E-LETTER on Systems, Control, and Signal Processing
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Welcome to the 363 issue of the E-letter, available electronically here. To submit new articles, go “Article Submissions” on the E-letter website. To unsubscribe, please send an email with the subject line “UNSUBSCRIBE”.

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1. IEEE CSS Headlines

1.1. CFP: CSS Outreach Fund
   Contributed by: Daniel E. Rivera, daniel.rivera@asu.edu

The IEEE Control Systems Society (CSS) Outreach Fund provides grants for projects that will benefit CSS members and the controls community in general. Since its inception in 2011, the Fund has made over 60 grants on behalf of a diverse group of CSS member-led activities.

The CSS Outreach Task Force is pleased to announce that the window for proposal submission for its 2018 fall solicitation will be held from November 1 to 23, 2018. Information regarding the program, which includes proposal requirements and descriptions of current and past funded projects, can be found in:

http://www.ieeecss.org/general/control-systems-society-outreach-fund

Potential applicants are encouraged to watch a 10-minute video describing the CSS Outreach Fund that is available from IEEE.tv:


Inquiries, notices of intent, and requests for application materials must be made directly to Daniel E. Rivera, Outreach Task Force Chair, at daniel.rivera@asu.edu.

1.2. IEEE Control Systems Society Technically Cosponsored Conferences
   Contributed by: Luca Zaccarian, CSS AE Conferences, zaccarian@laas.fr

The following conferences have been recently included in the list of events technically cosponsored by the IEEE Control Systems Society:


For a full listing of CSS technically cosponsored conferences, please visit http://ieeecss.org/conferences/technically-cosponsored,

and for a list of the upcoming and past CSS main conferences please visit http://ieeecss.org/conferences

1.3. IEEE Transactions on Automatic Control
   Contributed by: Alessandro Astolfi, ieeetac@imperial.ac.uk
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Contributed by: Michelle Colasanti, ieeetcst@osu.edu

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1.5. IEEE Control Systems Society Publications Content Digest
Contributed by: Alessandro Astolfi, ieeeetac@imperial.ac.uk

The IEEE Control Systems Society Publications Content Digest is a novel and convenient guide that helps readers keep track of the latest published articles.

The CSS Publications Content Digest, available at http://ieeecss.org/publications-content-digest
provides lists of current tables of contents of the periodicals sponsored by the Control Systems Society. Each issue offers readers a rapid means to survey and access the latest peer-reviewed papers of the IEEE Control Systems Society. We also include links to the Society’s sponsored Conferences to give readers a preview of upcoming meetings.

2. Awards

2.1. Call for Nominations: European Control Award
Contributed by: Paul Goulart, paul.goulart@eng.ox.ac.uk
The “European Control Award (ECA)” is to recognize outstanding contributions by a young researcher in the area of systems and control. The award is sponsored by the European Control Association (EUCA), and will be presented during the annual European Control Conference. The recipient will give a plenary lecture during the final day of the ECC. Details of this award and the nomination procedure can be found at http://www.euca-control.org/eca.html.

We encourage you to identify and to promote potential candidates for the European Control Award 2019 before November 30th 2018.

3. MISC

3.1. Graduate Course on “Model-Based Fault Diagnosis - A Linear Synthesis Framework using MATLAB”
Contributed by: Andreas Varga, varga.andreas@gmail.com

Graduate Course on “Model-Based Fault Diagnosis - A Linear Synthesis Framework using MATLAB”

A 21-hour Graduate Module Course on ”Model-Based Fault Diagnosis - a Linear Synthesis Framework using MATLAB” will be held at the University of Padova, Padova, Italy, in the period March 11-15, 2019. The course is organized by the International Graduate School on Control. The online registration for this course is open by now at http://www.eeci-igsc.eu/registration/. The deadline for the reduced fee is December 31, 2018.

Lecturers:
Dr. Andreas Varga, IEEE Fellow, Former Senior Scientist at DLR (German Aerospace Center)
https://sites.google.com/site/andreasvargacontact/home/
Dr. Daniel Ossmann, German Aerospace Center

Abstract: The model-based approach to fault detection and diagnosis has been the subject of ongoing research for the past few decades. The aim of this course is to describe the recent developments in the synthesis procedures of fault detection and isolation filters relying on computational approaches suitable to solve the basic synthesis problems in the most general setting. Freely available MATLAB-based software will serve as basis of computational synthesis experiments.

The course is centered on chapters 1–8 of the book:

Covered topics:
- Modelling systems with faults
- Basic problems of linear model-based fault diagnosis
- Nullspace-based synthesis paradigm
- Solution of synthesis problems of fault detection and isolation filters
- Solution of synthesis problems of model-detection filters using multiple-model-based techniques
- Computational issues in solving the synthesis problems
- Computational synthesis experiments using MATLAB

For more information see
For information on software see
https://sites.google.com/site/andreasvargacontact/home/software/fditools

3.2. EECI International Graduate School on Control
Contributed by: Francoise Lamnabhi-Lagarrigue, lamnabhi@l2s.centralesupelec.fr

EECI International Graduate School on Control
http://www.eeci-igsc.eu/igsc-program-2019

GRANT Application for PhD Students coming from developing countries
http://www.eeci-igsc.eu/grant-igsc-2019

Deadline for Modules M01-M09: 31/12/2018
Deadline for Modules M10-M27: 28/02/2019

Financial support of 500EUR will be awarded to selected PhD students attending module(s) of the EECI-
IGSC-2019 program. Successful grant applicants will be informed by individual mail in the week following
the deadline. Grant will be given after completion of the module by bank transfer or by cash.

*Prerequisites: Early Registration confirmed to at least one module*

*Documents required:*
- Passport copy
- Student card copy
- CV
- PhD Advisor’s Recommendation letter
- Motivation letter

Should you have any questions, please contact admin-eeci@l2s.centralesupelec.fr

3.3. AMS Short Course on “Sum of Squares: Theory and Applications”
Contributed by: Pablo A. Parrilo, parrilo@mit.edu

AMS Short Course on ”Sum of Squares: Theory and Applications”

Organizers: Pablo A. Parrilo (Massachusetts Institute of Technology) and Rekha R. Thomas (University of
Washington)

http://www.ams.org/meetings/short-courses/short-course-general

The next American Mathematical Society (AMS) Short Course on Sum of Squares: Theory and Applications,
will be held on January 14-15, 2019 before the Joint Mathematics Meetings in Baltimore, MD, which will
take place January 16-19, 2019. Registration opens on September 6 on the registration form for the Joint
Mathematics Meetings.

Speakers: Greg Blekherman (Georgia Institute of Technology), Hamza Fawzi (University of Cambridge),
Georgina Hall (Princeton), Ankur Moitra (Massachusetts Institute of Technology), Mauricio Velasco (Los
Andes University), Cynthia Vinzant (North Carolina State University).

For details and registration, please see the AMS course webpage:
http://www.ams.org/meetings/short-courses/short-course-general
3.4. Winter School on Optimization and Optimal control: A Data Based Approach
Contributed by: Dayaram Sonawane, dns.instru@coep.ac.in

3rd Winter School on Optimization and Optimal Control: A Data Based Approach

We would like to point your attention to the “3rd Winter School on optimization and optimal control: a data based approach”, which will take place during December 3 to December 7, 2018 in College of Engineering Pune, India. The aim of this intensive five-day winter schools is to give hands-on experience in data-based optimization and model predictive controllers (MPC). The course is recommended for both industrial and academic researchers as well as for master and PhD students of engineering, computer science, mathematics, and physics. The school is an event organized by the College of Engineering in association with Technical Education Quality Improvement Program (TEQIP), see more on the flyer.

Registration form: https://goo.gl/forms/Ux2suh4MQ0onoY5x2

Confirmed lecturers and Mathworks session are:
* DR. KISHALAY MITRA (Indian Institute of Technology, Hyderabad, India)
* DR. D. N. SONAWANE (College of Engineering, Pune, India)
* Mathworks Session

The program of the school includes four full days of lectures, interleaved by enough time slots to allow scientific discussions among the participants and with the speakers.

We welcome you, your students and colleagues to this interesting and inspiring event!

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3.5. Online Seminar by Dr. Ian Petersen
Contributed by: Tansel Yucelen, yucelen@usf.edu

Online Seminar by Dr. Ian Petersen - 9:00 PM Eastern Time, November 9, 2018
University of South Florida Forum on Robotics & Control Engineering (USF FoRCE, http://force.eng.usf.edu/) will host Dr. Ian Petersen (Australian National University) on November 9, 2018 at 9:00 PM Eastern Time. Specifically, Dr. Petersen will give an online seminar titled “Negative Imaginary Systems Theory and Applications” (abstract and biography of the speaker are included below). We hope that you will make plans to participate on this free online seminar. Here is the WebEx information needed to connect to this online seminar:

WebEx direct link (Suggested WebEx Option):
https://force.my.webex.com/force.my/j.php?MTID=m0d99237ded27fcdafe64f2b91e7e288

WebEx indirect link:
https://force.my.webex.com/force.my
(use 623 954 807 for the meeting number and AmnuzYmC for the password)

WebEx phone link:
+1-510-338-9438 USA Toll
(global call-in numbers:

The mission of the USF FoRCE is simple: Provide free, high-quality outreach events and online seminars to reach broader robotics and control engineering communities around the globe. To support our mission, we periodically invite distinguished lecturers to the USF FoRCE to give talks on recent research and/or education results related to robotics and control engineering. As a consequence, the USF FoRCE aims in connecting academicians and government/industry researchers/practitioners with each other through crosscutting basic
and applied research and education discussions. We cordially hope that you will enjoy the USF FoRCE events and find them highly-valuable to your own research and education interests.

Visit http://force.eng.usf.edu/ for more information and to access previously recorded events. For any questions, email the USF FoRCE director, Dr. Tansel Yucelen (yucelen@usf.edu).

>Title: Negative Imaginary Systems Theory and Applications (Dr. Ian Petersen, 9:00 PM Eastern Time, November 9, 2018)

Abstract: This seminar presents a survey of some of the main results in the theory of negative imaginary systems. The seminar also presents some applications of negative imaginary systems theory in the design of robust controllers. In particular, the seminar concentrates on the application of negative imaginary systems theory in the area of control of atomic force microscopes.

Biography: Ian R. Petersen was born in Victoria, Australia. He received a Ph.D in Electrical Engineering in 1984 from the University of Rochester. From 1983 to 1985 he was a Postdoctoral Fellow at the Australian National University. From 1985 until 2016 he was with UNSW Canberra where was most recently a Scientia Professor and an Australian Research Council Laureate Fellow in the School of Engineering and Information Technology. He has previously been ARC Executive Director for Mathematics Information and Communications, Acting Deputy Vice-Chancellor Research for UNSW and an Australian Federation Fellow. From 2017 he has been a Professor at the Australian National University. He is currently the Director of the Research School of Engineering at the Australian National University. He has served as an Associate Editor for the IEEE Transactions on Automatic Control, Systems and Control Letters, Automatica, IEEE Transactions on Control Systems Technology and SIAM Journal on Control and Optimization. Currently he is an Editor for Automatica. He is a fellow of IFAC, the IEEE and the Australian Academy of Science. His main research interests are in robust control theory, quantum control theory and stochastic control theory.

3.6. Online Seminar by Dr. Jeff Shamma
Contributed by: Tansel Yucelen, yucelen@usf.edu

Online Seminar by Dr. Jeff Shamma (12:00 PM Eastern Time, November 28, 2018)
University of South Florida Forum on Robotics & Control Engineering (USF FoRCE, http://force.eng.usf.edu/) will host Dr. Jeff Shamma (King Abdullah University of Science and Technology) on November 28, 2018 at 12:00 PM Eastern Time. Specifically, Dr. Shamma will give an online seminar titled "Distributed Protocols for Cooperative Multi-Robot Systems" (abstract and biography of the speaker are included below). We hope that you will make plans to participate on this free online seminar. Here is the WebEx information needed to connect to this online seminar:

WebEx direct link (Suggested WebEx Option):
https://force.my.webex.com/force.my/j.php?MTID=m8ed02a94e57f9222c162bac32f9f025

WebEx indirect link:
https://force.my.webex.com/force.my
(use 623 873 291 for the meeting number and m27xPHcs for the password)

WebEx phone link:
+1-510-338-9438 USA Toll
(global call-in numbers:
The mission of the USF FoRCE is simple: Provide free, high-quality outreach events and online seminars to reach broader robotics and control engineering communities around the globe. To support our mission, we periodically invite distinguished lecturers to the USF FoRCE to give talks on recent research and/or education results related to robotics and control engineering. As a consequence, the USF FoRCE aims in connecting academicians and government/industry researchers/practitioners with each other through crosscutting basic and applied research and education discussions. We cordially hope that you will enjoy the USF FoRCE events and find them highly-valuable to your own research and education interests.

Visit http://force.eng.usf.edu/ for more information and to access previously recorded events. For any questions, email the USF FoRCE director, Dr. Tansel Yucelen (yucelen@usf.edu).

Title: Distributed Protocols for Cooperative Multi-Robot Systems (Dr. Jeff Shamma, 12:00 PM Eastern Time, November 28, 2018)

Abstract: In cooperative multi-robot systems, there is a group of robots that seek to achieve a collective task as a team. Each individual robot makes decisions based on available local information as well as limited communications with neighboring robots. The challenge is to design local protocols that result in desired global outcomes. In contrast to a traditional centralized control paradigm, both measurements and decisions are distributed among multiple actors. This talk surveys various results for cooperative robotics based on methods drawn from game theory and distributed optimization, with applications to area coverage, cooperative pursuit, and self-assembly.

Biography: Jeff S. Shamma is a Professor of Electrical Engineering at the King Abdullah University of Science and Technology (KAUST) and the Director of the Center of Excellence for NEOM Research at KAUST. Shamma received a Ph.D. in systems science and engineering from MIT in 1988. He has held faculty positions at the University of Minnesota, The University of Texas at Austin, and the University of California, Los Angeles, and was the Julian T. Hightower Chair in Systems & Control in the School of Electrical and Computer Engineering at Georgia Tech. Shamma is a Fellow of the IEEE and the IFAC (International Federation of Automatic Control), and a recipient of the NSF Young Investigator Award, American Automatic Control Council Donald P. Eckman Award, and Mohammed Dahleh Award, and he is currently the deputy editor-in-chief for the IEEE Transactions on Control of Network Systems and a Distinguished Lecturer of the IEEE Control Systems Society.

4. Books

4.1. Multivariate Prediction, de Branges Spaces, and Related Extension and Inverse Problems

Contributed by: Harry Dym, harry.dym@weizmann.ac.il

The monograph
Multivariate Prediction, de Branges Spaces, and Related Extension and Inverse Problems, by Damir Z. Arov and Harry Dym was recently published by Birkhauser.

This monograph deals primarily with the prediction of vector valued stochastic processes that are either weakly stationary, or have weakly stationary increments, from finite segments of their past. The main focus is on the analytic counterpart of these problems, which amounts to computing projections onto subspaces of a Hilbert space of vector valued functions with inner product that is defined in terms of the matrix valued spectral density of the process. The strategy is to identify these subspaces as vector valued de Branges spaces and then to express the projections in terms of the reproducing kernels of these spaces and/or in terms of a
generalized Fourier transform that is obtained from the solution of an associated inverse spectral problem. Subsequently, the projection of the past onto the future and the future onto the past is interpreted in terms of the range of appropriately defined Hankel operators and their adjoints. In the last chapter, a number of computations are carried out for rational spectral densities.

The underlying mathematics needed to tackle this class of problems is developed in careful detail. However, to ease the reading, an attempt is made to avoid excessive generality. En route a number of results that were only known for the scalar case are generalized to the vector case.

4.2. Call for Submissions: Privacy in Dynamical Systems
Contributed by: Farhad Farokhi, ffarokhi@unimelb.edu.au

Call for submitting a chapter for the book "Privacy in Dynamical Systems"
I would like invite you to contribute a chapter for the book "Privacy in Dynamical Systems" (planned to be published by Springer towards the end of 2019).

The book is targeted to graduate students and researchers in information theory, communication theory, control engineering, estimation theory, signal processing, and related areas, and the objective is to give the reader an overview of the latest developments in privacy-aware design of dynamical systems with special interest in provable privacy using differential privacy, information-theoretic privacy (e.g., using privacy metrics motivated by mutual information, entropy, or Fisher information), encryption, etc. The book is motivated by the recent surge of interest in understanding privacy in dynamical systems (rather than the usual treatment of privacy in static datasets within the computer science literature) with applications to smart grids (e.g., privacy-aware smart metering with battery and/or renewable energy sources), transportation systems (crowd-sensing in transportation), finance (machine learning with private data or distributed optimization), and building management (utility-privacy trade-off).

The manuscript may consist of an overview and exposition of your recent results, and novel original scientific contributions are encouraged. All submitted manuscripts will be peer-reviewed. There is no page limit for the chapters but the authors are highly encouraged to keep the chapters within 10-20 pages for the sake of consistency.

If you agree to submit a manuscript, I would kindly request that you confirm your acceptance by sending a preliminary title, list of authors, and a short abstract, preferably by Nov 29.

The planning until the publication of the book is as follows:
Nov 29, 2018: Authors have indicated their intention to contribute by e-mail to ffarokhi@unimelb.edu.au
Mar 01, 2019: Full chapters are to be submitted by e-mail to ffarokhi@unimelb.edu.au
Jun 01, 2019: Authors receive review feedback (all chapters are peer-reviewed)
Jul 01, 2019: The revised chapters have been submitted
After this, final editing will be done by the editors and the book will be prepared for publication.

5. Journals

5.1. Contents: Automatica
Contributed by: John Coca, j.coca@elsevier.com
- Gianmario Rinaldi, Michele Cucuzzella, Antonella Ferrara, Sliding mode observers for a network of thermal and hydroelectric power plants, Pages 51-57
- Yuwei Ren, Yixian Fang, Aiping Wang, Huaxiang Zhang, Hong Wang, Collaborative operational fault tolerant control for stochastic distribution control system, Pages 141-149
- Han Zhang, Jieqiang Wei, Peng Yi, Xiaoming Hu, Projected primal–dual gradient flow of augmented Lagrangian with application to distributed maximization of the algebraic connectivity of a network, Pages 34-41
- He Kong, Salah Sukkarieh, Suboptimal receding horizon estimation via noise blocking, Pages 66-75
- Jung-Min Yang, Fault tolerant control for a class of interconnected asynchronous sequential machines, Pages 28-33
- Hui Wang, Quanxin Zhu, Adaptive output feedback control of stochastic nonholonomic systems with non-linear parameterization, Pages 247-255
- Yuan Zhou, Hesuan Hu, Yang Liu, Shang-Wei Lin, Zuohua Ding, A distributed approach to robust control of multi-robot systems, Pages 1-13
- Andreas Deutschmann, Pavel Malevich, Andrius Baltuška, Andreas Kugi, Modeling and iterative pulse-shape control of optical chirped pulse amplifiers, Pages 150-158
- Shuting Cai, Mingqing Xiao, Boundary observability of wave equations with nonlinear van der Pol type boundary conditions, Pages 350-353
- Jing-Dong Dao, Jin Guo, Chang-Yin Sun, Event-triggered identification of FIR systems with binary-valued output observations, Pages 95-102
- An-Yang Lu, Guang-Hong Yang, Secure Luenberger-like observers for cyber–physical systems under sparse actuator and sensor attacks, Pages 124-129
- Sarmad Munir, Morten Hovd, Sorin Olaru, Low complexity constrained control using higher degree Lyapunov functions, Pages 215-222
- Erik Weitenberg, Claudio De Persis, Nima Monshizadeh, Exponential convergence under distributed averaging integral frequency control, Pages 103-113
- Patricio E. Valenzuela, Cristian R. Rojas, Håkan Hjalmarsson, Analysis of averages over distributions of Markov processes, Pages 354-357
- Yong-Duan Song, Shuyan Zhou, Tracking control of uncertain nonlinear systems with deferred asymmetric time-varying full state constraints, Pages 314-322
- Dilshad Raihan, Suman Chakravorty, Particle Gaussian mixture filters-II, Pages 341-349
- Adnane Saoud, Antoine Girard, Optimal multirate sampling in symbolic models for incrementally stable switched systems, Pages 58-65
- Nikolaos Athanasopoulos, Raphaël M. Jungers, Combinatorial methods for invariance and safety of hybrid systems, Pages 130-140
- Ji Wang, Yangjun Pi, Miroslav Krstic, Balancing and suppression of oscillations of tension and cage in dual-cable mining elevators, Pages 223-238
- Anton Selifanov, Emilia Fridman, An improved time-delay implementation of derivative-dependent feedback, Pages 269-276
- Zhijie Liu, Jinkun Liu, Wei He, Robust adaptive fault tolerant control for a linear cascaded ODE-beam system, Pages 42-50
- Yan Wang, Jinhao Xiong, Daniel W.C. Ho, Decentralized control scheme for large-scale systems defined
over a graph in presence of communication delays and random missing measurements, Pages 190-200
- Bo Chen, Guoqiang Hu, Nonlinear state estimation under bounded noises, Pages 159-168
- Marco F. Huber, Marc-André Zöller, Marcus Baum, Linear programming based time lag identification in event sequences, Pages 14-19
- Rongni Yang, Wei Xing Zheng, $H_{\infty}$ filtering for discrete-time 2-D switched systems: An extended average dwell time approach, Pages 302-313
- Xianwei Li, Yeng Chai Soh, Lihua Xie, Robust consensus of uncertain linear multi-agent systems via dynamic output feedback, Pages 114-123
- Quang Minh Ta, Chien Chern Cheah, Cooperative and mobile manipulation of multiple microscopic objects based on micro-hands and laser-stage control, Pages 201-214
- Yong-Hua Liu, Hongyi Li, Adaptive asymptotic tracking using barrier functions, Pages 239-246
- Fengwei Chen, Hugues Garnier, Marion Gilson, Xiangtao Zhuan, Frequency domain identification of continuous-time output-error models with time-delay from relay feedback tests, Pages 180-189
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- Romeo Ortega, Nima Monshizadeh, Pooya Monshizadeh, Dmitry Bazylev, Anton Pyrkin, Permanent magnet synchronous motors are globally asymptotically stabilizable with PI current control, Pages 296-301
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- Xiao Liang, Juanjuan Xu, Control for networked control systems with remote and local controllers over unreliable communication channel, Pages 86-94
- Daniele Astolfi, Lorenzo Marconi, Laurent Praly, Andrew R. Teel, Low-power peaking-free high-gain observers, Pages 169-179
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- Gui-Hua Zhao, Jian-Chao Li, Shu-Jun Liu, Finite-time stabilization of weak solutions for a class of non-local Lipschitzian stochastic nonlinear systems with inverse dynamics, Pages 285-295
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- Lifeng Ma, Zidong Wang, Qing-Long Han, Yurong Liu, Dissipative control for nonlinear Markovian jump systems with actuator failures and mixed time-delays, Pages 358-362

5.2. Contents: Systems & Control Letters
Contributed by: John Coca, j.coca@elsevier.com

Systems & Control Letters
Vol. 121
November 2018
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- Carsten W. Scherer, Joost Veenman, Stability analysis by dynamic dissipation inequalities: On merging frequency-domain techniques with time-domain conditions, Pages 7-15
- Amir Ali Ahmadi, Bachir El Khadir, A globally asymptotically stable polynomial vector field with rational coefficients and no local polynomial Lyapunov function, Pages 50-53
- Arjan van der Schaft, Bernhard Maschke, Generalized port-Hamiltonian DAE systems, Pages 31-37
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5.3. Contents: Journal of Process Control
Contributed by: John Coca, j.coca@elsevier.com

Journal of Process Control
Vol. 70
October 2018
- M. Hadizadeh, A. Farzanegan, M. Noaparast, A plant-scale validated MATLAB-based fuzzy expert system to control SAG mill circuits, Pages 1-11
- Devin W. Griffith, Lorenz T. Biegler, Sachin C. Patwardhan, Robustly stable adaptive horizon nonlinear model predictive control, Pages 109-122
- Changxiong Chen, Liping Chen, Jianwan Ding, Yizhong Wu, The effectivity analysis of adding sensors for improving model based fault isolability properties, Pages 123-132
- Chriss Grimholt, Sigurd Skogestad, Optimal PI and PID control of first-order plus delay processes and evaluation of the original and improved SIMC rules, Pages 36-46
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- Dong Hwi Jeong, Chang Jun Lee, Jong Min Lee, Experimental gradient estimation of multivariable systems with correlation by various regression methods and its application to modifier adaptation, Pages 65-79
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- Lamiaa M. Elishenawy, Tarek A. Mahmoud, Fault diagnosis of time-varying processes using modified reconstruction-based contributions, Pages 12-23
- Martin Kleindienst, Markus Reichhartinger, Martin Horn, Felix Staudegger, Observer-based temperature control of an LED heated silicon wafer, Pages 96-108

5.4. Contents: Engineering Applications of Artificial Intelligence
Contributed by: John Coca, j.coca@elsevier.com

Engineering Applications of Artificial Intelligence
Vol. 76
November 2018
5.5. Contents: ISA Transactions

Contributed by: John Coca, j.coca@elsevier.com

ISA Transactions
Vol. 81
October 2018

- B.A. Haseena, K. Srinivasan, Development of mixed constrained RTDA controller for industrial applications, Pages 197-209
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- M.V. Srikanth, Narri Yadaiah, An AHP based optimized tuning of Modified Active Disturbance Rejection Control: An application to power system load frequency control problem, Pages 286-305
- Deepak Berwal, Ashish Kumar, Yogendra Kumar, Design of high performance QRS complex detector for
wearable healthcare devices using biorthogonal spline wavelet transform, Pages 222-230
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- Yongbo Li, Guoyan Li, Yu Wei, Binbin Liu, Xihui Liang, Health condition identification of planetary gearboxes based on variational mode decomposition and generalized composite multi-scale symbolic dynamic entropy, Pages 329-341
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- Jung Woo Kim, Sang Hun Sul, Jae Boong Choi, Development of user customized smart keyboard using Smart Product Design-Finite Element Analysis Process in the Internet of Things, Pages 231-243
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5.6. Contents: Journal of the Franklin Institute
Contributed by: John Coca, j.coca@elsevier.com

Journal of the Franklin Institute
Vol. 355, Iss. 16
November 2018
- Leitao Gao, Guangshe Zhao, Guoqi Li, Lei Deng, Fei Zeng, Towards the minimum-cost control of target nodes in directed networks with linear dynamics, Pages 8141-8157
- Hai Liu, Maiying Zhong, Yang Liu, Fault diagnosis for a kind of nonlinear systems by using model-based contribution analysis, Pages 8158-8176
- Takanobu Imae, Kai Cai, On algebraic connectivity of directed scale-free networks, Pages 8065-8078
- Fatim Zahra Ait Bella, Mohammed El Rhabi, Abdelilah Hakim, Amine Laghrhib, Reduction of the non-uniform illumination using nonlocal variational models for document image analysis, Pages 8225-8244
- Zhiru Cao, Yugang Niu, Finite-time sliding mode control of Markovian jump systems subject to actuator nonlinearities and its application to wheeled mobile manipulator, Pages 7865-7894
- Wei Zheng, Hongbin Wang, Changchun Hua, Zhiming Zhang, Hongrui Wang, Dynamic output-feedback control for nonlinear continuous-time systems based on parametric uncertain subsystem and interval type-2 fuzzy model, Pages 7962-7984
- R. Bardhan, D. Ghose, Nash Bargaining Solution based rendezvous guidance of unmanned aerial vehicles, Pages 8106-8140
- Sayyed Mohammad Hoseini, A composite pseudospectral method for solving multi-delay optimal control problems involving piecewise constant delay functions, Pages 7895-7923
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- Dhruv Kler, K.P.S. Rana, Vineet Kumar, A nonlinear PID controller based novel maximum power point tracker for PV systems, Pages 7827-7864
- JunMin Park, PooGyeon Park, $H_{\infty}$ sampled-state feedback control for synchronization of chaotic Lur’e systems with time delays, Pages 8005-8026
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- Lu-Xing Yang, Tianrui Zhang, Xiaofan Yang, Yingbo Wu, Yuan Yan Tang, Effectiveness analysis of a mixed rumor-quelling strategy, Pages 8079-8105

5.7. Contents: Applied and Computational Mathematics an International Journal
Contributed by: Fikret Aliev, chief_ed@acmij.az

Applied and Computational Mathematics an International Journal
Vol.17, No.3, October 2018
www.acmij.az

CONTENTS
- pages: 307-316, High Phase–Lag Order, Four–Step Methods for Solving $y'' = f(x; y)$, T.E. Simos, Ch. Tsitouras

5.8. Contents: International Journal of Control
Contributed by: Bing Chu, b.chu@soton.ac.uk

International Journal of Control
Volume 91, Issue 11, 2018
http://www.tandfonline.com/toc/tcon20/current

Special Issue dedicated to Alexander Poznyak on the occasion of his 70th birthday GUEST Editors Vladimir Kharitonov & Vadim Utkin
- Editorial, Vadim Utkin & Vladimir Kharitonov, pages: 2403-2403
- Optimisation and asymptotic stability, B. T. Polyak & P. S. Shcherbakov, pages: 2404-2410
- On upper estimate of anisotropic norm of uncertain system with application to stochastic robust control, M. M. Tchaikovsky & A. P. Kurdyukov, pages: 2411-2421
- $L_2$-gain tuning of variable structure SISO systems of relative degree n, Topacio Osuna, Yury Orlov & Luis
5.9. Contents: IET Control Theory & Applications
Contributed by: Alexandria Lipka, alipka@theiet.org

IET Control Theory & Applications
Volume 16
November 2018
http://digital-library.theiet.org/content/journals/iet-cta/12/16

- Rohollah Moghadam, Hamidreza Modares, Resilient adaptive optimal control of distributed multi-agent systems using reinforcement learning, Pages 2165 - 2174
- Xinyi Yu, Fan Yang, Linlin Ou, Qing Xu, Weidong Zhang, Two-degree-of-freedom optimal consensus scheme of fractional-order multi-agent systems , Pages 2175 - 2183
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- Chenjian Ran, Shuli Sun, Yinfeng Dou, WMF reduced-order robust estimators for multisensor descriptor systems, Pages 2232 - 2244
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- Junfeng Zhang, Miao Li, Ridong Zhang, New computation method for average dwell time of general switched systems and positive switched systems, Pages 2263 - 2268
- Yalu Li, Haitao Li, Xiaojing Xu, Yuanyuan Li, Semi-tensor product approach to minimal-agent consensus control of networked evolutionary games, Pages 2269 - 2275
- Caisheng Wei, Jianjun Luo, Zeyang Yin, Jianping Yuan, Leader-following consensus of second-order multi-agent systems with arbitrarily appointed-time prescribed performance, Pages 2276 - 2286
- Maja Stanković, Distributed asynchronous consensus-based algorithm for blind calibration of sensor networks with autonomous gain correction, Pages 2287 - 2293

5.10. CFP: Acta Informatica Special Issue on Synthesis

Contributed by: Paulo Tabuada, tabuada@ee.ucla.edu

Acta Informatica Special Issue on Synthesis
Guest editors: Paulo Tabuada and Roderick Bloem
Submission deadline: 15 January 2019
This special issue is devoted to the scope of the Third Workshop on Synthesis, SYNT 2018 (see http://synt2018.seas.ucla.edu/cfp.html). SYNT 2018 was part of the Federated Logic Conferences in Oxford and was devoted to bringing together researchers interested in the broad area of synthesis of computing systems. The workshop fosters the development of frontier techniques in automating the development of computing systems and is inclusive in its interpretation of the term synthesis.
Topics of interest include, but are not limited to:
- algorithms and tools for software synthesis and reactive (discrete-time, timed, hybrid, ...), synthesis, specification languages and optimization in synthesis, complexity and decidability results for synthesis, case studies of software or hardware synthesis, connections between verification and synthesis, synthesis by model learning, connections between synthesis and inductive programming, new approaches or applications for synthesis, description and analysis of benchmark families for synthesis.
Submission to this special issue is completely open and not limited to participants of the SYNT workshop. We expect original articles (typically 15-30 pages), which present high-quality contributions that have not been previously published in a journal and are not concurrently submitted to any other peer reviewed venue.

Extended versions of contributions previously published in proceedings need to contain significant new material and should be accompanied by a short description of the extension.
The submission system will open from 15 December until 15 January (see http://www.springer.com/computer/theoretical+computer+science/journal/236 and then click on "Submit Online". The article type should be "S.I.: SYNT’18").

6. Conferences

6.1. International Conference on Unmanned Aircraft Systems

Contributed by: Didier THEILLIOL, didier.theilliol@univ-lorraine.fr


On behalf of the ICUAS’19 Organizing Committee, this is to invite you to submit your contributions to the 2019 International Conference on Unmanned Aircraft Systems (ICUAS’18; http://www.uasconferences.com). The conference is co-sponsored by the IEEE CSS and RAS, and several other organizations.

The 2019 International Conference on Unmanned Aircraft Systems, ICUAS’19, will be held on June 11-14, in the Atlanta Marriott Buckhead Hotel and Conference Center which is situated in a supreme location in the heart of Atlanta. June 11 will be a Workshop/Tutorial full-day, followed by a three-day technical Conference on June 12-14.

Judging from the interest ICUAS has drawn over the past years and its growth, ICUAS’19 is expected to continue on this path and attract the highest number of participants from academia, industry, federal and state agencies, government, the private sector, users, practitioners and engineers who wish to be affiliated with and contribute technically to this highly demanding and evolving and expanding field. ICUAS’19 is fully sponsored by the ICUAS Association, which is a non-profit organization. Information about the Association may be found at www.icuas.com.

The major themes of ICUAS’19 will be: design for trusted and assured autonomy, metrics for autonomy, and design for resilience. These focus area topics are center-stage in the attempt to design and build high-confidence UAS/RPAS. In addition, ICUAS’19 will include a separate track on regulations, policy, legal and ethical issues that are essential to allow for integration of UAS/RPAS in the national airspace. National and international organizations, agencies, industry, military and civilian authorities are working towards defining roadmaps of UAS/RPAS expectations, technical requirements and standards that are prerequisite to their full utilization, as well as legal, policy and ethical issues. The next generation of UAS/RPAS is expected to be used for a wide spectrum of civilian and public domain applications. Challenges to be faced and overcome include, among others, see-and-avoid systems, robust and fault-tolerant flight control systems, payloads, communications, levels of autonomy, manned-unmanned swarms, network-controlled swarms, as well as challenges related to policies, procedures, regulations, safety, risk analysis assessment, airworthiness, certification issues, operational constraints, standardization and frequency management, all of paramount importance, which, coupled with ‘smart’, ‘environmentally friendly’ cutting edge technologies will pave the way towards full integration of UAS/RPAS with manned aviation and into the respective national airspace. ICUAS’19 aims at bringing together different groups of qualified military and civilian representatives worldwide, organization representatives, funding agencies, industry and academia, to discuss the current state of unmanned aviation advances, and the roadmap to their full utilization in civilian and public domains. Special emphasis will be given to research opportunities, and to ‘what comes next’ in terms of the essential technologies that need to be utilized to advance the state-of-the-art.

Conference topics include (but not limited to): Airspace Control; Integration; See/Sense-Detect-and-Avoid
Systems; Airspace Management; Interoperability; Security; Airworthiness; Levels of Safety; Sensor Fusion; Autonomy; Manned/Unmanned Aviation; Smart Sensors; Biologically Inspired UAS; Micro- and Mini-UAS; Standardization; Certification; Networked UAS; Technology Challenges; Control Architectures; Payloads; Training; Energy Efficient UAS; Path Planning and Navigation; UAS Applications; Environmental Issues; Regulations; UAS Communications; Fail-Safe Systems; Reliability of UAS; UAS Testbeds; Frequency Management; Risk Analysis; UAS Transportation Management (UTM); Policy/Regulation/Law Aspects.

Unmanned system autonomy, collaboration and coordination, formation control, validation and verification and unmanned system design for assured autonomy, are topics of great interest to ICUAS'19

Through Keynote addresses, round table panel discussions and presentations, it is expected that the outcome of the Conference will be a clear understanding of what industry, military, civilian, national/international authorities need, and what are the crucial next steps that need to be completed before UAS/RPAS are utilized in everyday life applications.

IMPORTANT DATES

(Please check the latest information at http://www.uasconferences.com)

February 12, 2019: Full Papers/Invited Papers/Tutorial Proposals Due
April 15, 2019: Acceptance/Rejection Notification
May 10, 2019: Upload Final, Camera Ready Papers
April 15 - May 10, 2019: Early Registration

PAPER SUBMISSION

Papers must be submitted electronically. Go to https://controls.papercept.net. Click on "Submit a Contribution to ICUAS’19" and follow the steps. The paper format must follow IEEE paper submission rules. Submitted papers should be classified as Contributed, Poster or Invited Session papers. The maximum number of pages for a contributed/invited paper submission is 10, and for a poster paper is 6. Accepted, contributed/invited session papers only, will be allowed up to two additional pages for a charge of $100 per additional page. Illustrations and references are included in the page count. Poster papers will allow for researchers/practitioners to present novel/cutting edge ideas with potential, however, not yet fully developed. Invited Sessions: Proposals must be submitted/uploaded electronically. A Summary Statement describing the motivation and relevance of the proposed session, paper titles and author names must be uploaded electronically by February 12, 2019. Authors must also submit full versions of invited papers electronically, marked as 'Invited Session Paper'.

Workshops/Tutorials: Proposals for workshops/tutorials should contain title, the list of speakers, and extended summaries (2000 words) of their presentations. Proposals must be sent by e-mail to the Tutorial/Workshop Chair by February 12, 2019.

Review Process: All submitted papers will undergo a peer review process following IEEE rules and standards. Authors will be notified of results at the latest by April 15, 2019. Accepted papers must be uploaded electronically no later than May 10, 2019. Authors are encouraged to accompany their presentations with multimedia material, which will be included in the Conference Digital Proceedings. Only Contributed or Invited Session papers will be acquired by IEEE and they appear in IEEE Xplore.

Paper presentation: Contributed/Invited Session papers will be grouped in Technical Sessions and will be allocated 20 minutes for oral presentation, which includes questions from the audience. Poster papers will be grouped based on subject. Presenters are encouraged to supplement the poster with additional slides, video or software demonstrations, etc. All poster paper presentations will be scheduled in one day.

Welcome and look forward to receiving your contributions and attendance to the ICUAS'19! For information about the ICUAS Association, Inc., see www.icuas.com.
6.2. International Conference on Future Energy Systems
Contributed by: Javad Lavaei, lavaei@berkeley.edu

ACM e-Energy is the premier forum for research at the intersection of computing and communication technologies with energy systems. It has established a strong track record for high-quality research in the application of computing and networked systems to make legacy systems more energy-efficient and in the design, analysis, and development of innovative energy systems. The Tenth International Conference on Future Energy Systems (ACM e-Energy) will be co-located with the ACM Federated Computing Research Conference (FCRC), from the 25th to the 28th of June 2019 at the Phoenix Convention Center in Phoenix, Arizona. By bringing together researchers in a single-track conference designed to offer significant opportunities for personal interaction, it is a major forum for shaping the future of this area.

We seek high-quality papers at the intersection of computing and communication technologies with energy systems. We welcome submissions describing conceptual advances, as well as advances in system design, implementation and experimentation. More details about the conference, relevant topics, and submission dates are available online at: https://energy.acm.org/conferences/eenergy/2019/cfp.php

6.3. IEEE International Symposium on Information Theory
Contributed by: Negar Kiyavash, negar.kiyavash@gatech.edu

The 2019 IEEE International Symposium on Information Theory (ISIT) will take place in the center of Paris at the Maison de la Mutualité in the heart of Paris, France, from July 7th to 12th, 2019.

Interested authors are encouraged to submit previously unpublished contributions in any area related to information theory, including but not limited to the following topic areas:
- Big Data Analytics
- Coding for Communication and Storage
- Coding Theory
- Combinatorics and Information Theory
- Communication Theory
- Complexity and Computation Theory
- Compressed Sensing and Sparsity
- Cryptography and Security
- Deep Learning for Communication Networks
- Distributed Storage
- Emerging Applications of Information Theory
The submitted and published versions of papers are limited to 5 pages in the standard IEEE conference format. Submitted papers should be of sufficient detail to be evaluated by expert reviewers in the field. If full proofs cannot be accommodated due to space limitations, authors are encouraged to cite a publicly accessible long version of the submission that may be considered in the review.

IMPORTANT DATES:
- Paper Submission Deadline: January 13, 2019
- Notification of Acceptance: March 31, 2019
- Advance Registration: April 30, 2019
- Author Registration: April 30, 2019
- Final Manuscript: April 30, 2019

We look forward to welcoming you to ISIT 2019 in Paris. For more information visit: https://www.itsoc.org/2019-ieee-international-symposium-on-information-theory

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6.4. European Control Conference

Contributed by: Bruno Siciliano, siciliano@ieee.org

ECC’19 (Extended deadline for submissions: November 12, 2018)
http://www.ecc19.eu

**Call for papers**

Dear Friends and Colleagues,

We would like to invite you to submit research articles in the 17th European Control Conference (ECC19), organized by the University of Naples Federico II and the University of Sannio. The European Control Conference is the annual conference promoted by the European Control Association and is intended to provide a stimulating environment for the productive exchange of ideas and developments in the area of systems and control and their applications.

ECC19 will take place in Naples, “the city of the sun”.

We would be delighted to have you present at this conference to hear what the technology experts and researchers have to share about both the methodology and the technology advancements.

Conference Venue: Hotel Royal Continental, Naples, Italy
Conference Date: 25 - 28 June 2019

Paper Submission: 12 November 2018 (no further extension)

Please take the time to explore the link below of the conference website for more details, check on important dates, and keep yourself up to date on recent news.

http://www.ecc19.eu

Thanks Much
Bruno Siciliano
Publicity Chair
Raffaele Iervolino
Publicity Co-Chair

6.5. International Symposium on Autonomous Systems
Contributed by: Youmin Zhang, Youmin.Zhang@concordia.ca


On behalf of the ISAS 2019 Organizing Committee, this is to invite you to submit your contributions to the The 3rd International Symposium on Autonomous Systems (ISAS 2019), May 29-31, 2019, Shanghai, China (www.isas.cqu.edu.cn).

The 3rd International Symposium on Autonomous Systems, ISAS 2019, will be held in Shanghai, China, during May 29-31, 2019. The conference is organized by Chongqing University, Shanghai Jiao Tong University, China, Star Institute for Intelligent Systems, China, University of Texas at Arlington, USA, and technically co-sponsored by IEEE Computational Intelligence Society, Technical Committee on Reliable Control Systems, Chinese Association of Automation, State Key Laboratory of Synthetical Automation for Process Industries, Northeastern University, China, and Key Laboratory of System Control and Information Processing, Ministry of Education of China.

ISAS focuses on both theory and applications mainly covering the topics of artificial intelligence, control, automation, robotics and autonomous systems. In addition to the technical sessions, there will be invited sessions, panel sessions and keynote addresses.

The topics of interest include, but are not limited to:

- Artificial intelligence (AI): Artificial intelligence and philosophy, Automated reasoning and inference, Case-based reasoning, Cognitive aspects of AI, Commonsense reasoning, Constraint processing, Heuristic search, High-level computer vision, Intelligent interfaces, Intelligent robotics, Knowledge representation, Machine learning, Multi-agent systems, Natural language processing, Planning and theories of action, Reasoning under uncertainty or imprecision
- Autonomous Systems: Unmanned system command and control, Cooperative control of unmanned systems, Unmanned system modeling and simulation, Unmanned system dynamics, New concept unmanned systems, Robotic systems, Unmanned aerial vehicles
- Networked Control Systems: Coordinated control and estimation over networks, Control and computation over sensor networks, Control under communication constraints, Control and performance analysis issues, Synchronization of activities across a controlled network, Stability analysis of controlled networks, Analysis of networks as hybrid dynamical systems
- Intelligent Control: Adaptive control, Co-operative control, Intelligent systems, Discrete event systems,
Multi-agent systems, Neural networks, Fuzzy systems, Control of biological systems
- Automation: Man-machine interactions, Process automation, Intelligent automation, Factory modeling and simulation, Home, laboratory and service automation, Network-based systems, Planning, scheduling and coordination, Nano-scale automation and assembly, Instrumentation systems, Biomedical instrumentation and applications, Building energy efficiency
- Robotics: Modeling and identification, Robot control, Mobile robotics, Mobile sensor networks, Perception systems, Micro robots and micro-manipulation, Visual servoing, Search, rescue and field robotics, Robot sensing and data fusion, Localization, navigation and mapping, Dexterous manipulation, Medical robots and bio-robotics, Human centered systems, Space and underwater robots, Tele-robotics, Mechanism design and applications.
- Emerging Technologies: Internet of things, Cyber-physical systems, Smart buildings, Smart grid, Energy management systems, Big data, Electric vehicles and intelligent transportation.

Keynote Speeches
Professor Jie Chen, Tongji University
Professor Jie Huang, The Chinese University of Hong Kong
Professor Marios Polycarpou, University of Cyprus
Professor Jose Principe, University of Florida

Important Dates (Please check the latest information at www.isas.cqu.edu.cn)
January 10, 2019: Deadline for Invited Session Proposals
January 10, 2019: Deadline for Full Paper Submission
February 28, 2019: Notification of Acceptance/Rejection
March 15, 2019: Deadline for Camera Ready Manuscript Submission
March 15, 2019: Deadline for Advance Registration

Welcome and look forward to receiving your contributions and attendance to the ISAS 2019!

STEERING COMMITTEE:
Frank L. Lewis, University of Texas at Arlington, USA
Hailong Pei, South China University of Technology, China
Yongduan Song, Chongqing University, China
Ning Li, Shanghai Jiao Tong University, China
Kimon P. Valavanis, Denver University, USA
Youmin Zhang, Concordia University, Canada
Tianyou Chai, Northeastern University, China

HONORARY CHAIR:
Frank Lewis, U of Texas at Arlington, lewis@uta.edu

GENERAL CHAIRS:
Yongduan Song, Chongqing University, ydsong@cqu.edu.cn
Xinping Guan, Shanghai Jiao Tong University, xpguan@sjtu.edu.cn

PROGRAM CHAIRS:
Changyun Wen, Nanyang technological University, ecywen@ntu.edu.sg
Cailian Chen, Shanghai Jiao Tong University, cailianchen@sjtu.edu.cn

6.6. International Conference on Control, Automation and Systems
Contributed by: Zee Yeon Lee, conference@icros.org
The aim of the ICCAS is to bring together researchers and engineers worldwide to present their latest works, and disseminate the state-of-the-art technologies related to control, automation, robotics, and systems.

**IMPORTANT DATES**
- May 31, 2019 : Submission of Regular Papers (3-6 pages)
- June 30, 2019 : Submission of Organized Session/Mini-symposium Proposal with Papers and Research Poster Papers (1-2 pages)
- July 31, 2019 : Notification of Acceptance
- August 31, 2019 : Submission of Final Camera-ready Papers

**PAPER SUBMISSION:**

Indexed in: IEEE Xplore, EI compendex, and SCOPUS

**PLENARY SPEAKERS**
- Frank Doyle (Harvard Univ., USA)
- Jun-Ichi Imura (Tokyo Institute of Technology, Japan)
- Eduardo F. Camacho (Univ. of Seville, Spain)
- Tianyou Chai (Northeastern Univ., China)
- Dawn Tilbury (Univ. of Michigan, USA)

ICCAS 2019 will be held on October 15-18, 2019 at ICC Jeju in Jeju, Korea. Jeju is a very beautiful and relaxing island, and selected as the World Natural Heritage. The aim of ICCAS 2019 is to bring together professors, researchers, engineers and students worldwide to present their recent works and discuss the state-of-the-art technologies related to control, automation, robotics and systems.

General Chair: Chung Choo Chung (Hanyang Univ., Korea)
General Co-Chair: Jay H. Lee (KAIST, Korea)
Program Chair: Dong Eui Chang (KAIST, Korea)
Organized by Institute of Control, Robotics and Systems (ICROS)

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**6.7. IFAC Symposium on Advances on Control Education**
Contributed by: Anthony Rossiter, j.a.rossiter@sheffield.ac.uk


The 2019 IFAC Advances in Control Education (ACE) Symposium will be held at the Philadelphia Marriott Downtown Hotel in the heart of the center in Philadelphia, PA, USA on July 7-9, 2019 in conjunction with ACC2019: http://acc2019.a2c2.org

The 12th Symposium on Advances in Control Education, ACE 2019, is an international forum on recent developments and advances in control education. Academic researchers and lecturers in control, R&D specialists in instrumentation, control and industrial automation, and practicing control engineers from a
variety of industrial sectors will find it especially rewarding. As in earlier symposia, the program will include plenary lectures, technical sessions, interactive and panel sessions, and software presentations.

The goal of the symposium is to bring together experts from the field of control and education that will contribute to: (i) Demonstrating, discussing, evaluating and linking existing resources in the control education area; (ii) Increasing awareness of the automatic control importance in our society; (iii) Linking different sources and authors active in development and provision of open educational resources.

6.8. International Conference on Control, Decision and Information Technologies

Contributed by: Achraf Jabeur Telmoudi, achraf-j.telmoudi@ieee.org

The 6th edition of International Conference on Control, Decision and Information Technologies (CoDIT’19), will be held from 23 to 26 April 2019 in Paris, France), website: http://codit19.com

We invite you to promote this conference which provide opportunity for researchers to share together the latest developments in control, optimization, decision, computer science and information technologies.

We will be grateful if you:
1. submit papers
2. encourage your colleagues and searchers to submit papers.
3. propose Special Session (or invited Session). !!! We are looking to organize focused special (or invited) sessions, You can download the Special Session template through: http://codit19.com/Template_Special_Session_CODIT19.docx

The Call for Papers is available here: http://codit19.com/Call_for_Papers_CoDIT2019.pdf

Publication:
Special issues & collections are planned in:
- Computers in Industry (Elsevier, Impact Factor: 2.850)
- Advanced Engineering Informatics (Elsevier, Impact Factor: 3.358)
- Cybernetics and Systems, (Taylor & Francis Online, Impact Factor: 1.197)
- RAIRO - Operations Research (Impact Factor: 0.478)
- Automatika (Taylor & Francis, Impact Factor: 0.217)
- Control Theory and Technology (Springer, Indexed SCOPUS)

The complete list will be available on our website as soon as possible (1-2 others journals).

Registered and Presented papers will be submitted for inclusion into IEEE Xplore as well as other Abstracting and Indexing (A&I) databases.

Proceedings of all past editions of CoDIT are published through IEEE Xplore and indexed in: DBLP, Conference Proceedings Citation Index — Thomson Reuters, SCOPUS, Ei Compendex and IEEE.

Important dates and deadlines:
Special sessions Proposal: October 25, 2018
Papers submission deadline: December 5, 2018
Acceptance notification: February 8, 2019

With our best regards,
On behalf of the organizing committee
6.9. IEEE Colombian Conference on Automatic Control
Contributed by: Jhon Isaza, jhonisaza@itm.edu.co

4th IEEE Colombian Conference on Automatic Control
Contributed by: Jhon Isaza, contact@ieeeccac2019.com

First Call for Papers
4th IEEE Colombian Conference on Automatic Control 2019

Scope: The 4th IEEE Colombian Conference on Automatic Control (CCAC) will be held on October 15-18, 2019 in Medellin-Colombia. This is the fourth in a series that have been successfully established in the Colombian and Latin American region. The objective of the conference is to gather academics and industrial researchers and practitioners to discuss the state of the art, research, and developments in technological advances and applications of control engineering to encourage technology development in Colombia and the Latin American region. The conference includes all aspects around control engineering, from analysis and design to simulation and hardware. Major topics for the event include, but are not limited to, the following:

- Applied control for industrial and non-industrial areas
- Applied control for robots
- Hybrid systems
- Intelligent control
- Mechatronics
- Mobile robots
- Modeling of dynamic systems
- Multi-robot systems
- Control of power systems
- Process control and automation
- Process optimization
- Sensing and sensor fusion
- System identification
- Systems and signals
- Control of biological systems and biochemical processes

Important Dates:
- Paper submission deadline: (March 17 2019) April 1 2019
- Paper decision notification: June 03 2019
- Camera-ready final manuscripts: July 15 2019

Paper submission: The program committee invites you to submit 4 to 6 pages long papers in English through www.ieeeccac2019.com. Submitted papers to CCAC must be original, not previously published or accepted for publication elsewhere and must not be submitted to any other event or publisher during the entire review process. IEEE policy regarding plagiarism and duplicate submission/publication will be strictly enforced. Accepted and presented papers will be published in the IEEE CCAC 2019 Conference Proceedings and submitted to IEEE Xplore®. Only English versions will be published in IEEE Xplore®.

Venue: The 4th IEEE CCAC 2019 will be held in Medellin from the 15th to 18th of October 2019. Medellin, the 2nd largest city in Colombia, is a vibrant city that offers a wide variety of tourist, gastronomic and cultural attractions.

Contact: Additional details and Conference updates are available at: www.ieeeccac2019.com
Inquiries about the conference may be addressed to: contact@ieeeccac2019.com

6.10. CDC Workshop on “Computation-aware Algorithmic Design for Cyber-Physical Systems”
Contributed by: Majid Zamani, zamani@tum.de
CDC 2018 Full-day Workshop on "Computation-aware Algorithmic Design for Cyber-Physical Systems"

The main goal of the workshop is to highlight recent advances and developments in the field of cyber-physical systems (CPS) with a specific focus on the need of accounting for computation constraints in algorithm design, also dictated by the communication structure of the system. To this purpose, we will bring together outstanding researchers from leading institutions and industries worldwide. The target audience comprises graduate level control theorists, computer scientists and engineers, as well as researchers with a strong interest in CPS verification and control, either from a theoretical or an application perspective. In particular, the main topics being covered are:

1- CPS models that are computation aware;
2- Performance metrics under computation limitations;
3- Algorithm design for CPSs operating in an uncertain dynamic environment;
4- Communication constrained networked control systems.

Invited Speakers:
Murat Arcak, University of California at Berkeley, USA
Massimo Franceschetti, University of California at San Diego, USA
Karl H. Johansson, KTH Royal Institute of Technology, Sweden
George J. Pappas, University of Pennsylvania, USA
Alessandro Pinto, United Technologies Research Center, USA
Jonathan Sprinkle, University of Arizona, USA
Panagiotis Tsiotras, Georgia Institute of Technology, USA

Organizers:
Raphaël Jungers – UC Louvain, Belgium
Maria Prandini – Politecnico di Milano, Italy
Ricardo Sanfelice – University of California Santa Cruz, USA
Majid Zamani – Technical University of Munich, Germany

The workshop will take place from 9:00 AM till 5:00 PM in the Splash 11 room, Fontainbleau Hotel, Miami Beach, on December 16, 2018.

Workshop website:
http://home.deib.polimi.it/prandini/CDC18_CPS_workshop.html

Registration link:

6.11. CDC Workshop on “Learning for Control”
Contributed by: Konstantinos Gatsis, kgatsis@sens.upenn.edu

Workshop on Learning for Control, 57th IEEE Conference on Decision and Control, Miami Beach, Florida, December 16, 2018

Over the past two decades, advances in computing and communications have resulted in the creation, transmission and storage of data from all sectors of society. Over the next decade, the biggest generator of data is expected to be Internet-of-Things devices which sense and control the physical world. This explosion of data that is emerging from the physical world requires a rapprochement of areas such as machine learning, control theory, and optimization. The availability and scale of data, both temporal and spatial, brings a wonderful
opportunity for our community to both advance the theory of control systems in a more data-driven fashion, as well as have a broader industrial and societal impact. The goals of our workshop are:

- Present state-of-the-art results in the theory and application of Learning for Control, including topics such as statistical learning for control, reinforcement learning for control, online and safe learning for control
- Bring together some of the leading researchers across the fields in order to promote cross-fertilization of results, tools, and ideas, and stimulate further progress in the area
- Attract new researchers in these exciting problems, creating a larger yet focused community that thinks rigorously across the disciplines and asks new questions

KEYNOTE SPEAKER
Michael I. Jordan, University of California, Berkeley

INVITED SPEAKERS
Dimitri P. Bertsekas, Massachusetts Institute of Technology
Francesco Borrelli, University of California, Berkeley
Giuseppe Carlo Calafiore, Politecnico di Torino
Maryam Fazel, University of Washington
Mahyar Fazlyab, University of Pennsylvania
Frank L. Lewis, University of Texas at Arlington
Benjamin Recht, University of California, Berkeley
Angela Schoellig, University of Toronto
Claire J. Tomlin, University of California, Berkeley
Rene Vidal, Johns Hopkins University

ORGANIZERS
Konstantinos Gatsis, University of Pennsylvania
Pramod P. Khargonekar, University of California, Irvine
Manfred Morari, University of Pennsylvania
George J. Pappas, University of Pennsylvania

The workshop will take place on Sunday December 16, 2018 during the 57th IEEE Conference on Decision and Control at the Fontainebleau in Miami Beach, FL, USA. Please note that only people who have registered for the conference can register for the workshop.

Registration link:
https://cdc2018.ieeecss.org/registration.php

Workshop website:
https://kgatsis.github.io/learning_for_control_workshop_CDC2018/

6.12. CDC Workshop on “Traffic Flow Control via PDE Techniques”
Contributed by: Nikolaos Bekiaris-Liberis, nikos.bekiaris@dssl.tuc.gr

CDC 2018 Workshop on “Traffic Flow Control via PDE Techniques”
The workshop will cover the subjects of (vehicular) traffic flow control and estimation as well as traffic flow dynamics modelling for control and estimation, with particular emphasis on PDE-based techniques. Both methodological and practical aspects will be addressed.

Speakers:
Every year, the international conference ACM e-Energy features co-located workshops on new trends or emerging topics of interest to the energy research community. Continuing this trend, ACM e-Energy 2019 will include a limited number of high quality, half- or full-day workshops on June 25, 2019. These workshops are aimed at exploring in-depth topics related to the areas of computing and communication for smart energy systems, as well as energy-efficient computing and communication systems. These workshops will provide international forums for scientists, engineers, and users to exchange and share their new ideas, experiences, and research results. The proceedings of the workshop program will be published by ACM Digital Library along with the conference proceedings. You are invited to submit a workshop proposal by December 10th, 2018 to the Workshop Chair, which should contain the following information:

- Workshop title
- Main contact details
- Workshop organizers (including contact details)
- Workshop theme
- Intention for a half-day or full-day workshop
- Suitability to e-Energy audience
- Draft call for papers
- A tentative list of TPC members
- Expected number of submitted/accepted papers, papers sessions, keynotes, panels, etc.
- If appropriate, a description of the history of the workshop, including the number of submitted/accepted papers, the number of attendees, the format, etc.
- If the same (or similar) workshop was held in the past ACM e-Energy conference, what was the number of participants in each time?
Decisions to accept/reject workshop proposals will be made by the Workshops Chair in consultation with the Conference and Program Chair based on the overall quality and compatibility with the ACM e-Energy 2019 program.

The organisers of accepted workshops will be responsible for their own publicity (e.g. website and call for papers) as well as the reviewing and paper selection process. For the ACM e-Energy proceedings publication they need to comply with publication guidelines and timing of the conference. They will be required to cooperate closely with the Workshops Chair and the ACM e-Energy 2019 local organisers to finalise all organisational details. Workshop registrations and payments will be made via the Conference registration system, and payments to the facilities will thus be taken care of by the local e-Energy organisers. In particular, local organisers may require that all workshops adhere to specific requirements regarding the general timetable, registration, and catering.

Important Dates
- Proposal submission deadline: December, 10th, 2018
- Notification: December, 15th, 2018

Please submit your proposal in PDF format via email directly to Dan Wang (dan.wang@polyu.edu.hk). Only complete proposals with all required information will be considered.

7. Positions

7.1. MS/PhD: Université Laval, Canada

Contributed by: Andre Desbiens, desbiens@gel.ulaval.ca

M.Sc. or Ph.D.: Université Laval, Québec City, Canada

Economic MPC for Reducing the Energy Footprint of a Mineral Processing Plant

Mineral processing plants are infamous for being high intensity energy consumers. The low efficiency of comminution stages, i.e. ore crushing and grinding, largely accounts for the electricity footprint, which incidentally could be significantly reduced by taking advantage of formal process control and optimisation techniques. If such approaches have enabled noteworthy advances for aerospace and petrochemical industry applications, they are still struggling to penetrate the field of mineral processing that is more prone to adopt ad hoc and/or heuristic methods.

The LOOP (Laboratoire d’observation et d’optimisation des procédés / Process observation and optimisation laboratory) is currently looking for an M.Sc. or Ph.D. candidate to study the benefits of unmeasured state observation, and economic MPC (model-based predictive control) for reducing the specific energy consumption of a mineral processing plant. The project is sponsored by Nemaska Lithium, a Canadian mining company developing a world-class spodumene orebody. It is funded through the Programme de recherche en partenariat sur la réduction des émissions de gaz à effet de serre du Fonds de recherche du Québec – Nature et Technologies (FRQNT). The candidate will be part of a research team studying process modelling, regulatory/advanced control, and real-time optimisation issues related to reducing the energy footprint of mineral processing plants.

BACKGROUND

- Electrical/electronic/computer engineering,
- Engineering physics, or
- Chemical engineering.
FUNDING
- Ph.D.: $30,000/year for 3 years;
- M.Sc.: $22,500/year for 2 years.

APPLICATION
- Cover letter,
- CV including list of published papers, and
- Academic records.

Send your application to:
Jocelyn Bouchard, Eng., Ph.D.
Associate professor
jocelyn.bouchard@gch.ulaval.ca

7.2. PhD: University of Luxembourg, Luxembourg
Contributed by: Jorge Goncalves, jorge.goncalves@uni.lu

Fully funded Phd position in the Systems Control group at the University of Luxembourg.
Topic: Prediction of causal regulatory interaction networks based on large-scale time-series data.
Supervisor: Prof. Jorge Goncalves.
Funding: full funding available for up to 4 years, with a highly competitive salary.
Candidate profile:
- Hold (or being about to obtain) a Master degree in Mathematics, Theoretical Physics, Control Systems Engineering, Theoretical Machine Learning or related fields.
- Strong mathematical background is a requirement. Biological knowledge is not essential.
- We will only consider students that graduate in their top 20- Excellent working knowledge of English.

Applications (to be sent online in the link below) should contain the following documents:
- A detailed Curriculum vitae that includes your class rank.
- A motivation letter, including a brief description of past research experience and future interests.
- Copies of diploma and transcripts of Bachelor/Master.
- Please ask at least two references to email their confidential letters directly to Mrs Sofia Pereira (sofia.pereira@uni.lu) within two weeks of submitting the application.

Only complete applications will be considered.
Review of applicants will begin immediately and will continue until the position is filled.
Informal inquires: Prof. Jorge Goncalves, jorge.goncalves@uni.lu

The University of Luxembourg is an equal opportunity employer. All applications will be treated in the strictest confidence.

More information and application link at:

7.3. PhD: University of Cambridge, UK
Contributed by: Jorge Goncalves, jmg77@cam.ac.uk

Doctoral Candidate (PhD student) in Systems Biology at the University of Cambridge
Title: Control of circadian period
The PhD student will be a member of the highly interdisciplinary research group, integrating experimental biological (supervised by Alex Webb in Plant Sciences) and system biology approaches (supervised by Jorge Goncalves in Engineering).

Description:
Biological systems are dynamical in nature as molecular species evolve in time in response to internal or external regulations, perturbations or random fluctuations. We are interested in understanding the complex mechanisms inherent to biological systems from a dynamical perspective, typically captured with differential equations or stochastic processes from time-series data. The main objective of the PhD project is to investigate the feasibility to control the expression of different genes (phase, period and amplitude) using feedback control and how this results in the emergent properties of a circadian oscillator. The inputs are light and different metabolites (such as sucrose and nicotinamide) and the outputs are reporters of gene expression. We aim this way to fully understand how the circadian oscillator regulates phase and period of rhythms in a plant. The project connects the biological area of circadian clocks and theoretical fields of control systems and machine learning.

Your Profile:
- Strong mathematical background is a requirement! Hence, the student must hold a mathematics, engineering or physics degree.
- The ideal candidate would hold degrees in Control Systems, Mathematics, Theoretical Physics, or Theoretical Machine Learning.
- If not already covered in their background, students must also learn advanced mathematic courses from the mathematics department including analysis, functional analysis and linear algebra, and control systems courses from the engineering department. Biological knowledge is not essential, and the student will learn basic experimental biology and perform some of the experiments.
- We are seeking students that graduate in their top 20- Excellent working knowledge of English.
- Full funding is available to students from the UK and other EU nations. Excellent candidates from non-EU nations are welcome to apply but they will have to obtain additional funding to take up the position.

Applications should contain the following documents:
- A detailed Curriculum vitae.
- A motivation letter, including a brief description of past research experience and future interests.
- Copies of diplomas.
- Please ask at least two references to email their confidential letters directly to Alex Webb (aarw2@cam.ac.uk) within two weeks of submitting the application.

Only complete applications will be considered.

Review of applicants will begin immediately and will continue until the position is filled. For further information, please Alex Webb (aarw2@cam.ac.uk) or Jorge Goncalves (jmg77@cam.ac.uk).

The University of Cambridge is an equal opportunity employer. All applications will be treated in the strictest confidence.

7.4. PhD: KU Leuven, Belgium
Contributed by: Jan Swevers, jan.swevers@kuleuven.be

PhD: KU Leuven, Department Mechanical Engineering, Belgium
One PhD position on multi-system learning control for interconnected mechatronic systems

Project
You will develop multi-system learning techniques for interconnected mechatronic systems. Learning techniques are used to improve the performance of systems that execute the same or similar operations over and over again. This performance improvement is realized gradually by exploiting the repetitive nature of these operations. Learning techniques are already finding their way to single systems in the mechatronic industry. However, they often suffer from long convergence periods and non-monotonic improving behavior. The new trend of interconnecting mechatronic systems (directly or through the cloud) offers new ways to improve these learning algorithms: instead of learning per machine, learning can be done for multiple systems in parallel by sharing information, resulting in an overall learning algorithm which is more efficient (shorter convergence periods) and more effective (a better performance for all systems). The project will involve theoretical innovations as well as implementations of the developed learning techniques and experimental validations. Several experimental demonstration cases are available for this research, e.g. three bar-linkage setups, a set of twenty similar mobile platforms, ....

Profile
Ideal candidates hold a Master’s degree in engineering (mechanical, control ...). Successful candidates have typically ranked at or near the top of their classes, have a solid background in systems, control, and numerical optimization, relevant computer programming skills, a strong interest and experience in real-world applications, and enthusiasm for scientific research. Team player mentality, independence, and problem solving attitude are expected, and proficiency in English is a requirement.

Applicants whose mother tongue is neither Dutch nor English must present an official language test report. The acceptable tests are TOEFL, IELTS, and Cambridge Certificate in Advanced English (CAE) or Cambridge Certificate of Proficiency in English (CPE). Required minimum scores are:

- **TOEFL**: 600 (paper-based test), 100 (internet-based test)
- **IELTS**: 7 (only Academic IELTS test accepted)
- **CAE/CPE**: grade B or A

Offer
A fully funded PhD position in an international context for four years at the KU Leuven: a top European university and a hub for interdisciplinary research in the fields of systems, control and optimization. You will be embedded in the MECO (Motion Estimation Control and Optimization) research team of the Department of Mechanical Engineering. A start date is to be agreed upon.

The MECO research team focusses on identification, analysis and optimal control of mechatronic systems such as autonomous guided vehicles, robots, and machine tools. It combines theoretical contributions (development of design methodologies) with experimental knowhow (implementation and experimental validation on lab-scale as well as industrial setups). The theoretical research benefits from the group’s expertise on numerical optimization, especially convex optimization.


Application
Please use the online application tool to submit your application

https://www.kuleuven.be/personeel/jobsite/jobs/54881997

Include:

- an academic CV with photo,
- a PDF of your diplomas and transcript of course work and grades,
- statement of research interests and career goals (max. 2 pages),
• sample of technical writing (publication or thesis),
• contact details of at least two referees,
• proof of English language proficiency test results.

7.5. PhD: Western University/Lakehead University, Canada
Contributed by: Abdelhamid Tayebi, atayebi@lakeheadu.ca

PhD positions in the area of nonlinear observers and control design for Unmanned Aerial Vehicles are available in the ECE department, Western University, London, Ontario, Canada and the EE department, Lakehead University, Ontario, Canada.

Please send your CV to Prof. A. Tayebi: atayebi@lakeheadu.ca
(http://flash.lakeheadu.ca/ tayebi/)

7.6. PhD: UCLA, USA
Contributed by: Elisa Franco, efranco@seas.ucla.edu

1 PhD student position in the Mechanical and Aerospace Engineering department at UCLA. Research topics include modeling and analysis of biological feedback systems, chemical reaction networks, and self-assembling systems.

Application deadline: December 1st. Start period: Spring or Fall 2019.

Application instructions: https://www.mae.ucla.edu/graduate-admissions/ If you have questions please contact Prof. Elisa Franco, efranco@seas.ucla.edu

7.7. PhD: International Max Planck Research School for Intelligent Systems, Germany
Contributed by: Frank Allgöwer, allgower@ist.uni-stuttgart.de

PhD: International Max Planck Research School for Intelligent Systems, Stuttgart/Tübingen, Germany
Multiple PhD positions in Intelligent Systems, including Control, at the International Max Planck Research School for Intelligent Systems in Stuttgart and Tübingen, Germany

The Max Planck Institute for Intelligent Systems and the Universities of Stuttgart and Tübingen are collaborating to offer a new interdisciplinary Ph.D. program, the International Max Planck Research School for Intelligent Systems. This doctoral program will accept its 3rd Ph.D. generation in spring 2019 and will enroll about 100 Ph.D. students over the next six years. This school is a key element of the state’s “Cyber Valley” initiative (http://www.cyber-valley.de/en) to accelerate basic research and commercial development in the broad field of artificial intelligence. Students are sought who want to earn a doctorate in the broad area of intelligent systems, including control systems.

Intelligent systems that can successfully perceive, act, and learn in complex environments hold great potential for aiding society. To advance human knowledge in this domain, we need doctoral students who are curious, creative, and passionate about research to join our school. Learn more at http://imprs.is.mpg.de

All aspects of the program are in English. You may join our program in spring 2019. You will be mentored by our internationally renowned faculty. You will register as a university graduate student and conduct research for approximately three years. You can take part in a wide variety of scientific seminars, advanced training workshops, and social activities. Your doctoral degree will be conferred when you successfully complete your Ph.D. project. Our dedicated coordinator will assist you throughout your time as a doctoral student.

People with a strong academic background and a master’s degree in Engineering, Computer Science, Cognitive Science, Mathematics, Control Theory, Neuroscience, Materials Science, Physics, or related fields should apply.

We seek to increase the number of women in areas where they are underrepresented, so we explicitly encourage women to apply. We are committed to employing more handicapped individuals and especially encourage them to apply. We are an equal opportunity employer and value diversity at our institutions.

Admission will be competitive. If selected, you will receive funding via an employment contract, subject to the rules of the Max Planck Society and the two participating universities.

You can apply at http://imprs.is.mpg.de before midday CET on November 15, 2018.

The selection interviews will take place between January 29 and February 1, 2019 in Stuttgart and Tübingen, Germany.

7.8. PhD: University of Houston, USA

Contributed by: Zheng Chen, zchen43@central.uh.edu

The Bio-inspired Robotics and Controls Lab in the Department of Mechanical Engineering at the University of Houston has available NSF funding to support PhD students in the general area of Bio-inspired Robotics, Soft Actuators and Sensors, and Dynamics and Control. The successful candidate is expected to have a strong background in control theory, modeling of complex dynamic systems, real-time control system design, system identification, micro/nano fabrication. Good programming skills and experience with C/C++, MATLAB/Simulink is an asset. A background in soft actuators and sensors as well as prior working experience with underwater robot design will be an advantage. Applicant to this position should already have completed (or will soon complete) a Master degree in systems and controls, electrical engineering, and/or mechanical engineering. The funding covers the cost of full tuition and stipends at a competitive rate and can start as early as Fall 2019.

The position will remain open until filled. Interested individuals should send their detailed curriculum vitae, copies of their recent transcripts, personal statement, a copy of their best publication in English, and if applicable GRE/TOFEL test scores to Dr. Zheng Chen (zchen43@central.uh.edu).

7.9. PhD: Clemson University, USA

Contributed by: Mohammad Naghnaeian, mnaghna@clemson.edu

A PhD position is available in the Mechanical Engineering Department, Clemson University. The research lies in the broad area of control and optimization of cyber-physical systems. Students with strong mathematical background are encouraged to apply. A prior knowledge of real-analysis and functional analysis is required; also, robust and adaptive control, hybrid and switching systems, and optimal control is preferred but not
required. The students will also assist Dr. Naghnaeian in
a) developing control algorithms for connected vehicles to improve fuel economy, safety, and fault/adversary
detection.
b) performing fundamental control theoretic research on the security of controlled systems.
c) merging the robust control framework with the learning techniques from data to develop robust and
real-time implementable data-driven control architectures.
d) setting up the cyber-physical security laboratory.

Interested applicants can email their CVs to Dr. Naghnaeian at (mnaghna@clemson.edu).

7.10. PhD: University of Louisiana at Lafayette, USA
Contributed by: Afef Fekih, afef.fekih@louisiana.edu

The Advanced Controls Laboratory at the University of Louisiana at Lafayette, USA has available funding to
support a PhD student in the general area of advanced control design/Fault Tolerant Control with application
to dynamic systems. Special considerations will be given to students who have a strong background in
power systems such as wind turbines and/or PVs. The successful candidate is expected to have a strong
background in control systems theory, and a very good knowledge of power systems. Programming skills in
MATLAB/Simulink are required. A genuine interest and curiosity in the subject, excellent oral and written
English communication skills are needed.

Applicants shall have a Master's degree or equivalent in systems and controls, power systems, electrical
engineering, mechanical engineering, applied Math or a related discipline. The PhD student is expected to
carry out original research and complete coursework throughout the period of appointment. Results will be
communicated in the form of journal publications, conference presentations, and the PhD dissertation.
The funding covers the cost of full tuition and stipends at a competitive rate and will start in Fall 2019.
Interested individuals should send their detailed curriculum vitae, copies of their recent transcripts, a copy of
their best publication in English, and if applicable GRE/test scores to Dr. Afef Fekih (afef.fekih@louisiana.edu).

7.11. PhD: Royal University Groningen, The Netherlands
Contributed by: Dario Bauso, d.bauso@rug.nl

One PhD Position for interdisciplinary research in Systems and Control, Optimization, Game Theory and
Complex Networks.

Optimization and Decision Systems Research Group (ODS), Engineering and Technology Institute (ENTEG),
Royal University Groningen (RUG), The Netherlands

PROSPECTIVE APPLICANTS. You should have a good first degree and/or Masters degree (or close to
completion) in mathematics or engineering or related subject. In addition, you should also have a background
in systems and control theory, optimization, operational research, or game theory as well as a familiarity with
computing software (MATLAB or similar). An interest in interdisciplinary studies is also desirable. You
should have good command of the English language (Dutch not required). Applications from enthusiastic,
talented and outstanding candidates are welcome.

PROJECT DESCRIPTION. The successful candidate will join the new research group Optimization and
Decision Systems and will carry out research in one of the following topics.
1. Evolutionary dynamics in social networks. In social networks one often observes herd behaviors or crowd-seeking attitudes in that certain social groups tend to mimic the behavior of other social groups. Behaviours may involve political opinions or social interactions like aggressive/non-aggressive or cooperative/non-cooperative. Mimicry can also be observed in financial markets under the name of "stock market bubbles", which sees investors to emulate other investors. You will deal with convergence analysis of consensus network dynamics under the influence of external manipulators. You will develop multi-scale dynamic models combining complex networks game theory and control theory.

2. Collective decision making for logistics and intelligent mobility. In "future cities" end use customers use electric plug-in vehicles to go from a source node to a destination node, and choose routing policies and charging policies (where and when to buy-sell energy to/from the power network). You will deal with the analysis and design of market mechanisms, incentive schemes, business models to induce socially optimal behaviors of end-use customers. You will develop micro-macro models capturing the interactions between individuals, groups and the environment. You will use mean-field game theoretic models to describe how individuals respond to a population behavior and how the population behavior evolves if individuals are rational decision-makers.

You will be exposed to interdisciplinary approaches which will help you
1. develop novel ideas and creative thinking and get perspective from outside your group
2. learn more about yourself, what you do and do not like in knowledge and science, and who you engage with most positively
3. improve your confidence and communication skills when talking to an heterogeneous audience

CONDITIONS OF EMPLOYMENT. The position will start as soon as possible, and run for four years. The successful candidate will be enrolled in the University graduate school. PhD students will receive a competitive salary in accordance with the Collective Labour Agreement for Dutch Universities (CAO). For more details go to
https://www.rug.nl/education/phd-programmes/phd-scholarship-programme/conditions-application/

ABOUT RUG and ENTEG. RUG is a top 100 research university currently ranked 80th on the Times Higher Education ranking. Founded in 1614, the university is one of the oldest research universities in the Netherlands. RUG is a truly international university, with over 30,000 students and 6,000 international students from over 120 different nationalities. According to the Shanghai Academic Ranking of World Universities (ARWU) 2018, Automation and Control Engineering at RUG is number one in the Netherlands, 5th in Europe and 18th worldwide.

APPLICATION: Please send your application including a motivation letter, a curriculum vitae, a list of courses with grades, and contact information for two academic references to Prof Dario Bauso (d.bauso@rug.nl) with (a.fronczek@rug.nl in cc). The position will remain open until an ideal candidate is found. However, for full consideration please apply before December 15, 2018.

*Please specify the following text in the subject*: ODS - PhD application

7.12. PhD: Delft University of Technology, The Netherlands
Contributed by: Sergio Grammatico, s.grammatico@tudelft.nl

2 PhD positions: Game theoretic Control, Complex Systems of Systems, Operator Theory
Delft Center for Systems and Control (DCSC), Delft University of Technology, The Netherlands.
I am looking for talented, outstanding candidates with an M.Sc. degree (or close to completion) in Systems and Control, or Applied Mathematics, Electrical or Mechanical Engineering, or related field, with theoretical
background and interest in System Theory, Automatic Control, Optimization, Game Theory, and with good command of the English language (knowledge of Dutch is not required).

General project description: The candidates will conduct theoretical and algorithmic research on complex multi-agent systems characterized by the presence of: (i) mixed cooperative and noncooperative agents; (ii) uncertain and stochastic variables; (iii) mixed-integer decision variables. The research will develop and build upon tools from game theory, monotone and fixed-point operator theory, statistical learning, distributed optimization and control. The main application areas are distributed control for smart power grids and multi-vehicle automated driving.

The PhD positions are in the context of the research project ”Game theoretic Control for Complex Systems of Systems” (COSMOS), funded by the European Research Council as ERC Starting Grant.

Conditions of employment: The appointments will be for 4 years. The PhD students will participate in the training and research activities of the TU Delft Graduate School and of the Dutch Institute of Systems and Control (DISC). As an employees of TU Delft, the PhD students will receive a competitive salary in accordance with the Collective Labour Agreement for Dutch Universities (CAO), from 2.2k EUR/month (gross, 1st year) to 2.8k EUR/month (gross, 4th year), possibly from 1.7k EUR/month (after taxes, 1st year) to 2.0k EUR/month (after taxes, 4th year), plus holiday allowance (8% of gross annual income) and end-of-year allowance (8.3% of gross annual income), travel budget, secondary benefits, discounts for health insurance and sport membership. Assistance with accommodation can be arranged.

Applications shall include the following documents:
- curriculum vitae;
- statement of motivation and research interests (up to one page);
- transcripts of all exams taken and obtained degrees (in English);
- names and contact information of up to three references (e.g. project/thesis supervisors);
- up to two research-oriented documents (e.g. thesis, conference/journal publication).

Applications or inquiries shall be emailed to prof. Sergio Grammatico (s.grammatico@tudelft.nl).

The starting dates are flexible. The call for applications will remain open until the ideal candidates are found.

More information: s.grammatico@tudelft.nl, https://sites.google.com/site/grammaticosergio.

7.13. PhD/PostDoc: Technion/University of Haifa, Israel

Contributed by: Leonid Mirkin, mirkin@technion.ac.il

PhD or Postdoctoral position at the Technion - IIT / the University of Haifa

Applications are invited for a PhD or a post-doctoral research fellow position in the area of stochastic event-triggered control at the Faculty of Mechanical Engineering, Technion, Israel or the Department of Statistics at the University of Haifa.

A postdoctoral position is for a period of 1 year, with the possibility of renewal up to another year contingent on performance. Applicants are required to have a recently completed PhD in control, stochastic processes, or related areas. PhD candidates have to comply with the requirements of the Technion graduate school, see https://graduate.technion.ac.il/en/prospective-students/graduates_of_universities_from_abroad/.

Applications (a motivation letter + CV with a list of publications) and enquiries should be addressed to Leonid Mirkin (mirkin@technion.ac.il) or Alexander Goldenshluger (goldensh@stat.haifa.ac.il).
Contributed by: Dimos Dimarogonas, dimos@kth.se


Please contact Dimos Dimarogonas, dimos@kth.se, for further information in case of interest.

7.15. PostDoc: Uppsala University, Sweden
Contributed by: Anders Ahlen, anders.ahlen@signal.uu.se

Postdoctoral position – Secure and Resilient Signal Processing and Control for In-body Area Networks
Duties: To conduct original research in the area of signal- and information processing and control over wireless in-body area networks, in particular, (i) theoretical analysis of secure and resilient networked estimation and control subject to malicious attacks such as, e.g., data integrity, eavesdropping, and jamming attacks, (ii) algorithms for strategic system design, and (iii) integration of energy harvesting powered in-body networks, e.g., networks involving implanted devices. Relevant areas also include distributed and decentralized estimation- and control algorithm design suitable for in-body networks.

The duties include theoretical analysis, algorithm design and implementation via software-based simulations, and ex-vivo trials, and documentation in the form of technical papers and reports. Some teaching in the undergraduate and/or graduate education and supervision of PhD students may be included in the position not exceeding 20%

Qualifications required: To qualify for an employment as a post-doctor, the applicant must hold a PhD degree or a foreign qualification deemed equivalent to a PhD, and the PhD degree must have been obtained no more than three years prior to the application date; however, for example, periods of sick leave or parental leave are deducted from the three-year period.

For this position it is required to have a PhD in Signal Processing, Automatic Control or Wireless Communications, preferably with applications to networked systems or a closely related subject with high quality publications in the related area of signal processing, control and wireless sensor networks. Emphasis will be placed on a strong mathematical background and documented research experience in signal processing and control and/or wireless sensor networks. For further information, please refer to: http://www.uu.se/en/about-uu/join-us/details/?positionId=229838

7.16. PostDoc: University of Waterloo, Canada
Contributed by: John Simpson-Porco, jwsimpson@uwaterloo.ca

Position: Post-Doctoral Fellowship
Project Title: Wide-Area Hierarchical Frequency and Voltage Control for Next Generation Transmission Grids
Location: University of Waterloo, Waterloo, ON, Canada
Starting Date: The position is available immediately. The contract duration is for one year, with an extension to a second year based on performance. Salary will be commensurate with experience.
Description: Our group seeks a post-doctoral fellow in the area of decentralized control design for modern power systems. The broad research objective is to leverage the latest advances in controller synthesis and distributed optimization to design real-time controllers for power transmission (and eventually, distribution) systems. A distinguishing aspect of the project will be a focus on blending modern principled controller design procedures with both hierarchical control and distributed optimization approaches. Responsibilities will include the principled design of distributed control solutions for power systems, and the extensive validation of these control solutions using realistic power system models.

Required Qualifications: The successful candidate must (1) hold a Ph.D. degree in either systems and control theory, convex optimization, or power system dynamics and control, (2) have an established track-record of academic publications in top venues, (3) have exceptional written and verbal communication skills, and (4) be highly motivated to make contributions in the area of decentralized power system control.

How to Apply: E-mail your CV, a Google Scholar link, two to three representative publications, and a list of three references to the PI at jwsimpson@uwaterloo.ca.

Information on the PI: https://ece.uwaterloo.ca/~jwsimpso/

7.17. PostDoc: Nanyang Technological University, Singapore
Contributed by: C. C. Cheah, ecccheah@ntu.edu.sg

The Nanyang Technological University, Singapore invites applications for one postdoctoral research fellow position to participate in the development of robotic dexterous and bimanual manipulation techniques in micro-world.

Applicants for the postdoc research fellow position should hold a Ph.D degree in one or more of the following areas:
1) Micro-manipulation
2) Optical manipulation
3) Dextrous manipulation
4) Cooperative control

The applications should have a track record of competitive research experience in terms of journal publications and have a good command of English and are able to communicate well.

Application Procedure:
Suitably qualified candidates are invited to submit a CV, cover letter initially. Short-listed candidates will be notified for submission of full application packages. Electronic submission of application is encouraged and can be sent to:
Prof C. C. Cheah
School of Electrical & Electronic Engineering Nanyang Technological University
50 Nanyang Avenue
Block S1
Singapore 639798
E-mail Address for E-mailed Applications: ECCCheah@ntu.edu.sg

Application closes when the position is filled. Only shortlisted candidates will be notified for interview.
7.18. **PostDoc: UiT the Arctic University of Norway, Norway**  
Contributed by: Raymond Kristiansen, raymond.kristiansen@uit.no

Postdoc: UiT the Arctic University of Norway, campus Narvik, Norway  
The Department of Electrical Engineering at the Faculty of Engineering Science and Technology, UiT Narvik has a vacant position as Postdoctoral fellow in mathematical modelling and control of multirotor UAVs. The position is attached to the research group Electromechanical systems.  
The position of Postdoctoral Fellow is a fixed term position for a period of two years. The position is related to an ongoing project on use of unmanned aerial vehicles (UAVs), specifically multirotors for shore-to-ship and ship-to-ship transportation of cargo. The field of research for the position is mathematical modelling and advanced control of multirotor UAVs in general, with a special focus on research problems related to landing and take-off on moveable platforms, as well as autonomous operation of multirotor UAVs with suspended cargo loads.  
We seek applicants with relevant competence within fields such as nonlinear systems and control theory, attitude parameterization and rotational control applications, as well as guidance, navigation and (coordinated) control of unmanned aerial vehicles. Candidates with a PhD in control engineering or similar are preferable.  

Apply at:  

Application deadline: 5 November, 2018  
Further information about the position is available by contacting professor Raymond Kristiansen, +4776966196, raymond.kristiansen@uit.no.

7.19. **PostDoc: Harvard University, USA**  
Contributed by: Claire Van Strien, cvanstrien@seas.harvard.edu

Open Post-Doc Positions with the Biomedical Systems Engineering Research Group at Harvard John A. Paulson School of Engineering and Applied Sciences  
The Diabetes Research Group at the Harvard John A. Paulson School of Engineering and Applied Sciences is seeking post-doc fellows that would like to be engaged in cutting edge interdisciplinary biomedical research and the development of novel control algorithms to improve glucose control and quality of life for people with type 1 diabetes mellitus. The research activity will include algorithm development, computer simulations and translation of the work to human clinical studies.  
Qualifications:  
Ph.D. degree (or close to completion) in Systems and Control, or Applied Mathematics, Electrical or Mechanical or Chemical Engineering, or related field.  
Strong background and interest in System Theory, Automatic Control, Optimization.  
Strong background in design and development of MPC algorithms  
Excellent interpersonal, written, and oral communication skills and ability to write peer reviewed papers with limited supervision.  
Ability to collaborate with a multidisciplinary team of scientists and medical professionals on a large project at all stages.

Back to the contents
Required documents:
Detailed curriculum vitae and list of publications
Names and contact information of three references

Prospective candidates should send their application to APS@seas.harvard.edu with the required information.

7.20. PostDoc: University of Groningen, The Netherlands
Contributed by: Bayu Jayawardhana, b.jayawardhana@rug.nl

Postdoctoral Fellowship
Engineering and Technology Institute Groningen
Faculty of Science and Engineering
University of Groningen

Organisation
The University of Groningen is currently in or around the top 100 on several influential global ranking lists. The Faculty of Science and Engineering (FSE) harbours a kaleidoscope of disciplines and research strengths. Our programmes in research and education range from nanomaterials and biomachinery to astronomy, from mathematics to pharmacy, from neurosciences to computer science, and from molecular and evolutionary biology to engineering and technology.

The FSE Fellowship programme
Our unique FSE fellowship programme offers temporary positions for talented junior researchers who want to further develop both their research and teaching skills. You will have an appointment for four years during which you can do challenging research, have various teaching responsibilities (approximately 30% of the time), and be offered opportunities for training and career orientation.
From the start, you will have a personal Work and Development Plan (WDP) that describes the specific research, teaching and training activities that you will undertake. You will receive didactic training in your first year and have the opportunity to obtain a University Teaching Qualification. In addition to the yearly Result and Development Interviews with your supervisors, you will have a yearly meeting with a career counsellor to discuss your career development and plans.
A personal budget of a EUR 1,000 per year is dedicated for additional training and career activities.
We currently offer 15 fellow positions in a broad range of scientific fields. The preferred starting date of the fellows is before April 2019.

Job description
The research area of the FSE fellow will be in Mechatronics and/or (Biomedical) Robotics and/or Systems & Control. For detail, see also: https://www.rug.nl/about-us/work-with-us/job-opportunities/overview?details=00347-02S0006NIP

The position is embedded in ENgineering and TEchnology institute Groningen (ENTEG).

Qualifications
You have:
• a PhD, obtained no longer than 3 years ago, preferably from another university than the University of Groningen
• a promising research record
• affinity with teaching; individuals with actual teaching experience will be favoured
• an excellent command of English.
Conditions of employment

The University of Groningen offers a starting salary depending on the date you obtained your PhD and your postdoctoral years. The UFO-profile Researcher/Lecturer (scale 10) applies. In addition to the primary salary the University offers 8% holiday allowance and an end-of-year bonus of 8.3%:

- 0 years: EUR 3,255 gross per month for a full-time position
- 1 year: EUR 3,389 gross per month for a full-time position
- 2 years: EUR 3,514 gross per month for a full-time position
- 3 years: EUR 3,637 gross per month for a full-time position.

You will have an initial appointment of one year that will be extended by 3 years if you perform satisfactorily. The fellowship will not be extended after the four years period.

The University of Groningen provides career services for partners of new faculty members moving to Groningen.

The University of Groningen has adopted an active policy to increase the number of female scientists across all disciplines of the university. Therefore, female candidates are especially encouraged to apply.

The preferred starting date is before April 2019.

Applications


Interested candidates are invited to submit a complete application including:

- a letter of motivation
- a curriculum vitae, including a list of publications
- a short description (max 1 A4) of your teaching interests (extra attachment 1)
- a short description (max 1 A4) of your scientific field of interest (extra attachment 2).

In this stage of recruitment we don’t ask for reference letters. Unsolicited marketing is not appreciated.

Information

For information you can contact:

- Yvonne Folkers, Coordinator of the FSE Fellowship Programme, Y.Folkers@rug.nl

Please do not use the e-mail address(es) above for applications.


Contributed by: Claudio De Persis, c.de.persis@rug.nl

PostDoc: University of Groningen, the Netherlands

A postdoctoral scholar position is available at the SMS-Cyber-physical Systems research group at the Faculty of Science and Engineering, University of Groningen, the Netherlands.

The research of the group focuses on the modeling and control of complex systems with nonlinear dynamics and large-scale dimensions and their interaction with communication media and computational devices. Examples are power systems, distribution networks, supply chains and flow networks. Current research lines focus on cyber-physical systems, data-driven estimation and control, resilient control, distributed control of networks, game-theoretic-optimal control.

The position also gives the possibility to the successful candidate to further develop his/her educational skills, including teaching a bachelor and a master course. The teaching-research time division is approximately
70% research and 30% teaching.  
Duration: initially one year, possibly starting in February 2018, with the option of extending the contract for one or two more years.  
Deadline for submitting applications: December 8, 2018  
Your Profile:  
• A Ph.D. degree in Control Theory, Mechanical, Computer, Electrical & Electronics Engineering, Applied Mathematics, Computer Science;  
• An excellent background in Systems & Control. Preference might be given to candidates with strong expertise in one of the following areas: identification, nonlinear control, networked control systems, dynamical networks, hybrid control systems, distributed control and optimization, machine learning;  
• Strong academic credentials, written and spoken English proficiency.  
About the organization:  
Since its foundation in 1614, the University of Groningen has enjoyed an international reputation as a dynamic and innovative center of higher education offering high-quality teaching and research. Study and career paths in a wide variety of disciplines encourage currently more than 30,000 students and researchers to develop their individual talents. Belonging to the best research universities in Europe, the top 100 universities in the world and joining forces with prestigious partner universities and networks, the University of Groningen is truly an international place of knowledge.  
Information: 
Interested candidates please send your application together with your detailed CV, motivational letter (1/2-1 A4 page) and list of references to:  
c.de.persis@rug.nl, p.tesi@rug.nl, n.monshizadeh@rug.nl (with f.g.fokkens@rug.nl in cc).  
*Please specify the following text in the subject*: SMS-CPS - PostDoc application.

7.22. PostDoc: Lehigh University, USA  
Contributed by: Nader Motee, motee@lehigh.edu  
Two postdoctoral positions are available with the Distributed Control and Dynamical Systems Laboratory in the Department of Mechanical Engineering and Mechanics at Lehigh University. All candidates with strong backgrounds in all or some of the following research areas are encouraged to apply:  
1. Stochastic dynamical systems; non-Gaussian uncertainty quantification for risk analysis & control.  
2. SLAM in highly dynamic environments; Visual perception.  
3. Learning algorithms and task planning for autonomous robots.  
Applicants should have a PhD degree in Engineering, Computer Science, or Applied Mathematics. The initial appointment is for one year with a possible extension up to 2-3 years. As employees of Lehigh University, postdocs will receive a competitive salary, travel budget, benefits, and discounts for health insurance. An interested applicant may contact Prof. Nader Motee (motee@lehigh.edu) by sending him the following information: (1) one-page research statement explaining how his/her background fits the research areas, (2) detailed CV and list of publications, (3) names of three references. All documents should be sent in PDF format. Applications received before December 15, 2018 will receive full consideration.
7.23. PostDoc: Eindhoven University of Technology, The Netherlands
Contributed by: Mircea Lazar, vacancies.CS@tue.nl

The Control Systems Group at the Electrical Engineering Department in Eindhoven University of Technology (TU/e) has an opening for a Postdoc position for 1 year in the project IMPERIUM

Project description:

IMPERIUM (http://www.imperium-project.eu/home/) is a European research project in which the Eindhoven University of Technology cooperates with DAF (https://www.daf.com/sites-landing/), Continental (https://www.continental-automotive.com/) and other European partners. The goal of the project is to optimize fuel efficiency of heavy-duty trucks by exploiting preview traffic and road data. Some of the preview data, such as legal speed limits, traffic flow, road curvature and gradient, is obtained from an Electronic Horizon Unit (developed by Continental), while additional preview data about the surrounding traffic can be obtained from onboard vehicle sensors, such as radar.

The research goal is to develop scalable algorithms for optimizing the truck fuel efficiency. The algorithms should use the preview data and current velocity/driving mode as input and should determine the optimal velocity and driving mode over a distance horizon in the future. The underlying fundamental theory of optimal control, dynamic programming and model predictive control, in combination with vehicle dynamics and parameter estimation techniques will be utilized to design the algorithms. The resulting algorithms need to be applicable for both standard and hybrid trucks, they need to be real-time compatible with the DAF automotive ECUs and should achieve the targeted fuel improvement.

The post-doc position is for 12 months, with a possible extension for another 12 months, and the work is going to be executed at TU/e, while collaborating with DAF and Continental. In particular, there will be a close co-operation with DAF regarding the algorithm development and validation on a prototype DAF truck.

Project supervision and host:

The project supervision will be provided by Dr. Mircea Lazar (Control Systems) and Dr. John Kessels (DAF). The Postdoc research will be hosted by the Control Systems group (http://www.tue.nl/cs/), within the Electrical Engineering Department of the Eindhoven University of Technology. The Control Systems group is one of the leading groups in control and systems theory in the Netherlands and its staff members are well known researchers worldwide on various domains (Systems identification, Model predictive control, Linear parameter varying systems, Energy management, Spatial temporal systems, Stability theory). The CS group focuses on four main application domains: high-tech systems, energy, automotive and process control. The group actively participates in the Dutch Institute of Systems and Control (DISC).

Candidate requirements:

We are looking for an enthusiastic PD candidate who has recently obtained the PhD title on a similar topic or has good expertise in optimal control/model predictive control, vehicle dynamics and coding of control algorithms. The candidate should be able to communicate fluently in English and contribute to shared CS tasks (supervision of students, assistance with teaching, assistance with grant proposals).

Employment conditions:

As an employee of the Eindhoven University of Technology, you will receive a competitive salary according to the Dutch salary scale for PostDocs, as well as excellent employment conditions. The TU/e offers an attractive package of fringe benefits such as excellent technical infrastructure, child care, savings schemes, and excellent sports facilities. Assistance for finding accommodation can also be given.

Interested candidates are encouraged to send their CV and motivation letter and the names of two references to vacancies.CS@tue.nl. The position start date is open until it is filled.
7.24. **PostDoc: University of Exeter, UK**  
Contributed by: Prathyush P Menon, p.m.prathyush@exeter.ac.uk

A postdoctoral research position is available from 7 January 2019 until 30 March 2021 to work on the NERC funded Campus project. The project is concerned with monitoring the state of the ecosystem in shelf seas around the UK using a combination of modelling and autonomous vehicles. The shelf sea ecosystem around the UK is under considerable pressure from climate change and pollution. Monitoring the state of the ecosystem using conventional means is prohibitively expensive. CAMPUS is concerned with the development of new methods for monitoring the state of the seas using a combination of numerical modelling and autonomous vehicles (mainly gliders and autonomous underwater vehicles - AUVs). The University of Exeter will undertake two tasks in the CAMPUS programme: the first is to build a statistical spatio-temporal model for short term forecasting; and the second is to further our in-house developed strategies for the guidance and control of autonomous vehicles.

The post will be concerned with the development of statistical spatio-temporal models to produce short term forecasts of the shelf sea ecosystem from a combination of dynamical model output (both physical and biological models) and data collected by ships and intelligently navigated gliders. In addition the post holder will work (with Scottish Association for Marine Science) on the development and implementation of novel guidance and control algorithms for underwater vehicles (gliders and AUVs).

For further information please contact Dr Prathyush Menon P.M.Prathyush@exeter.ac.uk

Job advert can be accessed at:  
https://jobs.exeter.ac.uk/hrpr_webrecruitment/wrd/run/ETREC107GF.open?VACANCY_ID=908863N3k2&WVID=3817591jNg&LANG=USA

7.25. **PostDoc: University of Kansas, USA**  
Contributed by: Huazhen Fang, fang@ku.edu

Applications are cordially invited for a postdoctoral research fellow position in the Information & Smart Systems Laboratory (www.issl.space) at the University of Kansas. The position is expected to start as early as January 2019, with the exact start date negotiable. The research project will be concerned with fundamental estimation theory and machine learning. A background in the broad areas of machine learning, deep learning, estimation, signal processing, mathematics, and control will be desirable.

A successful candidate should have the following qualifications: a recent PhD degree with thesis research on machine learning, data science, estimation theory, control systems, mathematics or related subjects, solid mathematical skills, excellent programming (Matlab, TensorFlow, or Python) skills, excellent oral and written communication skills, and strong motivation to perform outstanding research.

The appointment is for one year, with possible extension contingent on availability of funds and research performance. The salary will be in accordance with the postdoctoral salary scale of the University of Kansas.

Interested candidates can feel free to contact Dr. Huazhen Fang (fang@ku.edu) for further information and are encouraged to send: a curriculum vitae detailing research achievements, a list of three referees, and up to three research documents (e.g., thesis, journal articles, conference papers).
Contributed by: Sergio Grammatico, s.grammatico@tudelft.nl

1 PostDoc position: Game theoretic Control, Complex Systems of Systems, Operator Theory
Delft Center for Systems and Control (DCSC), Delft University of Technology, The Netherlands.

I am looking for a talented, outstanding research fellows with a Ph.D. degree (or close to completion) in Systems and Control, or Applied Mathematics, Electrical or Mechanical Engineering, or related field, with theoretical background and interest in System Theory, Automatic Control, Optimization, Game Theory, and with good command of the English language (knowledge of Dutch is not required). Expertise in mixed-integer optimization is appreciated.

General project description: The researcher will conduct theoretical and algorithmic research on complex multi-agent systems characterized by the presence of: (i) mixed cooperative and noncooperative agents; (ii) uncertain and stochastic variables; (iii) mixed-integer decision variables. The research will develop and build upon tools from game theory, monotone and fixed-point operator theory, statistical learning, distributed optimization and control. The main application areas are distributed control for smart power grids and multi-vehicle automated driving.

The PostDoc position is in the context of the research project ”Game theoretic Control for Complex Systems of Systems” (COSMOS), funded by the European Research Council as ERC Starting Grant.

Conditions of employment: The appointments will be for 3 years. As an employees of TU Delft, the research fellows will receive a competitive salary in accordance with the Collective Labour Agreement for Dutch Universities (CAO), of about 3.2k EUR/month gross, possibly from 2.5k EUR/month after taxes, plus holiday allowance (8% of gross annual income) and end-of-year allowance (8.3% of gross annual income), travel budget, secondary benefits, discounts for health insurance and sport membership. Assistance with accommodation can be arranged.

Applications shall include the following documents:
• curriculum vitae;
• statement of motivation and research interests (up to one page);
• transcripts of all exams taken and obtained degrees (in English);
• names and contact information of up to three references (e.g. project/thesis supervisors);
• up to three research documents (e.g. thesis, conference/journal publication).

Applications or inquires shall be emailed to prof. Sergio Grammatico (s.grammatico@tudelft.nl).
The starting date are flexible. The call for applications will remain open until the ideal candidates are found.

More information: s.grammatico@tudelft.nl, https://sites.google.com/site/grammaticosergio.

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7.27. Wallenberg-NTU Presidential Postdoctoral Fellowship: NTU, Singapore and WASP, Sweden
Contributed by: Lihua Xie, elhxie@ntu.edu.sg

Call for the Wallenberg - Nanyang Technological University (NTU) Presidential Postdoctoral Fellowship 2018

Supported by the The Knut and Alice Wallenberg Foundation, the WASP-NTU Presidential Postdoctoral Fellowship provides the opportunity for early career scientists, engineers and scholars from Singapore and
around the world to conduct independent investigations at NTU and a Wallenberg AI, Autonomous Systems and Software Program (WASP) research partner institution in Sweden.

The Wallenberg-NTU Presidential Postdoctoral Fellowship will be awarded to a diverse and select group of five individuals who demonstrate the intellectual capacity and rigor to drive their own research in the broad and multi-disciplinary areas of artificial intelligence, machine learning, big data and data analytics, software and security, mobility and autonomy.

The application for the Wallenberg-NTU Presidential Postdoctoral Fellowship Awards 2018 will open from 1 October 2018 and close 30 November 2018.

Please refer to the link http://www.ntu.edu.sg/ppf/Pages/home.aspx for detail.

You may contact Prof. Lihua Xie at elhxie@ntu.edu.sg if you have interest.

7.28. Postdoctoral Research Fellow: University of New South Wales, Australia

Contributed by: Jie Bao, j.bao@unsw.edu.au

Postdoctoral Research Fellow: The University of New South Wales (UNSW Sydney), Australia

A Postdoctoral Research Fellow position is available in the School of Chemical Engineering, The University of New South Wales (UNSW) Sydney, Australia.

Salary: AUD $93,578– $100,090 per annum plus 9.5% Superannuation and annual leave loading

This is a full-time fixed term position for 1 year, with possibility of extension for a further 12 months.

The Postdoctoral Research Fellow is required to carry out scientific research on an Australian Research Council (ARC) Discovery Project - “A Distributed Optimization-based Approach to Flexible Plantwide Control using Differential Dissipativity”. The Postdoctoral Research Fellow is expected to undertake the development on distributed differential dissipativity conditions for plantwide contraction and a framework for Distributed Economic Model Predictive Control (DEMPC) based on contraction theory and dissipativity theory.

Selection Criteria

* A PhD (or soon to be awarded) in Engineering or Mathematics or related area
* Knowledge and research experience with nonlinear control theory, model predictive control, contradiction theory, distributed control and/or Stochastic systems and control (desirable)
* Ability to supervise undergraduate students or equivalent experience in the supervision of junior staff in related projects (desirable)
* Demonstrated knowledge and research experience with process control and modern control theories
* Strong mathematical skills
* Demonstrated ability to conduct independent research with limited supervision
* Demonstrated track record of publications and conference presentations relative to opportunity
* Demonstrated ability to work in a team, collaborate across disciplines and build effective relationships
* Strong interpersonal skills with demonstrated ability to communicate and interact with a diverse range of stakeholders and students
* Knowledge of health and safety responsibilities and commitment to attending relevant health and safety training

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Applicants should apply online at http://external-careers.jobs.unsw.edu.au/cw/en/job/495229/postdoctoral-fellow-research-arc

For further information about the position, please contact:
Professor Jie Bao - j.bao@unsw.edu.au
T: +61 2 9385 6755

Applications close: 18th November 2018 at 11pm Sydney time.

7.29. Research Fellow: University of Hull, UK
Contributed by: Ron Patton, r.j.patton@hull.ac.uk

Research Fellow Position:
Fault Detection and Isolation and Fault Tolerant Control in Offshore Renewable Energy Systems, Aura Research Centre, University of Hull, UK. We are looking to recruit a talented and outstanding research fellow with a Ph.D. degree in Systems and Control or related subject and with good command of the English language. Research experience in control of renewable energy systems or energy harvesting will be an advantage, with internationally excellent publications and conference proceedings. Evidence of the ability to build strong and effective research networks and contribute to the successful completion of collaborative research projects would be valuable experience for an applicant for this position. Recent PhD graduates should not be put off from applying.

An invitation to apply for the post is to be found at:
https://jobs.hull.ac.uk/Vacancy.aspx?ref=FS0394
with application deadline 23rd November, 2018.

Persons interested in discussing the post further should contact Professor Ron Patton: r.j.patton@hull.ac.uk

General project description:
The chosen applicant will conduct theoretical and application based research focused on the development of fault diagnosis and fault tolerant control architectures and algorithms for large structure offshore wind turbines (up to 8MW). The work will focus on robust fault tolerant control approaches, capable of maintaining good power efficiency performance in the presence of sensor or actuator faults and rotor, tower bending and wind air flow uncertainty.

The research will contribute to a new EPSRC Project: “A New Partnership in Offshore Wind (http://www.npow.group.shef.ac.uk/)”. This is an exciting new collaboration between the Universities of Hull, Sheffield and Durham with Siemens Gamesa Renewable Energy and Ørsted. The successful research fellow will be expected to work closely with the above academic institutions and industry partners and to report results to collaborators and to disseminate them through journal and conference publications.

Conditions of employment:
The appointment will be for 3 years on the Band 7 Salary Scale in the UK and the appointee will attract a handsome travel bursary to support the research.

7.30. Research Fellow: University of Warwick, UK
Contributed by: Xiaowei Zhao, xiaowei.zhao@warwick.ac.uk
Research Fellow in Microgrid or Machine Learning, University of Warwick, UK

Two full-time posts are available on a fixed term basis, to start as soon as possible with an end date of 27 June 2021.

The School of Engineering seeks to appoint two full-time Research Fellows to work an EPSRC funded project on developing an intelligent energy management system for a grid-connected microgrid (consisting of distributed renewable energy sources, energy storages and local loads), this will maximise energy usage efficiency and make renewable generation more cost effective whilst minimising environmental impact and provide ancillary services. This project has eight project partners including National Grid UK.

Research Fellow 1 will mainly work on microgrid modeling including wind/solar power generation, energy storage, grid integration, power forecasting, power system analysis. Research Fellow 2 will mainly work on big data, machine learning, forecasting, energy trading analysis, controller design.

You will undertake independent and collaborative research and will be expected to write up your research for publication. You will be expected to deal with any management/administration problems that may arise from the project and produce journal and conference publications ensuring that the project objectives and deadlines are met.

It is essential that you have a good honours degree and a PhD (or expect to be awarded a PhD shortly) in the fields of Control Engineering, Electrical Engineering, Data science, Machine Learning, Mathematics, or Mechanical Engineering. You will have a developing research profile with the ability to publish high quality research output and will be able to contribute to the development of funding proposals. You will have excellent IT skills including demonstrable ability to use IT to write technical research papers and presentations. You are also required to be an excellent communicator with strong communication skills. You should have strong experience in at least one of the following areas: Power systems in particularly Microgrid, energy storage, data science, machine learning, energy trading, optimization, controller design. You should have excellent interpersonal skills and be able to work well within a team.

The University aims to promote work life balance for all employees and the School of Engineering will consider a range of possible flexible working arrangements in order to recruit the best candidate.

The School of Engineering is committed to the principles of the Athena SWAN Charter which recognises work undertaken to address gender equality, representation and progression for all staff working in an academic environment. The School currently holds the Athena SWAN Bronze award and the University holds an Institutional Silver award. Further information about the work of the School in relation to Athena SWAN can be found at the following link: https://warwick.ac.uk/fac/sci/eng/about/athenaswan/

If you have not yet been awarded your PhD but are near submission or have recently submitted your PhD, any offers of employment will be made as Research Assistant on level 5 of the University grade structure. Upon successful award of your PhD and evidence of this fact, you will be promoted to Research Fellow on the first point of the level 6 of the University grade structure.

For informal discussion of this opportunity, please contact Prof. Xiaowei Zhao at Xiaowei.zhao@warwick.ac.uk.

Click the link here to apply:
https://atsv7.wcn.co.uk/search_engine/jobs.cgi?SID=amNvZGU9MTc3MTYwOSZ2dF90ZW1wbGF0ZT0xNDU3Jm93bmVyNjQ5NQ==

7.31. Visiting Faculty Fellow: Georgia Tech, USA
Contributed by: Panagiotis Tsiotras, tsiotras@gatech.edu
The Institute for Robotics and Intelligent Machines (IRIM) at Georgia Tech invites applications/nominations for the 2018-2019 Visiting Faculty Fellows program.

IRIM’s VFF program supports extended visits (one to six months) to the Georgia Tech Atlanta campus for individuals working at other institutions or industry/government laboratories, engaged in research activities focusing on control, robotics, and AI (broadly interpreted). IRIM will provide Visiting Fellows partial salary support, along with support for travel and living expenses. During their stay, the IRIM Visiting Fellows will have the opportunity to interact with IRIM faculty and students and give a 2-3 day mini-tutorial on their current research. Previous IRIM Visiting Fellows include G. Chirikjian (2017) and M. Spong (2018).

More information about the IRIM VFF program can be found at:
robotics.gatech.edu/faculty/fellows
or by e-mail at vff2019@robotics.gatech.edu

The application deadline is **January 31, 2019**.

Georgia Tech’s Institute for Robotics and Intelligent Machines (IRIM), established in 2013, is one of the 11 Interdisciplinary Research Institutes (IRIs) at Georgia Tech and serves as an umbrella under which robotics researchers, educators, and students from across campus can come together to advance the many high-powered and diverse robotics activities at Georgia Tech. More than 70 faculty, 180+ students and 30 labs are part of IRIM, involved in research related to mechanics, HMI, AI&ML, perception, computer vision, and control. Additional information about IRIM can be found at: robotics.gatech.edu

### 7.32. Research Scientist: French German Research Institute of Saint-Louis, France

Contributed by: Mrs. Borchert, humanresources@isl.eu

The French German Research Institute of Saint-Louis (ISL), a leader in Europe in research on guided projectiles, is urgently looking for the head of its department "guidance, navigation, control, and System analysis". This department belongs to the division "Flight Techniques for Projectiles", comprising also aerodynamics, real flight experiments and sensors & communication systems departments. Their research is applied to all kinds of guided projectiles, mostly gun-launched. The position is challenging as the division’s roadmap schedules ambitious deadlines for demonstrating the feasibility of an innovative long-range guided projectile concept.

We are currently looking for a

Research scientist (m/f),
Head of the department "guidance, navigation, control, and system analysis",

Your Tasks:
- Develop and maintain, at the highest level, research capabilities in innovative solutions on guidance, navigation and control systems for the needs in guided projectiles, in synergy with the other departments of the division.
- Develop and maintain, at the highest level, evaluation capabilities of performances of guided projectiles concepts.
- Leverage the expertise of academic partners, other research institutes and industry to the benefit of the objectives of the department.
- Engage proactively with industry, so as to anticipate best their needs in terms of research output.
- Establish the research department program in accordance with the strategy and priorities of the Division and with the needs of the French and German Ministries of Defence.
- Manage, plan and evaluate the research carried out in the department.
- Monitor closely the research work of the scientists, engineers and PhD students of the department.

The incumbent is expected to carry out personally research, in addition to the management of the department.

The department possesses recognised skills and has developed so far quite innovative solutions.

Other duties:
- Manage the department’s human and financial resources as well as scientific equipment.
- Optimise the use of the department’s capabilities for the proper execution of the research program.
- Involve strongly in the department’s life, cohesion and development.
- Involve strongly in a synergetic approach in particular with the other departments of the division as key for success.
- Increase the scientific reputation of our Institute through high-level publications, involvement in conferences, external communication, etc.

Your Profile:
- PhD in automatic control applied to flight mechanics.
- At least 10 years of experience in high-level research (with a demonstrated prominence in your scientific community), including the effective management of a research team of 10 collaborators at least.
- Skills in guidance, navigation and control, and in system analysis for flying vehicles; additionally, skills in flight mechanics, aeroballistics, aerodynamics, mechatronics would be highly desirable.
- Knowledge in projectile and missile technologies.
- Organisational skills, ability to work effectively as the leader of the team, communication skills.
- An effective work experience in a multinational context and experience in managing multi-partners Projects would be valued.
- Excellent command of English; understanding or even ability to express yourself efficiently in one or both of the French and German languages would be of course a very desirable plus.

The ISL offers an attractive salary, flexible work arrangements and a very friendly work environment.

If these challenges appeal to you and you feel you have the right profile, we are looking forward to receive your complete application mentioning the following keyword "GNC-S".

French-German Research Institute of Saint-Louis Mrs. Isabel BORCHERT
5 rue du Gén éral Cassagnou
BP 70034
68301 SAINT LOUIS CEDEX, France
Phone: +33 (0)3 89 69 51 31
humanresources@isl.eu
For more information please visit www.isl.eu.

7.33. Faculty: Louisiana State University, USA
Contributed by: Marcio de Queiroz, mdeque1@lsu.edu

Tenure-Track Assistant Professor - Robotics

Louisiana State University (LSU) invites applications and nominations for a tenure-track faculty position in the Department of Mechanical and Industrial Engineering (MIE) of the College of Engineering.
Appointment will be made at the Assistant Professor level in Mechanical Engineering, though applicants with exceptional qualifications may be considered at other ranks. Research expectations include a commitment to developing and maintaining an innovative, nationally recognized and externally funded research program, and the ability to work independently and pursue interdisciplinary collaborations, both internally and externally to LSU. Teaching expectations include a commitment to effective instruction and mentoring at the undergraduate and graduate levels, and supervision of student research.

Job Responsibilities:
Teaching at the undergraduate and graduate level and associated service in support of the educational mission and reputation of the unit. Research resulting in scholarship published in archival journals and research grant/contract solicitation to support it, along with associated service in support of the research mission and reputation of the unit. The successful candidate will have the opportunity to join a growing Robotics Team and support a recently introduced multidisciplinary Robotics Minor in the College of Engineering.

Required Qualifications:
Bachelor’s degree in Mechanical Engineering or related discipline, with a Ph.D. in Engineering or related scientific field (ABD candidates will be considered so long as degree requirements are met prior to August 2019); at least four years of experience, including graduate study; experience with robotics; excellent verbal and writing skills.

Preferred Qualifications:
Background in any area of robotics is welcome, including but not limited to: industrial robotics, collaborative robotics, integrated human robotics (e.g., assistive and wearable robotics), autonomous vehicles, subsea robotics, and medical robotics. Applicants should demonstrate interest and capabilities for developing active, internationally-visible, externally-sponsored research programs related to robotics, autonomous systems, or similar fields.

To apply:
https://lsu.wd1.myworkdayjobs.com/LSU/job/LSU—Baton-Rouge/Assistant-Professor—Robotics-Automation_R00028745

Please attach the following as one file to your online application: cover letter, curriculum vitae, teaching philosophy statement, research plan statement and three professional references including name, title, phone number and e-mail address.

A copy of your transcript(s) may be attached to your application (if available). However, original transcripts are required prior to hire.

The review of applications will begin on November 15, 2018 and will continue until the position is filled.

7.34. Faculty: York University, Canada
Contributed by: Jinjun Shan, jjshan@yorku.ca

The Department of Earth and Space Science and Engineering, York University, is seeking an outstanding candidate at the rank of Assistant Professor in the area of Space Engineering. The successful candidate will have a PhD in Space Engineering, or a closely related field, and a research record commensurate with rank.
The appointment will commence on July 1, 2019, subject to budgetary approval. For full position details, see http://www.yorku.ca/acadjobs.

Applicants should complete the on-line process at http://lassonde.yorku.ca/new-faculty/. A complete application includes a cover letter indicating the rank for which the candidate wishes to be considered, a detailed CV, statement of contribution to research, teaching and curriculum development, three sample research publications and contact information for three referees.

Complete applications must be received by December 31, 2018.

York University is an Affirmative Action employer and strongly values diversity, including gender and sexual diversity, within its community. The Affirmative Action Program, which applies to women, Aboriginal people, visible minorities and people with disabilities, can be found at http://acadjobs.info.yorku.ca/affirmative-action/ or by calling the AA office at 416.736.5713. All qualified candidates are encouraged to apply; however, Canadian Citizens, Permanent Residents and Indigenous peoples in Canada will be given priority.

7.35. Faculty: Lafayette College, USA

Contributed by: Yih-Choung Yu, yuy@lafayette.edu

The Department of Electrical and Computer Engineering at Lafayette College invites applications for a tenure track position at the assistant professor level beginning in July 2019. The department is especially interested in candidates with potential for interdisciplinary connections in areas including (but not limited to) embedded systems, robotics, computer architecture, the internet of things, cyber-physical systems, and autonomous systems. The department is seeking candidates with a passion for undergraduate teaching and mentoring and the ability to teach courses in the digital stem of the ECE curriculum. Candidates must demonstrate the potential to establish a research program that can engage undergraduates and result in the publication of scholarly work in peer-reviewed venues.

Lafayette College is deeply committed to creating a diverse community: one that is inclusive and responsive, and is supportive of each and all of its faculty, students, and staff. All members of the College community share in the responsibility for creating, maintaining, and developing a learning environment in which difference is valued, equity is sought, and inclusiveness is practiced. In cultivating this community, the Engineering programs at Lafayette have taken a national leadership role in diversity as evidenced by the recent ASEE report listing Lafayette’s engineering programs among the top 10 in the nation for women on the faculty and among the top 20 for Bachelor’s degrees awarded to women.

Lafayette College is a small, highly selective undergraduate institution emphasizing superior education in engineering and the liberal arts. The College is located in the vibrant and historic city of Easton in the Lehigh Valley of Pennsylvania, which is 75 miles from both New York City and Philadelphia. The Electrical and Computer Engineering Department has approximately 75 students across all classes and features small class sizes, hands-on laboratory experiences, and strong support for faculty research and professional development.

Applicants should possess a Ph.D. in Electrical and/or Computer Engineering. To apply, please submit application materials, including a cover letter, curriculum vitae, statement of teaching interests, a brief research plan and three letters of recommendation, online at: http://apply.interfolio.com/55267. In your cover letter, please address how your scholarship, teaching, mentoring, and/or community service might support Lafayette College’s commitment to diversity and inclusion. Review of applications will begin November 1, 2018, and will continue until the position is filled.
Lafayette College is an equal opportunity employer and encourages applications from women and minorities.

7.36. Faculty: Queen’s University, Canada
Contributed by: Rianna Lewis, rianna.lewis@queensu.ca

Faculty Position at Queen’s University
The Department of Mathematics and Statistics at Queen’s University, Canada, invites applications for a tenure-track faculty position in Engineering and Applied Mathematics at the rank of Assistant Professor with a starting date of July 1, 2019. Candidates with expertise in any of the following two clusters are strongly encouraged to apply, though we will consider outstanding candidates in all areas of mathematical engineering:
(i) Mathematics of Machine Learning, Data Sciences, Statistical Learning, and Information Theoretic Methods in Learning and Data Science
The faculty will be part of the Mathematics and Engineering Program at Queen’s. In Mathematics and Engineering, there are presently prominent research groups in Geometric Mechanics, Control Theory, and Information and Communication Theory. The Mathematics and Engineering Program, and the Department of Mathematics and Statistics at large, offer an excellent environment for research and teaching with very high standards and a collaborative environment. For more information about the Mathematics and Engineering program, please see http://www.mast.queensu.ca/meng/.

A successful candidate will be expected to work in any of these or complementary research areas, and to contribute to both the graduate and undergraduate programs. Candidates eligible to obtain a license as a Professional Engineer are preferred.

Review of applications will begin on 10 December 2018. For the full position announcement, please visit: https://www.queensu.ca/mathstat/department/employment .

7.37. Faculty: Concordia University, Canada
Contributed by: Wen-Fang Xie, wfxie@encs.concordia.ca

Gina Cody Research Chair in Mechanical/Mechatronic/Robotics Engineering
http://www.concordia.ca/ginacody/about/jobs/miae/mechanical-mechatronic-robotics-engineering.html

Ranked among the top ten engineering schools in Canada, the Gina Cody School of Engineering and Computer Science is home to over 10,000 engineering and computer science students and a faculty complement of 230 professors. The Gina Cody School of Engineering and Computer Science has about 4,500 graduate students enrolled in 35 graduate programs. The School’s research profile continues to grow as it fosters multidisciplinary approaches to finding solutions to a broad range of societal challenges. For more information on the School, please visit: concordia.ca/ginacody

The Department of Mechanical, Industrial and Aerospace Engineering has 56 faculty members active in various areas of mechanical, industrial and aerospace engineering and its strength has grown in recent years. The Department is dedicated to multidisciplinary research and training of undergraduate and graduate students and offers bachelor’s and master’s degrees in Mechanical, Industrial and Aerospace Engineering, and PhD programs in Mechanical and Industrial Engineering. Concordia University attracts high quality
domestic and international students in all its programs and enrolments are stable and strong at both the undergraduate and graduate levels. More information on the Department is available at: concordia.ca/miae.

The Department seeks an outstanding candidate for the Gina Cody Research Chair in Mechanical/Mechatronic/Robotics Engineering at the rank of Associate or Full Professor. The five year research chair is renewable and comes with an attractive research package. The candidate will preferably have research interests related to mechatronics/robotics or a related area, however, exceptional candidates in other fields of mechanical or industrial engineering will be considered. Candidates should possess a Bachelor's degree in Mechanical/Mechatronic Engineering or similar engineering disciplines with a PhD degree in Mechanical Engineering or in a closely related area.

The successful candidate shall be internationally recognized as a leader in the field, with an excellent track record in leading major research initiatives, attracting strong external funding, supervising graduate students and post-doctoral fellows and committed to excellence in teaching at both the graduate and undergraduate levels. She/he will conduct independent scholarly research, and demonstrate industrial application of their research activities. As this is a senior research chair appointment, the incumbent is expected to provide leadership in their research area through initiatives that may include large team-based grants etc. Membership or eligibility for membership in a Canadian professional engineering association, preferably in the Province of Quebec is required. The language of instruction at Concordia is English; however, knowledge of French is an asset.

Applications must include a cover letter, detailed curriculum vitae, teaching and research statements, and names of four referees. Electronic applications should be submitted by December 1, 2018 and will be reviewed on an ongoing basis until a suitable candidate has been identified. Only short-listed applicants are notified. Kindly forward your electronic applications to:
Ms Sophie Merineau (assistant-to-chair@mie.concordia.ca)

7.38. Faculty: University of Cambridge, UK
Contributed by: Fumiya Iida, fi224@cam.ac.uk

University Lectureship (equivalent to US Assistant Professorship) in Computer Vision and Robotics(University of Cambridge, Department of Engineering)
Application deadline: 14 November 2018

Applications are invited for a University Lectureship in Computer Vision and Robotics. The successful candidate will join the Machine Intelligence Laboratory to add to its expertise in Computer Vision, Robotics, Medical Imaging, and Speech and Language Processing. We encourage applicants who will strengthen our current research activities in machine learning, object recognition and detection, segmentation, tracking, reinforcement learning, robot navigation, manipulation, human-robot interaction, and all aspects of machine intelligence and perception and interaction. The ideal candidate will work in both Computer Vision and Robotics, but candidates who specialise in either field are also encouraged to apply.

To apply online for this vacancy, please follow the web link below. This will route you to the University’s Web Recruitment System, where you will need to register an account (if you have not already) and log in before completing the online application form.

In addition to this, please ensure that you upload the application documentation Curriculum Vitae (CV), a full publications list, highlighting up to 5 publications you regard as most significant, and Statement of
professional, teaching and research experience and describe your future research plans (no more than two
pages).

If you upload any additional documents which have not been requested, we will not be able to consider these
as part of your application.

The closing date for applications is Wednesday 14 November 2018. If you have any questions about the
application process, please contact the HR Office (hr-office@eng.cam.ac.uk, +44 (0) 1223 332615).

The interviewing panel will meet soon after the closing date in order to produce a short-list; references may
be solicited. Short-listed candidates will be invited to visit the Department, give a short seminar/lecture
and attend a formal interview. This process will take place during mid January 2019.

Informal enquiries may be made to Dr Fumiya Iida (fi224@cam.ac.uk).

Please quote reference NM12143 on your application and in any correspondence about this vacancy.

The University values diversity and is committed to equality of opportunity.

The University has a responsibility to ensure that all employees are eligible to live and work in the UK.

Further information
http://www.jobs.cam.ac.uk/job/13667/

7.39. Faculty: The George Washington University, USA

Contributed by: Taeyoung Lee, tylee@gwu.edu

The Department of Mechanical & Aerospace Engineering at The George Washington University is seeking
exceptional candidates for a tenure track faculty position at the Assistant or Associate Professor level,
beginning as early as Fall 2019. All areas of mechanical engineering are of interest, including robotics,
controls, mechatronics and autonomous systems.

We seek candidates that can augment or complement existing research strengths in energy, bioinspired
engineering, fluid mechanics and thermal science, materials science and mechanics, nano/microsystems, and
robotics and controls. New faculty will join a vibrant department housed in a new $275M Science and
Engineering Hall that encourages interdisciplinary efforts across science and engineering. Current research
is supported by federal sources including NSF, NIH, NIST, DARPA, DOD, DOE, and a variety of industrial
sources.

The George Washington University is the largest academic institution in the nation’s capital. The exceptional
location affords the GW community unique cultural and intellectual opportunities, with close access to many
federal funding agencies, research laboratories, and one of the largest concentrations of technology companies
in the nation.

Minimum Qualifications

A Ph.D. in Mechanical or Aerospace Engineering, or a related area, by date of appointment is required.
Applicants must demonstrate potential for developing a high quality research program and for attracting
extramural research funding. All applicants must have demonstrated teaching excellence or potential at both
the undergraduate and graduate levels.

Responsibilities

Faculty hired into this position will be expected to build a substantial funded research program, mentor
graduate students in research and teach courses at the undergraduate and graduate levels.

Inquiries and Application

To inquire, please email to maesearch@gwu.edu or call 202-994-9800. To apply, complete the online faculty
application, at http://www.gwu.jobs/postings/ http://www.gwu.jobs/postings/11423 and upload: (1) a detailed CV or resume; (2) a research statement; (3) a teaching statement; and (4) a cover letter describing your goals and why you are applying to this position (5) and include full contact information for at least three professional references. Please have your references email their letters directly to maesearch@gwu.edu. Please also indicate your primary area(s) of expertise and interest, and desired professorial rank. Only complete applications will be considered. Review of applications will begin January 3, 2019 and will continue until the position is filled.

EEO/AA Policy
The George Washington University is an Equal Opportunity and Affirmative Action Employer that does not unlawfully discriminate in any of its programs or activities on the basis of race, color, religion, sex, national origin, age, disability, veteran status, sexual orientation, gender identity expression, or on any other basis prohibited by applicable law.

BACKGROUND SCREENING STATEMENT
Employment offers are contingent on the satisfactory outcome of a standard background screening.

7.40. Faculty: University of South Florida, USA
Contributed by: Tansel Yucelen, yucelen@usf.edu

University of South Florida, Department of Mechanical Engineering, Open Rank (Assistant/Associate/Full Professor) (Job Opening ID#18698)

The Department of Mechanical Engineering at the University of South Florida invites applications for tenured/tenure-earning faculty positions at Assistant, Associate, or Full Professor ranks to begin on August 7, 2019. Areas of emphasis for these positions are advanced manufacturing, thermal systems, and design, but all related fields will be considered. The positions require an earned doctorate degree in Mechanical Engineering or a closely related discipline from an accredited institution. The candidates must have a demonstrated record of scholarly achievements, and will be expected to establish an internationally-recognized, externally funded research program and demonstrate a strong commitment to teaching, student mentoring, and professional service. In order to be considered for Associate/Full Professor positions, the applicants must demonstrate outstanding and existing capabilities in externally funded research, instruction, and mentoring of students.

The Department has 20 faculty members and offers B.S., M.S. and Ph.D. degrees in Mechanical Engineering. The Department faculty members have collaborations with all departments in the College of Engineering, as well as the Colleges of Medicine, Arts & Sciences, Education, Nursing, and Public Health. The Department also has strong ties with numerous centers and institutes at USF, including the Clean Energy Research Center (http://cerc.eng.usf.edu), Nanotechnology Research and Education Center (http://www.nrec.usf.edu), Center for Urban Transportation Research (https://www.cutr.usf.edu), Center for Assistive Rehabilitation Robotics & Technologies (http://carrt.eng.usf.edu), H. Lee Moffitt Cancer Center, Global Center for Hearing and Speech Research, and USF Health Byrd Alzheimer’s Institute. Further information about the Department can be found at http://me.eng.usf.edu.

The College of Engineering at the University of South Florida is ranked at #55 among public institutions by U.S. News & World Report’s 2019 engineering graduate school rankings. The College serves nearly 7,000 students, offering ten bachelor’s programs, seven ABET-accredited, as well as 12 master’s and eight doctoral degrees. The College is actively engaged in local and global research activities with $36.4 million in research awards for the fiscal year 2017-2018. The College has 11 major research centers and institutes and is actively
engaged in local and global research activities focused on sustainability, biomedical engineering, computing technology and transportation.

The University of South Florida System is a high-impact, global research system dedicated to student success. In 2018, the Florida Board of Governors designated USF Tampa as a Preeminent State Research University, placing USF in the most elite category among the state’s 12 public universities. With more than $500 million in annual research expenditures, USF ranks 29th in the nation among public universities as reported by the National Science Foundation (2016). USF Tampa was ranked #19 among the “Best Universities for Technology Transfer, 2017” by the Milken Institute. USF ranks 1st in Florida, 5th in the nation among public universities and 12th world-wide for granted U.S. patents among all universities according to the Intellectual Property Owners Association/NAI (2017) and has ranked in the Top 10 among public universities for U.S. patents granted for the past eight years (2010-2017).

USF offers a first-class benefit package that includes medical, dental and life insurance plans, retirement plan options, tuition program and generous leave programs and more. Tampa Bay is home to 19 corporate headquarters with over $1 billion in annual revenue, eight of which are Fortune 1000 companies. Tampa is also home to USSOCOM. Tampa is the nation’s second-fastest-growing tech hub.

Applicants must submit a detailed curriculum vitae and names of at least four professional references. In addition, the application should include a 1-page statement of the applicant’s teaching interest and vision, and a 1-page statement of the applicant’s research plans. The cover letter indicating your interest in the specific rank should be addressed to Faculty Search Committee Chair, Mechanical Engineering, University of South Florida, 4202 E. Fowler Ave, ENB 118, Tampa, Florida, 33620. Review of applications will begin on December 15, 2018 and will continue until filled. Applicants must submit their application electronically with supporting documentation as one PDF file directly online to: https://www.usf.edu/work-at-usf/careers/index.aspx. (Applicants search Job Opening ID#18698).

The University of South Florida is an Equal Opportunity/Equal Access/Affirmative Action Institution. Women and minorities are strongly encouraged to apply. Dual career couples with questions about opportunities are encouraged to contact the Department chair. To request disability accommodations in the application and interview process, please notify Khoa Dinh, EOL Coordinator at (813) 974-9272 at least five working days in advance.

7.41. Faculty: University of Central Florida, USA
Contributed by: Aman Behal, abehal@ucf.edu

Position Number 38389
Class Title Assistant Professor, Disability, Aging, and Technology
Administrative Title No Administrative Function

Job Description
The University of Central Florida (UCF) has established several interdisciplinary clusters to strengthen its academic offerings and research mission. In support of this effort, we are recruiting faculty in the broad area of disability, aging, and technology and plan to hire three tenure-track assistant professors for the Disability, Aging and Technology Cluster. The positions have an anticipated start date of August 8, 2019.

The Disability, Aging and Technology (DAT) cluster is a partnership among six colleges: the College of Health Professions and Sciences, the College of Nursing, the College of Sciences, the College of Engineering and Computer Science, the Rosen College of Hospitality Management, the College of Medicine, and the Nanoscience Technology Center at UCF. The DAT cluster seeks transdisciplinary engagement in research and
education to link health and wellness interventions with technology applications so that effective and feasible health, behavioral, and assistive technologies can be used with diverse populations. Please visit our website to learn more about the cluster and the departments involved: https://www.ucf.edu/faculty/cluster/disability-aging-technology/.

The positions are interdisciplinary and will be expected to strengthen both the cluster and the candidate’s chosen tenure home (Computer Science, Electrical and Computer Engineering, or Mechanical Engineering). Both individual and interdisciplinary infrastructure and startup support will be provided with this new position.

We seek one experienced candidate for each of the following areas: 1) manipulator design; 2) cooperative robotics; and 3) dynamics and control. More specifically related to the DAT cluster, a successful candidate will be able to contribute to one or several of the following subject areas (but not limited to): haptics, tactile sensor, brain-machine interface, soft-robot, human-robot interaction, rehabilitation robot, computer vision for health monitoring, wearable robots, and assistive devices.

UCF is one of the nation’s largest universities with a diverse student body of more than 66,000 students and has grown substantially in size, quality, diversity, and reputation in its first 50 years. As of spring 2017, UCF is an emerging Hispanic Serving Institution (HSI). In the last five years, the Hispanic/Latino, full-time undergraduate student population at UCF has steadily increased from 19% to 26.3% (16,500+) of its overall undergraduate student body. Today, the university offers more than 200 degree programs at its main campus in Orlando. UCF is an economic engine, attracting and supporting industries vital to the region’s future while providing students with real-world experiences that help them succeed after graduation. UCF’s Orlando location also puts it at the center of the Florida High Tech Corridor. The corridor has an excellent industrial base that includes software, defense, space, simulation and training, and a world-renowned entertainment industry. Adjacent to UCF is a thriving research park that conducts over $2 billion in funded research, hosting more than 100 high-technology companies and UCF’s Institute for Simulation and Training. The Central Florida area is designated by the State of Florida as the Center of Excellence in Modeling and Simulation. UCF also has an accredited medical school which was established in 2006. It has established partnerships with all of the major healthcare systems in Central Florida and is a neighbor to large corporations such as Disney, Harris Corporation, Lockheed Martin, Siemens, and many others. Great weather, easy access to the seashore, one of the largest convention centers in the nation, and one of the world’s best airports are just a few features that make Orlando an ideal location. We encourage you to learn more about UCF at http://www.ucf.edu/faculty.

Position Minimum Qualifications
A Ph.D. from an accredited institution at the time of appointment in an area appropriate to the DAT cluster (e.g., Computer Science, Electrical and Computer Engineering, Mechanical Engineering, etc.).

The selected candidate must also have a record of research experience in aging, disability, or technology and teaching experience.

Preferences
A history of working with teams, especially teams that span multiple disciplines, is a strongly preferred qualification.

Special Conditions
Applicants for this position will also be considered for position numbers 30266 and 30267.

Equal Employment Opportunity Employer
As an equal opportunity/affirmative action employer, UCF encourages all qualified applicants to apply, including women, veterans, individuals with disabilities, and members of traditionally underrepresented popu-
7.42. Faculty: MIT, USA
Contributed by: Richard D. Braatz, braatz@mit.edu

SYSTEMS FACULTY POSITION
MASSACHUSETTS INSTITUTE OF TECHNOLOGY, CAMBRIDGE, MASSACHUSETTS

The MIT Department of Chemical Engineering together with the Institute for Data, Systems, and Society (IDSS) are seeking candidates for a joint tenure-track faculty position starting in July 2019 or on a mutually agreed date thereafter. Appointments will be at the assistant or untenured associate professor level. In special cases, a senior faculty appointment may be possible. Candidates must have a Ph.D. in Engineering, Applied Mathematics, Operations Research, Physics, Data Science, Computer Science, or a related field by the start of their employment. Faculty duties include teaching, research, and supervision of students.

We will consider candidates with background and interest in the general area of Systems, that is, analysis, optimization, design, and/or control of complex interconnected systems. Expertise areas of interests include, but are not limited to:

- Systems technologies for energy, materials, chemicals, and/or biomedical applications
- Advanced manufacturing systems, e.g., modeling, analysis, design, and control of manufacturing of products with specified molecular, micro, or mesoscale structures
- Mathematical modeling, design, and/or control of electrochemical systems
- Machine learning, high-dimensional statistics, data analytics for engineering applications
- Systems biology, systems biomedicine, and metabolic engineering
- Systems theory and algorithms for molecular and nanoscale systems
- Renewable energy and interconnected energy-water-food systems
- Design of products for sustainability, e.g., recycling systems, technoeconomic analysis, life cycle assessment

We are interested in candidates who have the vision and interest to contribute to the research frontier of emerging interdisciplinary fields. Appointment will be made in partnership with IDSS and the MIT Department of Chemical Engineering, whose faculty come from a wide variety of disciplines that include Engineering, Mathematics, Materials Science, Physics, Chemistry, and Biology. The objective of this position is to hire the best person, irrespective of the disciplines in which they received their degrees.

Candidates must register with the School of Engineering Faculty Search website (https://school-of-engineering-faculty-search.mit.edu/cheme/) and must submit application materials electronically to this website. Candidate applications should include a description of professional interests and goals in both teaching and research. Each application should include curriculum vitae and the names and addresses of three or more individuals who will provide letters of recommendation. Letter writers should submit their letters directly to MIT, preferably on the website or by mailing to the address below. Applications received by December 1, 2018 will be given priority.

Send all materials not submitted on the website to: systems-search@mit.edu

MIT is an equal opportunity employer. Women and underrepresented minorities are encouraged to apply.
Assistant Professor Position in Robotics and Controls

The P.C. Rossin College of Engineering & Applied Science at Lehigh University invites qualified individuals to apply for tenure-track positions in the area of Robotics and Controls. The primary goal of this search is to strengthen our existing team of faculty members in the interdisciplinary research areas related to Robotics and Controls, while deepening Lehigh’s footprint in local industry and related technologies as well as achieving national prominence and leadership. We invite applications from outstanding faculty candidates in all aspects of Robot Autonomy, including (but not limited to):

- Emerging methodologies in perception (visual sensing, learning, inference)
- Task planning and control of autonomous systems
- Emerging applications of autonomy (collaborative robots, social robots, etc.)

Candidates are required to have a Ph.D. degree in Computer Science, Electrical Engineering, Mechanical Engineering, or a related field. Applications from female or minority candidates are strongly encouraged.

Lehigh University is an affirmative action/equal opportunity employer that provides competitive salaries and comprehensive benefits and has a well-developed infrastructure to address dual career and work-life balance matters. As demonstrated by the Core Values and the Principles of Our Equitable Community, Lehigh University is committed to the values of Integrity and Honesty, Equitable Community, Academic Freedom, Intellectual Curiosity, Collaboration, Commitment to Excellence, and Leadership.

For full consideration, application materials must be received online by 12/01/2018 at:

https://academicjobsonline.org/ajo/jobs/12102

Review of applications will begin immediately and will continue until the positions are filled. Candidates should submit the following documents: 1) a cover letter indicating the area of specialization and faculty track, 2) curriculum vitae, 3) a statement for current and future research directions, 4) a teaching statement, 5) a statement of experience and vision for enhancing participation of people from traditionally underrepresented groups, 6) contact information for at least three references. Inquiries can be directed to email address: robotics-search@lehigh.edu.

Lehigh University is investing more than $250M over the next few years on new innovative research and academic programs to enhance its intellectual footprint. The Path to Prominence will advance the university’s mission and commitment to enhance student experiences. Investments will include upgrades to physical plants, research and teaching laboratories, and technical infrastructure.

Lehigh is a premier residential research university, ranked in the top tier of national research universities each year. Lehigh University is a coeducational, non-denominational, private university that offers a distinct academic environment for undergraduate and graduate students from across the globe. Located in Pennsylvania’s scenic Lehigh Valley, the campus is situated on 1,600 acres in close proximity to both New York City and Philadelphia.
Controls. We are seeking candidates who are passionate to address the current and future research challenges in all aspects of Robot Autonomy, including (but not limited to):

- Emerging methodologies in perception (visual sensing, learning, inference)
- Task planning and control of autonomous systems
- Emerging applications of autonomy (collaborative robots, social robots, etc.)

Applications from female or minority candidates are strongly encouraged.

Candidates must have a distinguished record of research, with publications in top conference and journal venues. A strong track record of research funding is required, as is a demonstrated ability and commitment to develop an innovative educational program to motivate and attract young researchers. Candidates must hold a Ph.D. degree in either Computer Science, Electrical Engineering, Mechanical Engineering, or another relevant area.

The candidate hired for the position is expected to foster and lead a world-class research team at Lehigh by expanding research collaborations, within and outside of Lehigh, in order to deepen Lehigh’s relationship with industry partners as well as achieving national prominence and leadership.

Lehigh University is an affirmative action/equal opportunity employer that provides competitive salaries and comprehensive benefits and has a well-developed infrastructure to address dual career and worklife balance matters. As demonstrated by the Core Values and the Principles of Our Equitable Community, Lehigh University is committed to the values of Integrity and Honesty, Equitable Community, Academic Freedom, Intellectual Curiosity, Collaboration, Commitment to Excellence, and Leadership.

For full consideration, application materials must be received online by 12/01/2018 at: https://academicjobsonline.org/ajo/jobs/12343

Review of applications will begin immediately and will continue until the position is filled. Candidates should submit the following documents: 1) a cover letter indicating the area of specialization and faculty track, 2) curriculum vitae, 3) a statement for current and future research directions, 4) a teaching statement, 5) a statement of experience and vision for enhancing participation of people from traditionally underrepresented groups, 6) contact information for at least three references. Inquiries can be directed to email address: ¡robotics-search@lehigh.edu¡.

Lehigh University is investing more than $250M over the next few years on new innovative research and academic programs to enhance its intellectual footprint. The Path to Prominence will advance the university’s mission and commitment to enhance student experiences. Investments will include upgrades to physical plants, research and teaching laboratories, and technical infrastructure.

Lehigh is a premier residential research university, ranked in the top tier of national research universities each year. Lehigh University is a coeducational, nondenominational, private university that offers a distinct academic environment for undergraduate and graduate students from across the globe. Located in Pennsylvania’s scenic Lehigh Valley, the campus is situated on 1,600 acres in close proximity to both New York City and Philadelphia.

7.45. Faculty: Texas Tech University, USA

Contributed by: Beibei Ren, beibei.ren@ttu.edu

Tenure-Track Faculty Position in Control and Dynamic Systems
Department of Mechanical Engineering
Texas Tech University
The DEPARTMENT OF MECHANICAL ENGINEERING (http://www.depts.ttu.edu/me/) in the Edward J. Whitacre College of Engineering at Texas Tech University (TTU) invites applications for a tenure-track faculty position in the area of control and dynamic systems beginning Fall 2019. The position is at the Assistant Professor level, but exceptional candidates with outstanding credentials and appropriate academic experience may be considered for the rank of Associate Professor/Full Professor. Research plans should focus on control theory and applications that cover major thrusts of the college, including all aspects of energy, engineers in medicine, and nanotechnology. Priority will be given to candidates who specializes in control of energy systems.

The successful candidates will be expected to develop an independent research program and collaborate with TTU faculty across various academic units. Candidates who have very strong records of scholarship supported by extramural funding, and who have the proven capacity or clear potential to bring externally sponsored research to TTU are encouraged to apply. Teaching control courses at both graduate and undergraduate levels is also essential. Experience working with diverse student populations and first-generation students is highly desirable. Professional service as well as service to the department, college, and the university is expected.

Applicants must hold a doctoral degree with a dissertation topic on control theory and applications. The expected starting date is August 2019, although an earlier start date is possible. Applicants should submit a cover letter, a resume, a statement of research and teaching interests, and a list of at least three references. Review of applications will begin on December 1st, 2018 and continue until the position is filled. Electronic submission of application materials is required via https://sjobs.brassring.com/TGnewUI/Search/Home/Home?partnerid=25898&siteid=5637#jobDetails=423946_5637.

As an Equal Employment Opportunity/Affirmative Action employer, TTU is dedicated to the goal of building a culturally diverse faculty committed to teaching and working in a multicultural environment. We actively encourage applications from all those who can contribute, through their research, teaching, and/or service, to the diversity and excellence of our academic community. Texas Tech University recently surpassed the Hispanic student population threshold necessary for designation as a Hispanic Serving Institution (HSI). The university welcomes applications from minorities, women, veterans, persons with disabilities, and dual-career couples.

7.46. Faculty: University of Waterloo, Canada

Contributed by: Maureen Fraser, mcfraser@uwaterloo.ca

University of Waterloo
Department of Applied Mathematics
Tenure Track/Assistant Professor

The Department of Applied Mathematics at the University of Waterloo invites applications for an Assistant Professor position. In special cases, Associate or Full Professor with tenure may be considered. The primary area of interest is control theory. However, exceptional candidates with broad interests in all areas of modern applied mathematics (including quantum control, machine learning, stochastic optimization, and other emerging areas) that enhance the research and teaching needs of the Department, are invited to apply.

The successful candidate will have the ability to establish an outstanding research program. Experience with interdisciplinary or industrial applications is of particular interest. We are looking for applicants with an
enthusiasm for teaching at both the undergraduate and graduate level, and for the supervision of graduate
and undergraduate research.

Candidates interested in this position should have a PhD or equivalent in Applied Mathematics, or related
field. Appointment at the Assistant Professor level is preferred, but extraordinarily strong candidates will
be considered for a more senior position. The salary range for this position is $100,000-$160,000. Salary will
be commensurate with qualifications, experience and research record. Negotiations beyond this salary range
will be considered for exceptionally qualified candidates. The effective date of appointment is July 1, 2019.

Applicants are strongly encouraged to apply on-line as described at: http://www.mathjobs.org/. Alterna-
tively, applications may be sent via email to amdept@uwaterloo.ca. Applicants should submit a curriculum
vitae, a research statement summarizing past work and future plans, a statement of teaching philosophy and
arrange for three letters of reference to be sent directly. The deadline for receiving applications is November
30, 2018.

If you have any questions regarding the position, the application process, assessment process, eligibility, or
a request for accommodation during the hiring process, please contact Professor Sivabal Sivaloganathan,
Chair, Dept. of Applied Mathematics (ssivalog@uwaterloo.ca).

The University of Waterloo regards diversity as an integral part of academic excellence and is committed
to employment equity and accessibility for all employees. As such, we encourage applications from women,
Indigenous (First Nations, Métis and Inuit) peoples, persons with disabilities, members of diverse gender
identities, and others who may contribute to the further diversification of ideas. At Waterloo, you will have
the opportunity to work across disciplines and collaborate with an international community of scholars and a
diverse student body, situated in a rapidly growing community that has been termed a “hub of innovation”.
All qualified candidates are encouraged to apply; however, Canadians and permanent residents will receive
priority in the recruitment process.

7.47. Faculty: Arizona State University, USA

Contributed by: Darryl Morrell, morrell@asu.edu

Tenure track/Tenured faculty positions at Arizona State University

The Ira A. Fulton Schools of Engineering at Arizona State University (ASU) and The Polytechnic School
(TPS) seek applicants for two engineering tenure-track or tenured faculty positions. Appointments may
be at the Assistant, Associate, or Full Professor rank commensurate with the candidate’s experience and
accomplishments, beginning August 2019.

The first position is in electrical systems. We seek candidates with expertise in one or more of the following
areas: embedded systems, power electronics systems, networked systems, and distributed sensing and control.
Potential application areas include robotic systems and industrial automation in the context of Industry 4.0.
Information on this position is available at https://apply.interfolio.com/56663.

The second position is in electrical aspects of energy systems. We seek candidates with expertise that
includes, but is not limited to, smart cities, distributed energy resources, energy storage, electrification,
consumer-side technologies, and sustainability. Applicant are preferred who complement our ability to
contribute to the solutions of Grand Challenge Problems by joining a community of experts dedicated to
developing technologies and designing integrated systems that support the evolving electrical energy market.
Information on this position is available at https://apply.interfolio.com/57135.
Control, Robotics, and Autonomy: Joint Faculty Search in Mechanical Engineering and Electrical & Computer Engineering

The Departments of Electrical & Computer Engineering (ECE) and Mechanical Engineering (ME) in the Bourns College of Engineering (BCOE) at the University of California, Riverside (UCR) invite applications as part of ongoing efforts to empower and broaden UCR’s current strengths in Control, Robotics, Autonomy, and Machine Intelligence, and spark new cross-disciplinary initiatives, both within and outside BCOE (e.g. with the School of Medicine, and the College of Natural & Agricultural Sciences).

We invite applications across the broad areas of Control, Robotics, & Autonomy, with particular emphasis on medical robotics, human-robot interaction, micro/soft-robotics, distributed & autonomous systems, control theory, and optimization. We are especially interested in applicants who will bring complementary expertise and create new synergies among the Departments of Electrical Engineering, Mechanical Engineering, and Computer Science. Successful candidates will have a proven record of, or exceptional promise for, developing a vibrant, externally-funded research program, as well as a portfolio of high quality courses in Controls and Robotics at the undergraduate and graduate levels.

Prospective applicants are encouraged to visit the ECE or ME websites for further information and links to the application submission site. Review of applications will begin January 1, 2019 and will continue until the position is filled. All applications will be reviewed by both departments; thus, applicants need only apply to one department.

UCR is a world-class research university with an exceptionally diverse undergraduate student body. Its mission is explicitly linked to providing routes to educational success for underrepresented and first-generation college students. A commitment to this mission is a preferred qualification. The University of California is an Equal Opportunity/Affirmative Action Employer. All qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, age, disability, protected veteran status, or any other characteristic protected by law.

The Advanced Dynamic Systems and Control team at Cummins Research and Technology has Control Research Engineer positions in Senior and Technical Specialist level to conduct research and development activities in the area of control and diagnostic system design with emphasis on control technologies for advanced powertrain systems. The successful candidate will join an exciting cross-functional team responsible for evaluating options and determining technical direction for strategically critical and new products at Cummins. The individual will be involved with proposing, designing and evaluating control system technology concepts, prototyping the system, control algorithms verification and validation, and vehicle integration for technology demonstration. Successful candidates will have a range of experience in control algorithm development, research and application, together with more in-depth experience in one or more relevant technical areas either from prior professional experience or academic research work.

Qualifications:
- PhD or MSc in Electrical or Mechanical Engineering with focus on control systems.
- Strong knowledge and experience in advanced control systems theory and applications including multivariable control design, Optimal Control, MPC and robust control.
• Knowledge in system identification and control oriented modeling.
• Proven experience in analysis and design of control systems. Experience with automotive and powertrain control design and analysis is highly desired.
• Fluent in using Matlab/Simulink and other coding languages for control design, analysis and simulation.
• Background in data analytics and machine learning techniques are desired.

Please email your resume to:
Dr. Ali Borhan: hoseinali.borhan@cummins.com

7.50. Researcher/Engineer: Nanyang Technological University, Singapore
Contributed by: Ehsan Mihankhah, ehsanm@ntu.edu.sg

Multiple open positions for a project on safety and security of autonomous vehicles

The primary goal of this project is to develop run-time fault and attack detection, self-adaptation and incremental verification algorithms for continuously protecting autonomous vehicles from faults and attacks while ensuring the trustworthiness and security of autonomous vehicles. We are looking for a team of researchers and engineers with Control and Mobile Robotics background. Multiple open positions are available. The successful candidate will work with Professor Danwei Wang and a group of Research Fellows, Research Associates and PhD/Masters/Bachelors students in the school of EEE at Nanyang Technological University, Singapore.

A. Multiple positions for control engineers/researchers with filtering and sensor fusion background

Major responsibilities include
• Design and development of methodology and architecture for detection of malicious intrusion and malfunctions of safety and critical sensors, actuators and control systems of autonomous vehicles.
• Filter design (e.g. Kalman filter) for sensor fusion with application to failure detection.

B. Multiple positions for researchers/engineers with computer vision background

Major responsibilities include
• Design and implementation of computer vision (detection and recognition) algorithms for autonomous vehicles
• Test, simulate and implement the developed algorithms on the test vehicle.
• Implementation of methodology and architectures designed for detection of malicious intrusion and malfunctions of safety and critical sensors, actuators and control systems of autonomous vehicles.

C. Multiple position for engineers with mechanical engineering background with experience in design and fabrication of mechanical parts

Major responsibilities include
• Design, fast prototyping, supervision of fabrication process carried out by the contractors.
• CAD design, 3D Design, part Analysis through 3D simulation, generating of final drawings for manufacturing process.

Interested candidates please email your CV/resume together with a cover letter to
Professor Wang Danwei ⟨EDWWang@ntu.edu.sg⟩