Welcome to the 347 issue of the Eletter, available electronically here.
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1. IEEE CSS Headlines

1.1. 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

1.2. IEEE Control Systems Society Publications Content Digest
Contributed by: Elizabeth Kovacs, ekovacs2@nd.edu

CSS Publications Content Digest 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.

1.3. IEEE Control Systems Letters
Contributed by: Francesca Bettini, bettini@dei.unipd.it

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Contributed by: Elizabeth Kovacs, ekovacs2@nd.edu

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2.1. Summer School on Sliding Mode Control
Contributed by: Martin Steinberger, martin.steinberger@tugraz.at

Summer School on SLIDING MODE CONTROL
September 4-8, 2017

This summer school brings together people from industry and academia motivated to get in touch with the techniques of sliding mode based control, observation and estimation.

Location: The summer school will take place at Graz University of Technology, Austria.

Speakers and Topics:
- Prof. B. Brogliato (INRIA Grenoble, France)
  Discrete-Time Sliding Mode Control: the Implicit Approach
- Prof. A. Ferrara (University of Pavia, Italy)
  Optimization Based Sliding Mode Control and Applications
- Prof. L. Fridman (Universidad Nacional Autónoma de México, Mexico)
  Higher Order Sliding Mode Control and Observation
- Prof. J. Moreno (Universidad Nacional Autónoma de México, Mexico)
  Lyapunov Analysis and Design of Higher Order Sliding Modes

The first day of the summer school will be spent to gain knowledge on the basics of sliding mode control; this introductory day will be taught by Prof. M. Horn, M. Steinberger and M. Reichhartinger (Graz University of Technology).

Registration fees: regular registration until July, 15, EUR 250. This fee covers full participation in the summer school including coffee and tea breaks.

Registration and further information: visit the webpage www.vss-graz.com or mail to info@vss-graz.com

3. Book

3.1. Linear Dynamical Quantum Systems: Analysis, Synthesis, and Control
Contributed by: Yasmin Brookes, yasmin.brookes@springer.com

Linear Dynamical Quantum Systems: Analysis, Synthesis, and Control
by Hendra I Nurdin & Naoki Yamamoto
ISBN: 978-3-319-55199-9
June 2017, Springer
Hardcover, 262 pages, $129.00/EURO 109.99
http://www.springer.com/gb/book/9783319551999#otherversion=9783319552019

This monograph provides an in-depth treatment of the class of linear-dynamical quantum systems. The monograph presents a detailed account of the mathematical modeling of these systems using linear algebra and quantum stochastic calculus as the main tools for a treatment that emphasizes a system-theoretic point of view and the control-theoretic formulations of quantum versions of familiar problems from the classical (non-quantum) setting, including estimation and filtering, realization theory, and feedback control. Both measurement-based feedback control (i.e., feedback control by a classical system involving a continuous-time...
measurement process) and coherent feedback control (i.e., feedback control by another quantum system without the intervention of any measurements in the feedback loop) are treated.

Researchers and graduates studying systems and control theory, quantum probability and stochastics or stochastic control whether from backgrounds in mechanical or electrical engineering or applied mathematics will find this book to be a valuable treatment of the control of an important class of quantum systems. The material presented here will also interest physicists working in optics, quantum optics, quantum information theory and other quantum-physical disciplines.

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Contributed by: Lars Gruene, lars.gruene@uni-bayreuth.de

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Volume 29, Number 2
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4.2. Contents: Control Engineering Practice
Contributed by: Martin Böck, cep@acin.tuwien.ac.at

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Contributed by: Fikret Aliev, chief_ed@acmij.az

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- Regional optimal control problem of a class of infinite-dimensional bi-linear systems, El Hassan Zerrik & Abella El kabouss, pages: 1495-1504
- Further results on $H_\infty$ control for discrete-time Markovian jump time-delay systems, Zhongyang Fei, Chaoxu Guan & Peng Shi, pages: 1505-1517
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4.5. Contents: Nonlinear Studies
Contributed by: Seenith Sivasundaram, seenithi@gmail.com

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Published: 2017-05-30

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- Dini-Lipschitz Functions for the Bessel transform, R Daher, M El Hamma, Abdlatif Akhlidj, 297-301
- Travelling wave solutions of a BBm(m,n) equation with generalized evolution, Mustafa Inc, Esma Ates, 303-308
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- Analysis of impact of transgenic crops in a noisy environment, Peter L. Antonelli, Solange F. Rutz, Rinaldo V. S. Junior, 337-353
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4.6. Contents: Mathematics in Engineering, Science and Aerospace
Contributed by: Seenith Sivasundaram, seenithi@gmail.com
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Vol 8 No 2 (2017): Published: 2017-05-30

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Contributed by: Fikret Aliev , proceedings.IAM@gmail.com
Proceedings of the Institute of Applied Mathematics, V.6, N.1, 2017
ISSN 2225-0530,

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- H.M. Huseynov, A.F. Mamedova, The inverse scattering problem for the one-dimensional Schroedinger operator with an additional linear potential
- Sh.I. Mustafayev, K.G. Gasimova, Improvement operation of sucker-rod pump
CALL FOR PAPERS

Special Issue on “Control Applications in Renewable Energy Systems”
http://www.ajc.org.tw

Renewable energy resources pose a number of fundamental and practical challenges such as cost and availability that need to be addressed before significant levels of renewable penetration into the existing power-mix can be realized. The intermittency of the renewable energy sources results in systems of exhibited changing dynamics, nonlinearities, and uncertainties. In addition, the behavior of these energy conversion systems is dominated by strong nonlinearities and the heavy interaction of continuous and discrete dynamics. This makes the application of classical control techniques, based on linearized models and purely continuous (or discrete) models inadequate. The use of more efficient control and optimization strategies would not only enhance the performance of these systems, but would also reduce the cost per kilowatt-hour produced. Therefore, the control applications of renewable energy systems are of great attractions to researchers. This special issue of the Asian Journal of Control (AJC) will provide a forum for researchers and practitioners to share insights on innovation and development of control methods for renewable energy systems, the application of advanced control techniques and methods to enable more efficient and higher operational capabilities of systems in the general area of renewable energy and Hybrid Power Systems (HPS).

Authors are invited to submit full papers describing original work in all aspects of engineering techniques related to the nonlinear control and stability analysis of the renewable energy-based systems covering the following topics but are not limited to:

- Nonlinear control of batteries or fuel cells.
- Battery and/or fuel cells integration into HPS.
- HPS in transportation applications.
- Optimal sizing of HPS.
- Linear/nonlinear control of HPS.
- HVDC use in HPSs.
- Power electronics and drives in HPS.
- Intelligent energy and smart grids.
- Green buildings.
- ICT applications in HPS.
- Energy storage systems impacts on HPS.
- Renewable-based off-Grid/Grid-Interactive systems.

Important Dates:
December 31, 2017 Deadline for submissions
March 31, 2018 Completion of First Review
July 31, 2018 Completion of Final Review
August 31, 2018 Receipt of Final Manuscript
CALL FOR PAPERS
Special Issue on “SMC based observation, identification, uncertainties compensation and fault detection”
http://www.ajc.org.tw

Sliding Mode Observers (SMO) are the only type of observers that even for the system with unknown inputs ensuring finite (or even fixed)-time exact convergence to the real system states. Moreover, SMO based on higher-order sliding modes provides best possible accuracy of states and unknown inputs estimation in the presence of sampling or deterministic noises.

Recently, a lot of new results were obtained in the field like fixed-time convergent differentiators, algorithms for finite- and fixed-time parameter identification.

The main goal of proposed Special Issue is to summarise the theoretical results about SMO results in the field and present different applications. The principal topics planned to be covered are as follows:

- Sliding Mode Based Differentiators
- SMO for nonlinear systems
- SMO for descriptor systems
- SMO for switched systems
- SMO based uncertainties compensation
- SMO Based parameter identification
- SMO Based Fault Detection
- SMO Based Fault Tolerant Control
- Applications of SMOs

Important Dates:
February 28, 2018 Deadline for submissions
May, 2018 Completion of First Review
September, 2018 Completion of Final Review
October, 2018 Receipt of Final Manuscript
January, 2019 Publication (Tentatively Vol. 21, No. 1)
Dr. Leonid Fridman  
National Autonomous University of Mexico, Mexico  
lfridman@unam.mx

Dr. Hamid Reza Karimi  
Politecnico di Milano, Italy  
hamidreza.karimi@polimi.it

Dr. Yueying Wang  
Shanghai University of Engineering Science, China  
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Dr. Peng Shi  
University of Adelaide, Australia  
peng.shi@adelaide.edu.au

About AJC  
The Asian Journal of Control, an ACA (Asian Control Association) affiliated journal, is the first international journal originating from the Asian Pacific region and being recognized by the major body of control researchers in this region. The Asian Journal of Control publishes bimonthly high-quality papers on original theoretical and experimental research and development in the areas of control, involving all facets of control theory and its application. Functionally, this journal not only provides a forum where control researchers and practitioners can exchange their knowledge and experiences in control areas, but also serves as an educational means for students and any others who would like to learn new topics in this technical area. The journal aims to be a key interface between control communities within the Asian Pacific region and throughout the world and is listed by Science Citation Index Expanded.

How to submit  
Potential authors are encouraged to upload the electronic file of their manuscript (in PDF format) through the journal’s online submission website: http://mc.manuscriptcentral.com/asjc.

If you encounter any submission problem, please contact Prof. Li-Chen Fu.

Editor-in-Chief: Professor Li-Chen Fu  
Department of Electrical Engineering, EE II-524  
Tel: +886-2-3366-3558  
National Taiwan University  
Fax: +886-2-2365-4267  
Taipei 10617, Taiwan  
E-mail: lichen@ntu.edu.tw

All submission should include a title page containing the title of the paper, an abstract and a list of keywords, authors’ full names and affiliations, complete postal and electronic address, phone and fax numbers. The contacting author should be clearly identified. For detailed submission guidelines, please visit: http://wileyonlinelibrary.com/journal/asjc.

4.10. CFP: IEEE Transactions on Control Systems Technology

Contributed by: Guillaume Mercère, guillaume.mercere@univ-poitiers.fr

CFP: Special Issue on System identification and control in biomedical applications in IEEE Transactions on Control Systems Technology

Contributions are invited for a special issue of the IEEE Transactions on Control Systems Technology devoted to the subject of System Identification and Control in Biomedical Applications. The purpose of this special issue is to document the current status of research in this field through an original collection of diverse,
high-quality papers. The emphasis is on the role control systems technology plays in advancing the state of the art in the challenges of applying feedback control in living organisms, with emphasis on biomedicine. Specifically, we aim at (i) pointing out theoretical and practical issues specific to bio-medical systems, (ii) bringing together solutions developed under different settings with specific attention to the validation of these tools in bio-medical settings using real-life datasets and experiments, and (iii) introducing significant case studies. Topics of common interests include (but are not limited to) the following:

- theoretical and implementation challenges which arise in medical systems,
- control engineering tools for solving specific system design problems in medical technology,
- novel data-driven modeling techniques capturing the dynamics of biomedical systems, and accounting for intra- and inter-individual variability,
- evidence of successful projects in biomedicine enabled by system identification and control, such as the artificial pancreas and closed-loop anesthesia.
- application areas in healthcare and medical systems, such as assistive devices and therapeutics in medical rehabilitation, and mathematical models of infectious disease spread.
- prevention and treatment of chronic, relapsing disorders and illnesses such as cancer, diabetes, obesity, and HIV.

Only contributions that include significant results based on analysis of real data or experimental validation will be included. Papers must contain high-quality original contributions and be prepared in accordance with the IEEE Transactions on Control Systems Technology standards. Prospective authors should state in their cover letter and in the notes section of the submission site that their manuscript is intended for the special issue on “system identification and control in biomedical applications.” Submitted manuscripts must not have been previously published or be under review for possible publication elsewhere.

Time line:
Manuscripts Due: November 1, 2017
Notification to authors (after the first round of reviews): March 1, 2018
Notification of final decision: June 1, 2018
Publication Date: January 2019

Authors can submit their manuscripts via https://mc.manuscriptcentral.com/tcst

Information for Authors prior to submitting a paper is available via
http://www.ieeecss.org/publications/tcst/information-authors

All inquiries should be directed to G. Mercère you can contact via his email address: guillaume.mercere@univ-poitiers.fr

Guest Editors:
Guillaume Mercere, Université de Poitiers, France (LEAD)
Bayu Jayawardhana, University of Groningen, The Netherlands
Alexander Medvedev, Uppsala University, Sweden
Daniel E. Rivera, Arizona State University, Tempe, Arizona, USA
Caterina Scoglio, Kansas State University, Manhattan, Kansas, USA

5. Conferences

5.1. World Congress: Mathematical Problems in Engineering, Aerospace and Sciences
Contributed by: Seenith Sivasundaram, seenithi@gmail.com
World Congress: Mathematical Problems in Engineering, Aerospace and Sciences
WHEN: July 3, 2018 – July 6, 2018
WHERE: American University of Armenia, Yerevan
Website: http://www.icnpaa.com
http://www.internationalmathematics.com/icnpaa/

ICNPAA’s AIM
Mathematical Problems in Engineering, Aerospace and Science have stimulated cooperation among scientists from a variety of disciplines. Developments in computer technology have additionally allowed for solutions of mathematical problems. This international forum will extend scholarly cooperation and collaboration, encouraging the dissemination of ideas and information.

The conference will have a pool of active researchers, with a proper balance between academia and industry, as well as between senior and junior researchers, including graduate students and post-doctoral fellows. It is anticipated that such a balance will provide both senior and junior researchers an opportunity to interact and to have a wider picture of recent advances in their respective fields. The conference, especially, enables the setting up of new interdisciplinary research directions among its participants by establishing links with world renowned researchers, making possible joint international projects that will no doubt bring about fresh and innovative ideas and technologies in engineering, aerospace and sciences.

Co-Sponsored by: AIAA: American Institute of Aeronautics and Astronautics
IFIP: International Federation of Information Processing
American University of Armenia, Yerevan

The proceedings will be published by the American Institute of Physics.
AIP Conference Proceedings are indexed in:
• Astrophysics Data System (ADS)
• Chemical Abstracts Service (CAS)
• Crossref
• EBSCO Publishing
• Electronic Library Information Navigator (ELIN), Sweden
• Elsevier – SCOPUS
• International Atomic Energy Agency (IAEA)
• Thomson Reuters (ISI)

5.2. Annual Allerton Conference on Communication, Control, and Computing
Contributed by: Rachel Palmisano, rep2@illinois.edu

FIFTY-FIFTH ANNUAL ALLERTON CONFERENCE ON COMMUNICATION, CONTROL, AND COMPUTING
October 3, 2017 – Opening Tutorials
October 4-6, 2017 – Conference Sessions

CALL FOR PAPERS
The Fifty-Fifth Annual Allerton Conference on Communication, Control, and Computing will kick off with Opening Tutorials being held on Tuesday, October 3, 2017 at the Coordinated Science Laboratory. The conference sessions will start on Wednesday, October 4, 2017 through Friday, October 6, 2017, at the
Allerton Park and Retreat Center. The Allerton House is located twenty-six miles southwest of the Urbana-Champaign campus of the University of Illinois in a wooded area on the Sangamon River. It is part of the fifteen-hundred acre Robert Allerton Park, a complex of natural and man-made beauty designated as a National natural landmark. Allerton Park has twenty miles of well-maintained trails and a living gallery of formal gardens, studded with sculptures collected from around the world.

Papers presenting original research are solicited in the areas of:
- biological information systems
- coding techniques and applications
- coding theory
- data storage
- information theory
- multiuser detection and estimation
- network information theory
- sensor networks in communications
- wireless communication systems
- intrusion/anomaly detection and diagnosis
- network coding
- network games and algorithms
- performance analysis
- pricing and congestion control
- reliability, security and trust
- decentralized control systems
- robust and nonlinear control
- adaptive control and automation
- robotics
- distributed and large-scale systems
- complex networked systems
- optimization
- dynamic games
- machine learning and learning theory
- signal models and representations
- signal acquisition, coding, and retrieval
- detection and estimation
- learning and inference
- statistical signal processing
- sensor networks
- data analytics.

Final versions of papers that are presented at the conference are required to be submitted electronically by October 8, 2017 in order to appear in the Conference Proceedings and IEEE Xplore.

PLENARY LECTURE by John Lafferty, Louis Block Professor, Department of Statistics & Computer Science, University of Chicago is scheduled for Friday, October 6, 2017 at the Allerton Park and Retreat Center featuring.

OPENING TUTORIAL LECTURES by Nathan Srebro, Professor, Toyota Technological Institute at Chicago and Alexander (Sasha) Rakhlin, Associate Professor, Department of Statistics, University of Pennsylvania
will be presented on Tuesday, October 3, 2017 at the Coordinated Science Laboratory, University of Illinois at Urbana-Champaign.

INFORMATION FOR AUTHORS: Regular papers suitable for presentation in twenty minutes are solicited. Regular papers will be published in full (subject to a maximum length of eight 8.5” x 11” pages, in two column format) in the Conference Proceedings. Only papers that are actually presented at the conference and uploaded as final manuscripts can be included in the proceedings, which will be available after the conference on IEEE Xplore.

For reviewing purposes of papers, a title and a five to ten page extended abstract, including references and sufficient detail to permit careful reviewing, are required.

Manuscripts can be submitted during June 16-July 10, 2017 with the submission deadline of July 10th being firm. Please follow the instructions at the Conference website: http://www.csl.illinois.edu/allerton/.

Authors will be notified of acceptance via e-mail by August 7, 2017, at which time they will also be sent detailed instructions for the preparation of their papers for the Proceedings.

Important Dates:
Submission Deadline: July 10, 2017
Acceptance Date: August 7, 2017
Registration Opens: after August 7, 2017
Conference Dates: October 3-6, 2017
Final Submission Deadline: October 8, 2017
Conference Co-Chairs: Naira Hovakimyan and Negar Kiyavash
Email: amellis@illinois.edu URL: www.csl.illinois.edu/allerton/

5.3. International Workshop on Control Engineering and Synthetic Biology
Contributed by: Antonis Papachristodoulou, antonis@eng.ox.ac.uk

International Workshop on Control Engineering and Synthetic Biology - 17th and 18th July 2017, Royal Academy of Engineering – Prince Philip House, London, UK

Designing and implementing effective feedback control in living cells has the potential to dramatically change biotechnology and synthetic biology. However, before this potential is realised, a number of theoretical and practical challenges must be addressed, which lie at the interface between control engineering and synthetic biology.

This will be the topic of an International Workshop on Control Engineering and Synthetic Biology, which will be held on the 17th and 18th July 2017 at the Royal Academy of Engineering – Prince Philip House, London, UK. This workshop will discuss both the challenges and the opportunities that Synthetic Biology offers. A specific focus will be on the “next grand challenges” in the field of synthetic biology and how control engineering can address them. An exceptional group of speakers, world leaders in synthetic biology and control engineering, will present recent progress, identify challenges and share their vision of where synthetic biology is headed and how the control engineering community can contribute to delivering its promise.

This event is supported by the Engineering and Physical Sciences Research Council (EPSRC) under projects EP/M002454/1 and EP/M002187/1.
Please visit:
http://sysos.eng.ox.ac.uk/wiki/index.php/SynBioControl2017
for more information, the list of speakers, and to register.
We would be grateful if you could disseminate this information to your colleagues and within your institution.

Filippo Menolascina, Antonis Papachristodoulou, and Guy-Bart Stan

5.4. International Conference on Control, Automation and Systems
Contributed by: Hye-Soo Kim, conference@icros.org

2017 17th International Conference on Control, Automation and Systems (ICCAS 2017)
October 18(WED)-21(SAT), 2017
Ramada Plaza, Jeju Island, Korea
http://2017.iccas.org

CALL FOR PAPERS:

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
Proposal for Invited/Organized Session (Mini-symposium)
- July 15, 2017: Submission Deadline (Extended!!)
Regular Papers (3 - 6 pages) & Invited/Organized Session Papers (1 - 6 pages)
- July 15, 2017: Submission Deadline (Extended!!)
- August 1, 2017: Notification of Acceptance
- August 31, 2017: Submission of Final Camera-ready Papers
Research Poster Papers (1 - 2 pages)
- August 22, 2017: Submission Deadline
- August 31, 2017: Notification of Acceptance
- September 7, 2017: Submission of Final Camera-ready Papers


PAPER SUBMISSION GUIDELINE: http://2017.iccas.org/?page_id=21
Indexed in: IEEE Xplore, EI compendex, and SCOPUS

PLENARY SPEAKERS
- Richard D. Braatz (Massachusetts Inst. of Tech., USA)
"New Directions in the Control in Advanced Manufacturing Systems"
- Reza Moheimani (Univ. of Texas at Dallas, USA)
"On-Chip Atomic Force Microscope: Why and How?"
- Antonella Ferrara (Univ. of Pavia, Italy)
"Modern Sliding Mode Control with Application to Automotive Systems"
- Huijun Gao (Harbin Inst. of Tech., China)
"Network-Based Control and Estimation"
Atsuo Takanishi (Waseda Univ., Japan)
"Humanoid Robotics Research and Its Applications"

VENUE: The Jeju is the largest island off the coast of the Korean Peninsula. The Jeju contains the natural World Heritage Site Jeju Volcanic Island and Lava Tubes, and has a temperate climate.

- Selected as the New 7 Wonders of Nature
- Only place in the world that has been certified by UNESCO Triple Crown in Natural Science: Biosphere Reserves, World Natural Heritage, World Geological Park
- Designated by WHO (World Health Organization) as an International Safe City
- No visa entry and 30-day stay for 187 countries including China

ACCOMMODATION: ICCAS 2017 participants can reserve rooms at the appointed hotels at a special (discounted) rate. View details: http://2017.iccas.org/?page_id=63

Organized by Institute of Control, Robotics and Systems (ICROS)
Technically Co-Sponsored by IEEE IES, IEEE CSS, IEEE RAS, SICE, ACA, CAA, CACS, ECTI, CAAI, and ISA

General Chair: Dong-il “Dan” Cho (Seoul Nat’l Univ., Korea / ICROS President)
Organizing Chair: Doyoung Jeon (Sogang Univ., Korea)
Program Chair: Hyosung Ahn (GIST, Korea)

5.5. Asian Control Conference

Contributed by: Ljubo Vlacic, l.vlacic@griffith.edu.au

The 2017 Asian Control Conference – ASCC 2017
Gold Coast 17 – 20 December 2017, Australia
https://www.ascc2017.com/

NEW SUBMISSION DEADLINES
Regular Papers (drafts): 24 July 17 (extended)
Invited Session Proposals: 17 July 17 (extended)
Workshop Proposals: 24 July 17 (extended)

5.6. Australian and New Zealand Control Conference

Contributed by: Ljubo Vlacic, l.vlacic@griffith.edu.au

Australian and New Zealand Control Conference - ANZCC 2017, Gold Coast, 17-20 December 2017, Australia

NEW SUBMISSION DEADLINES
Regular Papers (drafts): 24 July 17 (extended)
Invited Session Proposals: 17 July 17 (extended)
Workshop Proposals: 24 July 17 (extended)

6. Positions

6.1. PhD: Delft University of Technology, the Netherlands
Contributed by: Riccardo Ferrari, r.ferrari@tudelft.nl
The Delft Center for Systems and Control (DCSC) at Delft University of Technology (TU Delft) in the Netherlands has vacancy for

One PhD Position in Fault and Cyber-attack Tolerance for Distributed Systems

Project Description: The successful candidate will carry out research in support of Dr. Ferrari project called SURE: Safe Unmanned Robotic Ensembles. The goal of SURE is to make formations of mobile robots, such as cooperative self driving cars, robust to faults or cyber-attacks that could affect one or more robots. The PhD student will develop model-based algorithms capable of detecting and isolating faults or cyber-attacks affecting a robot of its neighbors, as well as accommodation techniques. There will be the possibility to test such algorithms on a multi-robot setup in our laboratories. Furthermore, developed algorithms are expected to be generalized in order to be applied to other distributed systems, not only in the field of mobile robotics.

Requirements: the applicant should have obtained a M.Sc. degree in a field related to the project, such as electrical or electronics engineering, systems & control, mechanical engineering or computer science. A good command of the English language is required. Candidates with a background in fault diagnosis, multi-robots formations or distributed (parameters)-systems are especially encouraged to apply.

Conditions of Employment: The position will start preferably on September 1st, 2017, and run for four years. The successful candidate will be enrolled in the University graduate school. Salary and benefits are in accordance with the Collective Labour Agreement for Dutch Universities. Candidates actually in the process of obtaining their M.Sc. degree can be considered subjected to the condition of having completed it no later than the required starting date.

About Delft University of Technology: TU Delft is an internationally recognized research university that has been ranked 19th in the Engineering and Technology section of the world-wide QS World University Ranking 2015/16. In the THE World University Ranking 2016/17, TU Delft has been ranked 20th in Engineering and Technology section. TU Delft is an equal opportunity employer and committed to increase the diversity of its staff. Female candidates are encouraged to apply, more information on gender related initiatives and policies can be found at https://www.tudelft.nl/en/about-tu-delft/strategy/diversity-policy/dewis/gender-policy.

Application and More Information: 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 Dr. Riccardo Ferrari (r.ferrari@tudelft.nl). Dr. Ferrari can also be contacted for more information about this vacancy. The vacancy will remain open until a suitable candidate has been found.

6.2. PhD: McGill University, Canada

Contributed by: Ahmad Haidar, ahmad.haidar@mcgill.ca

Position Title: PhD Candidate

The Department of Biomedical Engineering in the Faculty of Medicine at McGill University is seeking outstanding candidates for a PhD position. The successful candidate will develop a control algorithm for an electromechanical artificial pancreas in type 1 diabetes.

The artificial pancreas is a closed-loop, tri-hormonal (multi-input), delivery system to regulate glucose levels. The successful candidate will design and optimize the controller through repeated clinical experiments, and will consequently lead the design and the conduction of randomized controlled clinical trials to test the algorithm and to answer clinical questions.
The successful candidate will have the opportunity to work with a multi-disciplinary team that includes researchers with backgrounds of endocrinology, control engineering, nutrition, pediatrics, and computer science. This is a great opportunity for a highly motivated applicant who wants to utilize their expertise in control systems to tackle medical problems.

Our lab implements a quality management system (ISO13485) and we work closely with industry. Our department offers unique courses on intellectual property, regulatory affairs, and clinical trials tailored specifically for biomedical engineers who wish to pursue career in industry.

McGill University ranks 1st in Canada among medical-doctoral universities (Maclean’s) and is Canada’s most international university. McGill is located in the vibrant multicultural Montreal in the francophone province of Quebec. Montreal is a city steeped in culture and is named the best student city in the world (QS Ranking).

Desired Skills:

• Strong expertise in system control design, preferably in adaptive control or model predictive control. Desired expertise includes estimation algorithms, observers, and Kalman filtering.
• Strong desire to work in a clinical setting.
• Strong programming skills.

Starting Date:
• September 2017 or January 2018.

Apply with your curriculum vitae to Prof. Ahmad Haidar (ahmad.haidar@mcgill.ca). Please refer to www.mcgill.ca/haidar for more information on our research program. For information on registration instructions, rights and responsibilities, and how to get a work permit if you’re joining us from abroad, please refer to http://www.mcgill.ca/gps/postdocs

6.3. PhD: Arizona State University, USA

Contributed by: Theodore (Ted) Pavlic, tpavlic@asu.edu

PhD OPPORTUNITY: MODEL-PREDICTIVE CONTROL FOR WATER RESILIENCY IN COUPLED HUMAN-NATURAL SYSTEMS

We are seeking a PhD candidate interested in applying methods from model predictive control (MPC) to the design and control of coordinated green and gray water infrastructure systems to improve resiliency in chemical and agricultural sectors. The candidate candidate will work with a multi-disciplinary team of operations researchers, economists, hydrologists, and ecologists to build a control model of a complex system that includes political, legal, economic, social, and hydrological components. The control model will be used to optimize the placement and utilization of different green and gray water infrastructure sources to improve resiliency of the system.

The candidate will be primarily supervised by Dr. Theodore Pavlic, a control theorist interested in autonomous decision making systems at Arizona State University. The team also includes Dr. John Sabo, Dr. William Michael Hanemann, Dr. Jon Miller, and participation of the Earth Genome Project. The NSF-funded project is expected to last 4 years. However, as ASU is a large, multi-disciplinary university, the PhD candidate will have many opportunities for other collaborations.

Dr. Pavlic has chair or co-chair rights in a variety of different graduate programs at ASU. Consequently, the particular PhD program is negotiable (e.g., Computer Science, Mechanical and Aerospace Engineering, Electrical Engineering, Applied Mathematics, etc.). The important thing is that the student is interested
interested in applying methods from optimization and predictive control to ecological, coupled-human-natural systems involving water resiliency.

Interested candidates should contact Dr. Pavlic (tpavlic@asu.edu) directly with:
* Brief statement of interest in the project
* Detailed CV
* Bachelors and masters transcripts (informal is OK)
* Name and e-mail of two references

Candidates should apply as soon as possible.

6.4. PhD: Université Laval, Canada

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

PhD: Université Laval, Canada

Three PhD positions are available at the LOOP (Laboratoire d’observation et d’optimisation des procédés – Process Observation and Optimization Laboratory), Université Laval, Québec City, Canada. The projects are in collaboration with the multinational biopharmaceutical Pfizer. They address industrial problems and the solutions will have significant impacts for Pfizer.

For pharmaceutical industries, automation and continuous processing is a way to become more competitive, to reduce production time, energy consumption and the amount of waste produced. Towards this objective, the projects are:

Project #1 - Coating of the tablets: development of an in-line vision sensor providing film-coating properties (coating level, distribution across tablets, esthetical defects, etc.).
- Fractional factorial design
- Multivariate Image Analysis
- Partial Least Squares regression
- Validation of the machine vision sensor

Project #2 – Novel continuous drying of the granules (before they are compressed into tablets): safe and robust in-line minimization of the drying time and/or energy consumption while insuring a desired final humidity of the particles and avoiding their overheating.
- First-principles modelling and model calibration
- State estimation
- Model predictive control
- Real-time optimization

Project #3 - Freeze-drying of vials: safe and robust in-line minimization of the primary drying time and/or energy consumption while insuring that sublimation is completed and avoiding to exceed the collapse temperature.
- First-principles modelling and model calibration
- State estimation
- Model predictive control
- Real-time optimization
- Heating policies for various vials arrangements

The final stage of the three projects is to implement and validate the most promising approaches on pilot units.
Candidate profile:
- should have completed, or about to complete, a MSc degree in Electrical or Chemical Eng., or related areas,
- strong background in multivariate statistics and/or first-principles modelling and/or systems and control,
- solid programming skills in Matlab,
- ability to work in multi-disciplinary teams,
- excellent communication skills (oral and written) in English - a plus if knowledge of French (courses are given in French).

Please send a complete CV, a motivation letter and transcripts to Prof. André Desbiens (desbiens@gel.ulaval.ca) with the subject "E-Letter PhD position".

6.5. PhD: Vrije Universiteit Brussel, Belgium

Contributed by: Philippe Dreesen, philippe.dreesen@vub.be

PhD position Tensors for System Identification at Vrije Universiteit Brussel

A fully funded PhD position is now available at the Vrije Universiteit Brussel (VUB), Belgium, department ELEC. The goal is to develop novel methods for nonlinear system identification using tensors. We will exploit the Volterra representation while aiming for interpretable block-oriented models. Tensors play a central role in understanding and taking advantage of the Volterra kernels. See our paper http://homepages.vub.ac.be/ mishteva/papers/voltpWH.pdf

We offer an attractive salary, a job in the heart of Europe, and support from a renowned research group. This is a four year PhD project, with a yearly evaluated and renewable contract. The preferred starting date is as soon as possible and no later than Oct 1, 2017.

The specific PhD topic can be adapted to the interests of the applicant. It is especially suitable for engineers interested in mathematics, and for mathematicians interested in engineering applications.

Requirements: Master’s degree in Electrical Engineering, (Applied) Mathematics, Physics, Computer Science, or a related domain. Further requirements include excellent programming skills (e.g., MATLAB) and excellent English language skills. Experience in tensor methods and system identification is an advantage, but is not required.

Please send a two-page CV, a one-page personal statement (motivation and background knowledge) as a single PDF document to philippe.dreesen@vub.be. Mention “FWO-VOLT-2017” in the email subject line. Applications received before July 15, 2017 will be given full consideration. Informal inquiries can be sent to the same email address.

6.6. PhD: Imperial College London, UK

Contributed by: Giordano Scarciotti, g.scarciotti@imperial.ac.uk

PhD studentship in Control of Uncertain Nonlinear Systems, Imperial College London, United Kingdom

Applications are invited for a PhD studentship in "Control of Uncertain Nonlinear Systems: a stochastic and set-valued approach". The work will be based within the Control and Power group in the Department of Electrical and Electronic Engineering. The student will be supervised by Dr Giordano Scarciotti. The studentship will start as soon as possible from October 2017.
Every model of a real system has some degree of uncertainty. A parameter of the model may be unknown, some dynamics may be unmodeled, or the model may be completely unknown. Uncertainty arises in, for example, power production (unpredictable renewable sources), power distribution (energy price/demand), control of aircrafts, and biological and chemical reactions.

The project will tackle the problem of modelling, analysis and control of uncertain systems with two complementary approaches: stochastic differential equations allow to model randomness; set-valued mappings allow simultaneous modelling of multiple behaviours. Note that instead of considering a robust control approach, the objective of the project is to describe and deal with uncertainty within these two frameworks in a comprehensive manner.

The ideal candidate should have a strong background in Control Engineering, Automation Engineering or Applied Mathematics. Strong knowledge of linear system theory, a basic understanding of nonlinear systems and some experience in using MATLAB is required. Any knowledge of advanced topics such as stochastic systems and hybrid systems would be beneficial, but are not required skills as these will be acquired during the PhD.

Applications are invited from candidates with (or who expect to gain) a first-class honours degree or an equivalent degree in Engineering, Mathematics or a related discipline (for more details, see https://www.imperial.ac.uk/study/pg/apply/requirements/pgacademic/). The studentship provides a (tax-free) bursary of £16,553 (Standard RCUK Bursary rate) per annum for up to 3.5 years to cover living expenses, together with the College tuition fees at the UK/EU rate for 3 years. Applications from Overseas will also be considered, but the difference in the Overseas and UK/EU rate will have to be met by the successful applicant.

For a description of the Control and Power Research Group please visit our website at http://www3.imperial.ac.uk/controlandpower.

Informal enquiries and requests for additional information for this post can be made to Dr Giordano Scarciotti by email at g.scarciotti@imperial.ac.uk.

Applications will be assessed as received and all applicants should follow the standard College application procedure (indicating Dr Giordano Scarciotti as supervisor) (http://www3.imperial.ac.uk/pgprospectus/howtoapply).

Closing date for applications: Open until filled
Start Date: As soon as possible from October 2017.

6.7. PhD: CNRS/University Grenoble Alpes, France
Contributed by: Alain Kibangou, alain.kibangou@univ-grenoble-alpes.fr

A PhD thesis position is available at CNRS/University Grenoble Alpes (France) within the framework of the ERC grant Scale-Freeback (http://scale-freeback.eu/). The research proposal deals with the problem of state estimation design and optimal sensor placement algorithms for large-scale evolutionary dynamical networks. The estimation design will be built upon scale-free aggregated models, where the aims is to reconstruct some “average” measure of the systems states instead of observing the states of the whole high-dimensional system.

Requested background: Control theory or Applied mathematics.
6.8. PhD: Ghent University Global Campus, South Korea
Contributed by: Shodhan Rao, Shodhan.Rao@ghent.ac.kr

PhD position in Applied Mathematics: Ghent University Global Campus, Incheon, South Korea
There is a vacancy for a PhD position in Applied Mathematics in Ghent University Global Campus (GUGC), Incheon, South Korea (www.ghent.ac.kr). Ghent University Global Campus is the first campus of Ghent University outside Belgium. This campus is situated in Songdo International City, Incheon, South Korea. GUGC integrates educational and research facilities in a single building. Ghent University has the ambition to organize a first-rate, truly European education in Asia and to develop excellent research in the fields of Molecular biotechnology, Environmental and Food technology. Its programs are accredited in Flanders and in Korea.

While the prospective candidate will work in GUGC, Korea, the eventual PhD degree of the candidate will be from Ghent University, Belgium. The research focus of the student is expected to be in the area of mathematical/systems biology particularly in the area of model reduction of biochemical networks. The candidate is also expected to assist his/her supervisor in teaching undergraduate mathematics courses. While the candidate will mainly work under the supervision of Prof. Shodhan Rao at GUGC, he/she will be co-supervised also by Prof. Arnout van Messem of GUGC and Prof. Willem Waegeman from the department of Mathematical Modelling, Statistics and Bioinformatics at Ghent University. The candidate will therefore have the opportunity to spend some time at the campus in Ghent University during the course of his/her PhD. In addition to the regular salary, free accommodation within the campus and a yearly travel budget are foreseen. GUGC is an equal opportunities employer.

We are looking for candidates with the following qualifications and skills
- The candidate should hold or expect to hold by August 2017, a master degree in one of the following disciplines: mathematics, systems and control, bioscience engineering, chemistry or chemical engineering. Exceptional candidates from other science/engineering backgrounds will also be considered.
- The candidate should have had a rigorous undergraduate mathematics training and in general a strong background in mathematics.
- The candidate should be highly motivated to conduct research in the area of applied mathematics, specifically in the area of mathematical biology/chemistry.
- The candidate should have an excellent academic track record, an excellent command of English and good academic writing and presentation skills.
- Knowledge of biology or chemistry at undergraduate level is preferable although not mandatory.

The expected starting date of the PhD candidate is August 15, 2015. Interested candidates should send their applications before July 21st, 2017 by email to Shodhan.Rao@ghent.ac.kr with a CV, copies of transcripts and degrees and a motivation letter (please merge all the documents in one file).

6.9. PhD: UNSW, Australia
Contributed by: Daoyi Dong, daoyidong@gmail.com

Scientia PhD Scholarship at UNSW
This project aims to develop distributed estimation and control methods for quantum networks. Quantum networks play a vital role in the development of powerful quantum technology, and benchmarking and
controlling quantum networks has been an important task in next generation technology. The project will advance key knowledge and provide effective methods to enable us to identify and control quantum networks for wide applications arising in this emerging technological revolution. The scholarship provides the following support:

- Work on high quality research projects with the best supervisory teams in world class environments
- $40K a year stipend for four years
- Tuition fees covered for the full 4 year period
- Coaching and mentoring will form a critical part of your highly personalised leadership development plan
- Up to $10k each year to build your career and support your international research collaborations

More application information could be found at:

http://www.2025.unsw.edu.au/apply/

If you are interested in applying for the scholarship, please contact Dr Daoyi Dong (d.dong@unsw.edu.au), Prof Valeri Ougrinovski (v.ougrinovski@adfa.edu.au) or Dr Michael Hush (m.hush@unsw.edu.au)

6.10. PhD/PostDoc: KU Leuven, Belgium

Contributed by: Wim Michiels, Wim.Michiels@cs.kuleuven.be

PhD/PostDoc: KU Leuven, Belgium

The Numerical Analysis and Applied Mathematics (NUMA) Centre of KU Leuven - University of Leuven (Belgium) invites applications for up to 6 doctoral and 3 postdoctoral positions.

NUMA consists of 40 members (professors, postdoctoral and PhD researchers). We develop, analyse and implement numerical algorithms for applications in science and engineering. We focus on algorithmic innovations, and on the analysis of accuracy and efficiency. Our research relies on mathematical insight, design of algorithms, and software development.

NUMA has vacancies on several recently acquired research projects for researchers with various expertise. Applicants should have a general interest in the development and analysis of numerical methods, and/or their application in engineering and science. We are currently looking for candidates with specific interest/expertise in one (or more) of the following domains:

- Numerical (multi)-linear algebra: polynomial computations and iterative methods
- Multiscale and stochastic methods for simulation and control
- Large-scale PDE-constrained optimization and uncertainty quantification
- Parallel algorithms and metaheuristics for cutting and packing problems
- High-dimensional approximation, simulation and analysis
- Computational methods for control
- Data driven network analysis and control
- Complex and cyber-physical systems

We offer a stimulating environment at a European top university, a well-equipped and experienced multidisciplinary research unit, a personalized PhD trajectory, with attention paid to transferable skills development, a competitive wage and moving expenses. Senior postdocs will get the opportunity to become involved in project management.

For more information on the research unit and possible supervisors, visit

https://wms.cs.kuleuven.be/groups/natw/
The positions at the postdoctoral level are for one year with the possibility of extension to a second year. The positions at the predoctoral level will be initially for one year. After a positive evaluation, this position can be extended for three more years.

Candidates are invited to submit their application (including a detailed CV, a motivation letter, and two letters of recommendation) via the website
https://icts.kuleuven.be/apps/jobsite/vacatures/54213421 (for the PhD positions) and

6.11. PostDoc: Huazhong University of Science & Technology, China
Contributed by: Ye Yuan, ye.yuan@outlook.com

Prof. Ye Yuan (http://yy311.github.io) is looking for a number of postdoc researchers and visiting researchers starting as soon as possible at Huazhong Artificial Intelligence Lab (HAIL), Huazhong University of Science & Technology (HUST), Wuhan, China. The research project is broadly on the development of novel learning and control theory with application to cyber-physical systems (robotics and power systems).

1. For Postdoc, we offer
   • A competitive salary (at least RMB 212,000 per year, negotiable depending on the qualification);
   • Possibilities for the Postdoc to spend time at world-leading universities (such as UC Berkeley and Caltech) to take specialized courses and work with collaborators there;
   • Experimental platform (Vicon+Crazyflies, GPU cluster, UR3 robot+Kinect, Hardware in the loop Power simulator)
   • Full contract for 2 years with the possibility of renewal up to 6 years contingent on performance;
   • Possibilities to stay at HUST as a lecturer or an associate professor afterwards.

2. For visiting professors, we offer
   • A highly competitive salary depending on the qualification (per month);
   • Travel cost and housing

3. Your Profile
   • A Ph.D. degree in Control Theory, Power Systems, Mathematics, Computer Science, or a closely related field;
   • An excellent background in one of the following areas: system identification, control theory, machine learning, robotics.

Interested candidates should send their CV (with names of at least two references) and a cover letter (for postdoc candidates) describing their specific interest and how their background fits the qualifications to Prof. Ye Yuan ye.yuan@outlook.com. All applications will be treated in the strictest confidence.

6.12. PostDoc: INRIA Lille Nord Europe, France
Contributed by: Mihaly Petreczky, mihaly.petreczky@ec-lille.fr

Postdoc position at INRIA Lille Nord Europe

We are looking for a candidate with a strong mathematical background and a PhD in one of the following fields: machine learning, control theory, systems identification, statistics or probability theory. Knowledge of either machine learning or system identification/control theory is a plus.
The successful applicant will work on the frontier between machine learning and control theory/systems identification. System identification is a sub-discipline of control theory which aims at learning dynamical models (difference/differential equations) from data and use these models for decision making (control). Recently the same problem has gained attention in the machine learning community. The aim of this project is to combine theoretical results from machine learning and system identification in order to study the theoretical limits of learning dynamical models from time series. More broadly, the project concerns the combination of learning dynamical models with decision making (control). The specific tasks he the candidate is expected to contribute to are 1) finding theoretical limits of learning dynamical models from time series, 2) applying machine learning to system identification. If time permits, the results will be validated experimentally on several benchmark problems.

Starting date: October-November 2017
Length of the appointment: 24 months.

Contact persons:
Daniil Ryabko (daniil@ryabko.net) Lille Nord Europe and Mihaly Petreczky (mihaly.petreczky@ec-lille.fr) CNRS.

6.13. PostDoc: Shanghai Jiao Tong University, China
Contributed by: Weidong Zhang, wdzhang@sjtu.edu.cn

Postdoctoral position in Shanghai Jiao Tong University, China (Marine Automation)
The Engineer Research Center of Marine Automation, Shanghai Municipal Education Commission (in the Department of Automation, Shanghai Jiao Tong University, China) offers 3 postdoc positions in control engineering as soon as possible thereafter. We are interested in candidates in the broad areas of control engineering, marine engineering, unmanned autonomous systems, etc.

Requirements and qualifications:
- PhD degree
- Documented experience with research dissemination in international scientific journals
- Experience with writing research applications
- Good communication skills in English or Chinese
- Self-motivation and the ability to work both independently and as a team player with researchers from different disciplines

Main tasks:
- Active involvement in research efforts
- Supervision of student projects and thesis at both master and Ph.D. levels

Salary and others:
- RMB 120-200k/year (approximately, 18-30kUSD)
- Apartment with very cheap rent
- It is a 2-year position and can be extended to 5 years

Required documents
- One self-recommendation letter covering your research statements, your achievements, as well as your possible requirements from us
- A list of your publications

For further information, please contact Prof. Dr. Weidong Zhang, Email: wdzhang@sjtu.edu.cn, Tel: +86-21-34204019. Address: Dongchuan Road 800, Shanghai Jiao Tong University, Shanghai 200240, China.
Contributed by: Paolo Falcone, falcone@chalmers.se

At the Mechatronics Group of the Electrical Engineering Department, we are engaged in both fundamental and applied research related to intelligent transportation systems. Ongoing research projects focus on the design and the experimental validation of control algorithms for autonomous vehicles operating in complex urban environments. We consider both cooperative and non-cooperative settings, where the challenges are the control over wireless networks and making decision in a mixed automated-human environment, respectively. Our research is, where possible, validated through experiments on full-scale vehicles and in collaboration with industrial partners.

We invite applications for one post-doctoral position in networked control systems. The candidate will join a team of post-docs and Ph. D. students engaged in neighboring research, with the main objective of developing algorithms to control mobile networked systems, when the information necessary to close the control loop are delivered through wireless network and possibly generated by Cloud applications. Clearly, in such setup, information losses and delays arising from the state of the network may unacceptably degrade the performance of the overall system or even lead to unsafe operation. Our objective is to harness the emerging information and communication technologies by proactively planning the control actions to the systems and the access to remote information in order to circumvent classical limitation of networked control systems, where the control is designed based on a communication protocol decided beforehand. The successful candidate will be engaged in both fundamental and experimental research. In particular, if relevant to the research, experimental setup in the field of transportation systems might be available to demonstrated the developed algorithms. A strong theoretical background in control and practical problem-solving capabilities are required.

The working time of post-doctoral staff is mainly devoted to research. Undergraduate teaching duties, not exceeding 20% of the working time, may include supervision of MSc students.

The position is co-funded by the Chalmers Area of Advance in Transportation. The appointment is a full-time employment (not a scholarship) for a period of not more than two years (1+1).

A PhD (or close to completion) in control theory, applied math or neighboring relevant field. Experience with networked control systems will be preferred. Ability to initiate new research collaborations is essential. Good communication skills in oral and written English are required.

For further info visit: https://www.chalmers.se/en/about-chalmers/vacancies/Pages/default.aspx
or contact:
Paolo Falcone (falcone@chalmers.se), Division of Systems and Control. Tel.: +46 31 772 1803
Jonas Sjöberg, (jonas.sjoberg@chalmers.se), Division of Systems and Control. Tel.: +46 31 772 1855

6.15. PostDoc: University of Exeter, UK
Contributed by: Halim Alwi, h.alwi@exeter.ac.uk

Postdoctoral Research Fellowship in Control Systems
Location: University of Exeter
Department: College of Engineering Mathematics and Physical Sciences
Reporting To: Dr Halim Alwi
The full time post is available immediately for 18 months (with possible extension).

The University of Exeter is a Russell Group university that combines worldclass research with very high levels of student satisfaction. Exeter has over 21,000 students from more than 130 different countries and is in the top 1% of universities in the world with 98% of its research rated as being of international quality. Our research focuses on some of the most fundamental issues facing humankind today.

The post:
The project will explore an exciting research of flight control for small multirotor unmanned aerial vehicles (UAVs). The overall aims of the project are:

1) to help improve safety, resilience and survivability of small multirotor unmanned aerial vehicles in the event of inflight faults and failures, and
2) to bridge the gap between theory and application of sliding mode control, thus encouraging adoption of sliding mode control in industry. In order to achieve these aims, the main objectives of the project are:

- a) to develop a simulation model and simulation tool for highly redundant multirotor UAV,
- b) to investigate and develop fault tolerant control (FTC) schemes based on sliding mode control, and
- c) to build the hardware of the multirotor UAV, and subsequently to implement, test and evaluate FTC control schemes.

The project will focus on the application of sliding mode methods to address the aims and objectives listed above. The successful applicants will help develop FTC schemes (objective (b)) and also be expected to assist in preparing the control schemes for hardware implementation on a multirotor UAV.

About you:
The successful applicant will be able to present information on research progress and outcomes, communicate complex information, orally, in writing and electronically. Applicants will possess a relevant PhD and be able to demonstrate sufficient knowledge in the discipline and of research methods and techniques to work within established research programmes. At Postdoctoral Research Fellow level, the successful applicant will be a nationally recognised authority in the state of the art fault tolerant control methods, or techniques which can be applied to these areas and be able to develop research programmes and methodologies. Knowledge of sliding mode control techniques would be an asset. An interest in aerospace systems especially multirotor unmanned aerial vehicles will also be an advantage. The successful applicant will also be able to work collaboratively, supervise the work of others and act as team leader as required.

The successful candidate will be appointed at Postdoctoral Research Associate or Postdoctoral Research Fellow depending on the skills and experience the individual can bring to the role. Candidates should demonstrate their achievement against the relevant criteria in the accompanying person specifications which will be used to make an appointment at an appropriate level.

Full details of the advert can be found here:
http://www.jobs.ac.uk/job/BCH080/postdoctoral-research-associate-postdoctoral-research-fellow/
ITK has 22 professors, 14 adjunct professors, about 10 postdocs and researchers as well as 70 PhD candidates. Approximately 160 candidates graduate annually from the three MSc programs in cybernetics, which comprise about 720 students in total. The department is involved in numerous research projects and centers, including the Centre of Excellence for Autonomous Marine Operations and Systems (NTNU AMOS, http://www.ntnu.edu/amos).

The professor/associate professor must have a solid background in numerical optimization for control. Important application areas include energy and process systems, in particular control and optimization of integrated energy systems. This includes automatic control (e.g. model predictive control) as well as decision support systems (e.g. real-time model-based optimization). Research competence in mixed-integer optimization coupled to hybrid dynamic systems or static systems, including large-scale mixed-integer programming, is relevant.

The professor/associate professor is expected to play a leading role in research and research-based education in optimization and control of dynamic systems in cooperation with the existing staff at ITK. She or he is also expected to establish collaboration with relevant colleagues at other departments at the faculty and within NTNU’s strategic research areas.

The department has strong relationships to Norwegian and international academia and industry, with numerous joint research projects. The research activities at the department rely crucially on external funding, and the development of educational programs may also receive external funding. The successful applicant is expected to work actively to obtain research grants and other external funding from the Research Council of Norway, European research and educational agencies, relevant industry and other available sources.

The candidate will join a research community at ITK which was rated "excellent from an international perspective" in the Norwegian Research Council’s evaluation of 53 ICT communities in Norway in 2012, as one of only three ICT communities to receive such a rating in the Norwegian university and college sector.

The full announcement can be found at https://www.jobbnorge.no/ledige-stillinger/stilling/139773/professor-associate-professor-in-optimization-and-control-of-dynamic-systems

with application deadline on Monday August 21.

About NTNU, Trondheim and Norway:
- About NTNU: http://www.ntnu.edu/
- NTNU Facts and Figures: http://www.ntnu.edu/facts
- NTNU International Researcher Support: http://www.ntnu.edu/nirs
- About Trondheim: https://trondheim.com/
- About Norway: https://www.visitnorway.com/about/
- Working in Norway: https://www.nav.no/workinnorway/en/Home

6.17. Faculty: Umeå University, Sweden

Contributed by: Per Hallberg, per.hallberg@umu.se

Dear colleague

We would like to draw your attention to our announcement of a professor in technology for autonomous systems.

We are looking for a person that could complement and strengthen our current related research at the Department of Applied Physics and Electronics at Umeå University. The closing date is 4th of September,
6.18. Faculty: KU Leuven, Belgium
Contributed by: Goele Pipeleers, goele.pipeleers@kuleuven.be

Vacancy: Model Based Virtual Sensing in Structural Dynamics and Mechatronics
There is currently a vacancy at the research unit Noise and Vibration Engineering at the Science & Technology Group, Faculty of Engineering Science, Department of Mechanical Engineering of the KU Leuven, for a full-time professorship (ZAP) in the field of model based virtual sensing based on ab initio physical models for structural dynamics and mechatronics. We are looking for internationally oriented candidates with excellent research records and with educational competences in the field of dynamics of mechanical systems.

More information at:
or:
Prof. dr. ir. Dominiek Reynaerts, tel.: +32 16 32 26 40, mail: dominiek.reynaerts@kuleuven.be
Prof. dr. ir. Wim Desmet, tel.: +32 16 32 25 27, mail: wim.desmet@kuleuven.be.

Apply no later than: August 31, 2017