E-LETTER on Systems, Control, and Signal Processing
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Welcome to the 355 issue of the E-letter, available electronically here.
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6.23 Faculty: University of Oxford, UK
6.24 Faculty: Zhejiang University of Technology, China
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6.27 Curriculum Development Director: Vin University, Vietnam
6.28 Research Scientist: Bosch Center for Artificial Intelligence, Germany

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 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 spring solicitation will be held from May 1 to 25, 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:

https://ieeetv.ieee.org/conference-highlights/daniel-e-rivera-the-css-outreach-program-providing-community-service-studio-tech-talks-sections-congress-2017?

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

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1.2. CFP: IEEE Conference on Decision and Control

Contributed by: Sergio Galeani, sergio.galeani@uniroma2.it

The 57th IEEE Conference on Decision and Control will be held Monday through Wednesday, December 17-19, 2018 at the Fontainebleau in Miami Beach, FL, USA. The conference will be preceded by technical workshops on Sunday, December 16, 2018.

The CDC is recognized as the premier scientific and engineering conference dedicated to the advancement of the theory and practice of systems and control. The CDC annually brings together an international community of researchers and practitioners in the field of automatic control to discuss new research results, perspectives on future developments, and innovative applications relevant to decision making, systems and control, and related areas.

The IEEE CDC is hosted by the IEEE Control Systems Society (CSS) in cooperation with the Society for Industrial and Applied Mathematics (SIAM), the Institute for Operations Research and the Management Sciences (INFORMS), the Japanese Society for Instrument and Control Engineers (SICE), and the EUropean Control Association (EUCA).

The 2018 CDC will feature contributed and invited papers, as well as tutorial sessions and workshops.

Aside from the technical sessions, the 2018 CDC will feature the Bode Lecture and four semi-plenary lectures.
The Bode Lecture will be presented by Prof. Mark Spong, from the University of Texas, Dallas.
The Semi-Plenary speakers will be:
- Maurice Heemels, Eindhoven University of Technology;
- Sean Meyn, University of Florida;
- Yasamin Mostofi, University of California, Santa Barbara;
- Rodolphe Sepulchre, University of Cambridge.

Important deadlines:
- Invited Session Proposals Due: March 10

- Initial Paper Submissions Due: March 20
- Workshop Proposals Due: May 1

Further details can be found at the CDC2018 website:

https://cdc2018.ieeecss.org/

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1.3. CFP: IEEE Control Systems Letters

Contributed by: Francesca Bettini, bettini@dei.unipd.it

Call for submissions to L-CSS Special Issue:
"Control and Network Theory for Biological Systems".

The L-CSS invites submissions for a special issue on "Control and Network Theory for Biological Systems" (to be included, tentatively, in the January 2019 issue of L-CSS).

Authors are invited to submit six-page manuscripts for review on this topic. The deadline for initial submissions is: *** May 31, 2018 ***.
Submission instructions can be found in the L-CSS website at
http://ieee-cssletters.dei.unipd.it/Page_authors.php?p=1

Guest Editors:
- Murat Arcak, University of California at Berkeley, USA
- Franco Blanchini, UniversitaÕ degli Studi di Udine, Italy
- Mathukumalli Vidyasagar, IIT Hyderabad, India and University of Texas at Dallas, USA

This special issue intends to collect new ideas and contributions at the frontiers of the field of control and network theory for biological systems.
The primary aspect of any contribution should be novelty and originality. Also, the results should be presented in a mathematical language, according to the L-CSS standard.

Specific topics of interest for this special issue include, but are not limited to:

- systems biology: analysis of biochemical reaction networks, gene regulatory networks, molecular systems and cell systems;
- stability, robustness, dynamic and steady-state behavior of biological systems;
- modeling and identification of biological networks;
- graph-theoretical approaches for biological networks;
- stochastic models in biology:
- synthetic biology: design of biological feedback control systems de novo;
- analysis of ecological systems and strategies for ecosystem management;
- dynamics of epidemics, infections and contagion;
- design of optimal therapies for diseases and smart drug delivery.

A manuscript submitted to the special issue should be six pages long in the journal format (style files are available on PaperPlaza), which is a strict limit.
The contribution may also be accompanied by supplementary material, as is customary in biology journals (up to 9 additional pages are possible). However, the value of the submission shall be decided based only the main paper, which must be self-contained.
The supplement is intended to present complementary information, such as simulations, videos, figures, or examples, but not, for instance, theorem proofs or definitions. Some mathematical background can be added to the supplement, for the reader's convenience, if it is already existing in the literature.

According to the L-CSS policy, the final decision will be made within two rounds of reviewing with no exceptions. The final decision will be reached no later than 5 months from the initial submission deadline.

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1.4. 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:

- 18th International Conference on Control, Automation and Systems (ICCAS 2018). PyeongChang, South Korea. Oct 17 - Oct 20, 2018. http://2018.iccas.org/
- 2nd IFAC Conference on Cyber-Physical and Human Systems. Miami (FL), United States. Dec 14 - Dec 15, 2018. http://www.cphs2018.org/
- 37th Chinese Control Conference (CCC2018), Wuhan, China. Jul 25 - Jul 27, 2018. http://ccc2018.cug.edu.cn/English/Hom
- 22nd International Conference on System Theory, Control and Computing (ICSTCC 2018), Sinaia, Romania. Oct 10 - Oct 12, 2018. http://www.icstcc.ugal.ro/
- 23rd International Conference on Methods and Models in Automation and Robotics (MMAR 2018), Miedzyzdroje, Poland. Aug 27 - Aug 30, 2018. http://mmar.edu.pl/

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

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1.5. IEEE Transactions on Automatic Control

Contributed by: Alessandro Astolfi, ieeetac@imperial.ac.uk

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1.6. IEEE Transactions on Control Systems Technology

Contributed by: Michelle Colasanti, ieeetcst@osu.edu

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1.7. IEEE Control Systems Society Publications Content Digest

Contributed by: Elizabeth Kovacs, ekovacs2@nd.edu

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.

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2. MISC

2.1. Online Seminar: "Nonlinear Observers Robust to Measurement Noise and Their Applications in Control and Synchronization"

Contributed by: Tansel Yucelen, yucelen@usf.edu

Online Seminar by Dr. Daniel Liberzon - 12:00 PM Eastern Time, March 23, 2018

USF Forum on Robotics & Control Engineering (USF FoRCE, http://force.eng.usf.edu/) will host Dr. Daniel Liberzon on March 23, 2018 at 12:00 PM Eastern Time. Specifically, Dr. Liberzon will give an online seminar titled "Nonlinear Observers Robust to Measurement Errors and Their Applications in Control and Synchronization" (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: https://force.my.webex.com/force.my/j.php?MTID=mf1fe6b07b7f63b0cdf308c8a4185e0cf

WebEx indirect link: https://force.my.webex.com/force.my (use 623 414 799 for the meeting number and bNXPddCn for the password)

WebEx phone link: +1-510-338-9438 USA Toll (global call-in numbers:
https://force.my.webex.com/force.my/globalcallin.php?serviceType=MC&ED=642877972&tollFree=0)

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.

In the remaining period of Spring 2018, other USF FoRCE speakers will include Drs. Ilya Kolmanovsky and Hassan Khalil. 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: Nonlinear Observers Robust to Measurement Noise and Their Applications in Control and Synchronization (Dr. Daniel Liberzon, 12:00 PM Eastern Time, 03/23/2018)

Abstract: In this talk we address the problem of designing nonlinear observers that possess robustness to output measurement errors. To this end, we introduce a novel concept of quasi-Disturbance-to-Error Stable (qDES) observer. In essence, an observer is qDES if its error dynamics are input-to-state stable (ISS) with respect to the disturbance as long as the plant's input and state remain bounded. We develop Lyapunov-based sufficient conditions for checking the qDES property for both full-order and reduced-order observers. This relates to a novel "asymptotic ratio" characterization of ISS which is of interest in its own right. When combined with a state feedback law robust to state estimation errors in the ISS sense, a qDES observer can be used to achieve output feedback control design with robustness to measurement disturbances. As an application of this idea, we treat a problem of stabilization by quantized output feedback. Applications to synchronization of electric power generators and of chaotic systems in the presence of measurement errors will also be discussed.

Biography: Daniel Liberzon was born in the former Soviet Union in 1973. He did his undergraduate studies in the Department of Mechanics and Mathematics at Moscow State University from 1989 to 1993. In 1993 he moved to the United States to pursue graduate studies in mathematics at Brandeis University, where he received the Ph.D. degree in 1998 (supervised by Prof. Roger W. Brockett of Harvard University). Following a postdoctoral position in the Department of Electrical Engineering at Yale University from 1998 to 2000 (with Prof. A. Stephen Morse), he joined the University of Illinois at Urbana-Champaign, where he is now a professor in the Electrical and Computer Engineering Department and the Coordinated Science Laboratory. His research interests include nonlinear control theory, switched and hybrid dynamical systems, control with limited information, and uncertain and stochastic systems. He is the author of the books "Switching in Systems and Control" (Birkhauser, 2003) and "Calculus of Variations and Optimal Control Theory: A Concise Introduction" (Princeton Univ. Press, 2012). His work has received several recognitions, including the 2002 IFAC Young Author Prize and the 2007 Donald P. Eckman Award. He delivered a plenary lecture at the 2008 American Control Conference. He is a fellow of IEEE and IFAC, and an Editor for Automatica (nonlinear systems and control area).

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2.2. LCCC Focus Period on "Learning and Adaptation for Sensorimotor Control"

Contributed by: Anders Rantzer, rantzer@control.lth.se

LCCC Focus Period on "Learning and Adaptation for Sensorimotor Control"

The LCCC Linnaeus center - Lund Center for Control of Complex engineering systems is announcing a Focus Period on "Learning and Adaptation for Sensorimotor Control" from October 8 to November 9, 2018 with a workshop in the middle. Confirmed invited speakers include Francesca Cacucci (UK), Marie Csete (USA), Ondrej Chum (Czech Republic), Mathew Diamond (Italy), John Doyle (USA), Auke Ijspeert (Switzerland), Henrik Jörntell (Sweden), Hedvig Kjellström Sidenbladh (Sweden), Per Petersson, (Sweden), Ben Recht (USA), Angela Schoelling (Canada), Terrence Sejnowski (USA), Patrick van der Smagt (Germany), Stefano

Soatto (USA), Csaba Szevesvari (USA), Paul Verschure (Spain), René Vidal (USA), CI de Zeeuw (The Netherlands).

The aim of the focus period is to bring together leading researchers from different communities to create cross-fertilization and new ideas. At any particular time, there will be room for up to 10 visiting scholars. A typical visit will be 3 weeks, either beginning or ending with the workshop week. Invitation as visiting scholar includes free accommodation and workshop registration. Interested visitors are encouraged to contact Anders Rantzer ¡rantzer@control.lth.se¿.

For more information, see http://www.lccc.lth.se/index.php?page=october-2018.

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2.3. Cancelled: Second American MPC Summer School 2018

Contributed by: Sasa V. Rakovic, sasa.v.rakovic@gmail.com

The previously announced second American MPC summer school 2018 (please see the previous issue of e-letters) has been just cancelled.

Please take a note of this unexpected outcome, and ignore the previous announcement as the summer school is not going to be held.

Kind regards,

Sasa V. Rakovic, Ph.D. DIC

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3. Books

3.1. Scalar, Vector, and Matrix Mathematics, Theory, Facts, and Formulas

Contributed by: Dennis Bernstein, dsbaero@umich.edu

Scalar, Vector, and Matrix Mathematics, Theory, Facts, and Formulas
Revised and expanded edition
by Dennis Bernstein
Princeton University Press, 2018, 1600 pages

Since its initial publication, this book has become the essential reference for users of matrices in all branches of engineering, science, and applied mathematics. In this third and expanded edition, Dennis Bernstein combines extensive material on scalar and vector mathematics with the latest results in matrix theory to make this the most comprehensive, current, and easy-to-use book on the subject.

Each chapter describes relevant theoretical background followed by specialized results. Hundreds of identities, inequalities, and facts are stated clearly and rigorously with cross-references, citations to the literature, and helpful comments. Beginning with preliminaries on sets, logic, relations, and functions, this unique compendium covers all of the major topics in matrix theory, such as transformations and decompositions, polynomial matrices, generalized inverses, and norms. Additional topics include graphs, groups, convex functions, polynomials, and linear systems. The book also features a wealth of new material on scalar inequalities, geometry, combinatorics, series, integrals, and more.

Now more comprehensive than ever, Scalar, Vector, and Matrix Mathematics includes a detailed list of symbols, a summary of notation and conventions, an extensive bibliography and author index with page references, and an exhaustive subject index.

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3.2. Modeling of Dynamic Systems

Contributed by: Teng Li, tengli@mech.ubc.ca

Features of the new book by Clarence W. de Silva
Modeling of Dynamic Systems
CRC Press, ISBN 978-1-4987-9848-8, 2018

Features:
- Provides systematic approaches that leads to unique models
- Presents modeling approaches that are applicable to problems in many physical domains (e.g., electrical, mechanical, fluid, and thermal) and to problems of multiple domains (mixed systems)
- Presents "unified" and "integrated" approaches to modeling of mechatronic and other engineering systems
- Modeling approaches that are commonly and effectively used in electrical engineering are extended to other domains
- Equivalence or approximate equivalence (to the actual physical system or to another type of model) is considered as the primary basis in developing "equivalent models" and in "model reduction" using various criteria of equivalence.

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

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Contributed by: Yan Ou, yan.ou@ia.ac.cn

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Contributed by: LiChen Fu, lichen@ntu.edu.tw

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4.13. Contents: Nonlinear Analysis: Hybrid Systems

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

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

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4.15. Contents: Journal of the Franklin Institute

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

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4.16. Contents: Evolution Equations and Control Theory

Contributed by: Irena Lasiecka, lasiecka@memphis.edu

Evolution Equations and Control Theory
Vol 7.1, 2018. 1

The new issue EECT 7-1 March 2018 regular issue is now online:
http://aimsciences.org/journal/A0000-0000/2018/7/1

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4.17. CFP: European Journal of Control

Contributed by: Yanzheng Zhu, yanzhengzhu1986@gmail.com

CFP: European Journal of Control Special Issue on Advanced Control Theory and Applications for Next-Generation Engineered Systems

Scope:
Recent years has witnessed great advances and in-depth integration of modern control, communication, and computing technologies. They have prompted the born of nextgeneration engineered systems, including networked cyber-physical systems, Internet of Things, smart power grids, artificial intelligence robots, intelligent

transportation systems, and smart buildings, etc. It is well recognized that the next-generation engineered systems have brought great benefits for human's manufacture and life. However, their multi-device composition, heterogeneous architecture, complex connection and interaction mechanisms, and limited resources, indeed pose substantial design and operation challenges. It is obvious that constructing the model of system evolution should jointly consider the objectives of system control, as well as limited resources. In our control and automation society, an intractable problem is how to jointly design decentralized/distributed cooperative control policies, and resource-efficient allocation approaches to achieve the best operation performances, e.g., stability, robustness, and efficiency.

Since existing data transmission for remote state estimation and control in the nextgeneration engineered systems relies on wireless technologies, adversaries can illegally invade the system at remote side, secretly steal the sensitive information or malicious manipulate the control system to an abnormal state. It is reported that a great number of potential security breaches have been found in industrial control systems. For example, if the security breaches are malevolently used to destroy the smart grid by the attackers, power stations may work disorderly or cannot generate electricity. Different from traditional cyber attacks which only destroy the cyber layer, new emerging attacks can adopt both cyber and physical approaches to disrupt the operation of systems. Thus, from perspective of system control, it is crucial to design proper secure control methodologies to actively defend cyber-physical attacks.

Besides, it is still difficult to apply the existing control theory to practice. Most of the theoretical verification work is accomplished by computer simulations. It is clear that there exists a huge gap between the simulation platform and the practical environment. Thus, the simulations cannot perfectly imitate the running of engineered systems under operation designed theory. More practical platforms and testbeds are desired to fill the gap between the theoretical results and the practical applications.

In general, traditional control technologies have remarkably improved the system performances. However, due to the integration and interaction of cyber space and physical world in the next-generation engineered systems, it is required to explore new control methods to integrally operate the systems to achieve the higher requirements.

In general, traditional control technologies have remarkably improved the system performances. However, due to the integration and interaction of cyber space and physical world in the next-generation engineered systems, it is required to explore new control methods to integrally operate the systems to achieve the higher requirements.

Recently, the researches on control theory and applications for next-generation engineered systems are becoming critical and urgent and have drawn increasing attention from both academia and industry. They have been included as either specific technical sessions or important topics in top conferences, such as IEEE CDC, ECC, ACC, and IFAC World Congress. There are also several journal special issues/sections on control theory and applications for next-generation engineered systems —"Sliding Mode Control and Observation for Complex Industrial Systems", "New Technique Trends for Power Converters in Distributed Power Generation Systems" in IEEE Transactions on Industrial Electronics, "Smart Agents and Cyber-Physical Systems for Future Industrial Systems" in IEEE Transactions on Industrial Informatics, and"Secure Control of Cyber Physical Systems" in IEEE Transactions on Control of Network Systems. Note that, the former three special issues/sections are interested in system design for specific industrial systems, while the latter mainly focuses on secure control of CPSs. Unlike them, we emphasize on advanced control theory and applications for next-generation engineered systems.

The advanced control theory and applications for next-generation engineered systems is a hot research topic in European Journal of Control. Since January 2015, the journal has published about 30 papers on this

topic. However, there is no special issue in European Journal of Control specified to this topic. Thus, it is important and timely to launch a special issue to highlight the importance of advanced control theory for the nextgeneration engineered systems and to link the practical challenges and requirements with the most recent theoretical and technical advances in this area. We also believe that this special issue will attract the attention of a large audience including researchers and developers from control, automation, robotics, and industrial communities.

Coverage:

This special issue will seek latest significant contributions on advanced control theory and applications for next-generation engineered systems. Topics of interest include, but are not limited to, the following:
- Modeling of next-generation engineered systems
- System stability and performance analysis
- Decentralized/distributed control for next-generation engineered systems
- Resilient/secure feedback controller design
- Data-driven/event-driven control for next-generation engineered systems
- Robust control for next-generation engineered systems
- Fault tolerant control for next-generation engineered systems
- Switching control strategy for next-generation engineered systems
- Resource allocations/optimization for next-generation engineered systems
- Intelligent autonomous control for next-generation engineered systems
- Experiments, platforms and applications for next-generation engineered systems

Schedule:

Full paper submission deadline: June 30, 2018
First notification: August 31, 2018
Final notification: October 31, 2018
Final paper due: November 30, 2018
Publication date (tentative): March, 2019

Guest Editors:
Dr. Heng Zhang, School of Computing, Engineering & Math, University of Western Sydney, Australia, Email: Dr.Zhang.Heng@ieee.org
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5. Conferences

5.1. IFAC Conference on Cyber-Physical & Human Systems

Contributed by: Yue Wang, yue6@clemson.edu

CALL FOR PAPERS

The 2nd IFAC Conference on Cyber-Physical & Human Systems

December 14-15, 2018, Miami, USA

Submission Deadline: April 15, 2018

Acceptance notification: September 1, 2018

Final Submission Deadline: October 1, 2018

Steady advances in controls, communications, and computing are enabling new forms of cyber-physical systems (CPS), and are simultaneously redefining the role and position of humans in broad areas of applications and blurring the traditional boundaries between humans and technology. Therefore, for the most part, human interactions in these technical systems are becoming more complex and raising a range of new technical challenges and broader questions, touching social and even cultural domains. This newfound relationship between humans and technology must be studied from an engineering perspective, a human-factors perspective, and from the perspective of social sciences. This conference series on Cyber-Physical & Human Systems (CPHS) is intended to examine these multidisciplinary dimensions.

The second IFAC conference on CPHS builds on the success of CPHS 2016 and the H-CPS-I meeting in 2014. CPHS 2018 aims to bring together researchers and practitioners from academia and industry to share scientific and technological advances as well as gain a deeper understanding of the interactions between cyber-physical systems and humans. Of particular interest are human-centered technologies in a wide-range of applications including transportation, energy, robotics, manufacturing, and health-care. Examples of topics include human-machine symbiosis, humans as supervisors/operators of complex engineering systems, humans as agents in multi-agent systems, and humans as elements in controlled systems. In addition to the technical and theoretical contributions, CPHS 2018 also invites papers studying the ethical questions, public policies, regulatory issues, and new risks associated with interactions between humans and cyber-physical systems. Towards this end, we invite submissions in the following categories:

• Full conference papers (6-8 pages) addressing relevant CPHS topics, which will be peer-reviewed, and presented at the conference (if accepted). Review, Tutorial and Vision papers are also welcome.

• Extended abstracts (a minimum of 500 words) addressing topics of interest, subject to the same review process as full papers, and invited to present at the conference (if accepted).

• Invited sessions, consisting of six full papers and/or extended abstracts, to fill a two-hour block.

• Tutorials and/or workshops, a half-day or full-day event either before or after the conference (please contact the organizers for guidance and details)

We encourage submissions on human-centered technologies in a wide-range of applications including transportation (ground, air, and space), energy, robotics, manufacturing, and health-care. Example of topics include the following:

1. Human-Machine Symbiosis

o Control of smart prosthetics

o Neurostimulation

o Exoskeletons

o Biomedical implants

o Augmented Human

2. Humans as supervisors/operators of complex engineering systems

o Human-Machine interaction in flight control

o Cooperative control in Automotive systems (ex. ADAS)

o Process plant operation

o Robotic surgery
o Spacecraft control
o Control in hazardous environments
o Automated or semi-automated trains
o Remote operation of robotic teams (ex. in rescue scenarios)
3. Humans as agents in multi-agent systems
o Intelligent road transportation
o Next-generation air traffic management
o Flexible manufacturing
o Assistive robotics
o Smart Grid and Demand Response
o Urban mobility
4. Humans as elements in controlled systems
o Comfort control in homes
o Smart cities
o Rescue robotics
o Assistive devices
o Smart infrastructure
o Connected buildings
5. General CPHS topics
o Semiautonomous and mixed-initiative systems
o Shared control
o Cognitive control
o Decision-support for human operators
o Recent theoretical developments impacting the open problems
o Ethics, public policy, and regulatory issues
o Potential impact and open problems

The conference program will only include papers of the highest standard as selected by the IPC, in accordance with the IFAC guidelines www.ifac-control.org/publications/Publications-requirements-1.4.pdf. All papers and abstracts will be accepted with the understanding that the authors will present them at the CPHS Conference. At least one author of every accepted paper will be required to register for the conference before uploading the final version. Accepted papers and abstracts will be presented either in oral or poster format. Accepted papers will be included in the conference "preprints" (USB drive) and published online, whereas accepted abstracts will only be included as preprints and not published on-line. All papers, abstracts, and invited session proposals must be submitted through the conference submission website, www.cphs2018.org, and conform to the policy found therein.

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5.2. International Conference on Methods and Models in Automation and Robotics

Contributed by: Pawel Dworak, pawel.dworak@zut.edu.pl

23rd International Conference on Methods and Models in Automation and Robotics
27-30 August 2018
Amber Baltic Hotel, Miedzyzdroje, Poland

It is our great pleasure to invite You to participate in the 23rdt International Conference on Methods and Models in Automation and Robotics, MMAR 2018 to be held in Miedzyzdroje, Poland, from August 27th to August 30th, 2018.

The Conference will be a good opportunity for highlighting the new results and directions of Automatic Control theory, technology and applications. As such, it mainly will concentrate on the following key points:
– emphasis on invited lectures including plenaries,
– industry participation promotion,
– attract young people to study and work in the field.
The participants of the 23rd International MMAR Conference will have the opportunity to take part in the wide spectrum of categories for technical presentations, including plenary lectures, regular papers of both lecture and poster session types, and panel discussion. We look forward to seeing our old and new friends in Poland. You are kindly invited to participate in the 23rd International MMAR Conference in Miedzyzdroje, Poland.

The proceedings of the conference will be submitted for review and approval for inclusion in the IEEE Xplore® Digital Library and will be submitted for inclusion in the Conference Proceedings Citation Index - Science (ISI Web of Science).

Key Dates (Please check the latest information at www.mmar.edu.pl)
March 5, 2018 - Paper submission
May 21, 2018 - Notification of acceptance
June 25, 2018 - Registration
July 2, 2018 - Camera-ready paper submission

For more information see http://www.mmar.edu.pl

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5.3. International Conference on System Theory, Control and Computing

Contributed by: Marian Barbu, Marian.Barbu@ugal.ro

22nd International Conference on System Theory, Control and Computing - ICSTCC 2018
October 10-12, 2018, Sinaia, Romania
Website: http://www.icstcc.ugal.ro/2018

ICSTCC 2018 aims at bringing together under a unique forum, scientists from Academia and Industry, to discuss the state of the art and the new trends in System Theory, Control and Computer Engineering, promoting professional interactions and fellowship.

ICSTCC 2018 is technically co-sponsored by IEEE Control Systems Society.
In accordance with the Letter of Acquisition signed with IEEE, the Proceedings of ICSTCC 2018 will be submitted for inclusion in IEEE Xplore Digital Library. The Proceedings will also be submitted for indexing in Thomson Reuters Conference Proceedings Citation Index (formerly ISI Proceedings).

ICSTCC 2018 conference will be hosted by the beautiful International Center for Conferences – CASINO Sinaia. Sinaia is one of the most famous and oldest mountain tourist resorts in Romania, known as "The Carpathian Pearl". It is best known for being the summer residence of the Romanian Royal family. We are planning a number of field trips: Bran Castle (Dracula's Castle) and Peles Castle.

Confirmed keynote speakers:
Alberto Bemporad (Italy)
Gildas Besancon (France)
Emilia Fridman (Israel)
Ion Necoara (Romania)
Dorothee Normand-Cyrot (France)
Sigurd Skogestad (Norway)

Important dates:
- April 27, 2018: Invited Session proposal submission
- May 4, 2018: Initial paper submission
- June 29, 2018: Notification of acceptance
- July 27, 2018: Final submission and registration payment

The main areas of interest are: Automation and Robotics; Computer Science and Engineering; Electronics and Instrumentation

All papers should be submitted via the online submission system at
http://controls.papercept.net/conferences/scripts/start.pl#STCC18

For further information please contact the organizing committee at: icstcc2018@ugal.ro.

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5.4. International Conference on Control, Automation and Systems

Contributed by: Hye-Soo Kim, conference@icros.org

2018 18th International Conference on Control, Automation and Systems (ICCAS 2018)
October 17 20, 2018
YongPyong Resort, PyeongChang, GangWon Province, Korea
http://2018.iccas.org

Call for Papers: http://icros.org/data/download/ICCAS2018/ICCAS2018_CFP.pdf

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, 2018 : Submission of Regular Papers (3 6 pages)
- June 30, 2018 : Submission of Organized Session/Mini-symposium Proposal with Papers and Research Poster Papers (1 2 pages)
- July 31, 2018 : Notification of Acceptance
- August 31, 2018 : Submission of Final Camera-ready Papers

PLENARY SPEAKERS
- Edwin K. P. Chong (Colorado State Univ., USA)
- Mattew W. Smuck (Stanford Univ., USA)
- Janan Zaytoon (Univ. of Reims, France)
- Xiaoyan Zhu (Tsinghua Univ., China)
- Hideaki Ishii (Tokyo Inst. of Tech., Japan)

– Welcome to PyeongChang, 2018 Winter Olympics Venue –
PyeongChang is a county in Gangwon Province, South Korea. It's known for Odaesan National Park, with trails crisscrossing the Taebaek Mountains. The park is also home to several Buddhist temples, including Woljeongsa Temple, with its 9-story octagonal pagoda. Lee Hyo-seok Culture Village explores the life of early-20th-century poet Lee Hyo-seok. On the Heungjeong Valley bank are the 7 themed gardens of Herbnara Farm.

General Chair: Chul Joo Hwang (President of ICROS; Jusung Engineering, Korea)
Organizing Chair: Sungwan Kim (Seoul Nat'l Univ., Korea)
Program Chair: Jung Kim (KAIST, Korea)

Organized by Institute of Control, Robotics and Systems (ICROS)

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5.5. ASME 2018 Dynamic Systems and Control Conference

Contributed by: Yue Wang, yue6@clemson.edu

The ASME 2018 Dynamic Systems and Control Conference
(https://www.asme.org/events/dscc)
September 30 - October 3, 2018, Hyatt Regency Atlanta, Atlanta, Georgia, USA

The 2018 Dynamic Systems and Control (DSC) Conference will be held on October 1-3, 2018 at the Hyatt Regency Atlanta, located in the heart of downtown Atlanta, Georgia. The venue is one of the top Atlanta luxury hotels and is connected to the MARTA transit system and blocks away from major attractions such as Georgia Aquarium and the World of Coca-Cola. On behalf of the 2018 DSCC Organization Committee and the Dynamics Systems and Control Division (DSCD) of ASME, we cordially invite you to enjoy an exciting technical program and a unique opportunity to network.

The DSC conference is the showcase technical forum of the ASME Dynamic Systems and Control Division. It provides a focused and intimate setting for dissemination and discussion of the state of the art in dynamic systems and control research, with a mechanical engineering focus. The 2018 DSC Conference Technical Program will consist of sessions in all of the usual areas of interest to the Division that include, but are not limited to, automotive and transportation systems, bio-systems and health care, energy systems, mechatronics, modeling, identification, intelligent systems, robotics, vibrations, and smart structures. Highlights of the 2018 DSCC will include:

- Four plenary talks given by distinguished scholars, including the Oldenburger Lecture and the Nyquist Lecture.
- Workshops and tutorials that are focused on emerging topics.
- Invited and special sessions on technical tracks and funding programs that are of interest to the DSC community.
- Student programs including Best Student Paper competition, networking with faculty recruiters, and networking with industry.
- Exhibits by industry.

- Extensive networking opportunities during the opening reception, continental breakfasts, the banquet, and the farewell lunch.

All accepted papers must be presented on-site at the conference by an author of the paper. Papers which are not presented (no-shows) will be removed from the official conference proceedings and will not be indexed through the ASME Digital Collection.

Online access to conference papers will be given to all registered attendees at the start of the conference. Following the event, the official proceedings of the conference are published in the ASME Digital Collection, and will be submitted to all major indexers including EI Complex, Scopus, and the ISI Conference Proceedings Citation Index.

Important Dates
- Submission of invited session proposals - April 2, 2018
- Submission of contributed and invited papers - April 9, 2018
- Notification of acceptance/rejection - May 28, 2018
- Submission of final papers - July 2, 2018

Conference Organizers
General Chair
XIAOBO TAN, xbtan@egr.msu.edu
Michigan State University

Program Chair
GEORGE ZHU, zhug@egr.msu.edu
Michigan State University

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5.6. Call for Workshop Proposals: ASME 2018 Dynamic System and Control Conference

Contributed by: Sean Andersson, sanderss@bu.edu

ASME 2018 Dynamic System and Control Conference
(www.asme.org/events/dscc)
Call for workshop proposals

We invite you to submit your proposals for a workshop to be delivered at the 2018 DSCC in Atlanta, GA. Workshops will be held on Sunday, September 30, from 1 – 5 pm. Organizers of workshops with at least ten registered attendees will receive a (single) $500 travel stipend.

Proposals should be sent as PDF files to the Workshops Chair (Sean B. Andersson) at sanderss@bu.edu and should provide the following information.

1. Names, affiliations, and a brief biosketch of the organizers and presenters.
2. Workshop abstract.
3. Outline and timing of topics covered (3-4 hours).

Submission deadline: April 15, 2018.
Acceptance notification: May 31, 2018.

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5.7. 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.

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5.8. Allerton Conference on Communication, Control, and Computing

Contributed by: Rachel E Palmisano, rep2@illinois.edu

Call for Papers
Allerton Conference on Communication, Control, and Computing

Manuscripts can be submitted from June 15-July 9, 2018. The submission deadline of July 9th is firm.

Please follow the instructions at http://allerton.csl.illinois.edu.

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5.9. International Conference on Systems and Control

Contributed by: Driss MEHDI, driss.mehdi@univ-poitiers.fr

The 2018 7th International Conference on Systems and Control

The 7th edition of the International Conference on Systems and Control will be held on October 24-26, 2018, at the Universitat Politecnica de Valencia, Spain.

Paper submission: Papers must be submitted electronically via the Web upload system only. The guidelines are given at the ICSC'18 Web site

The authors are invited to submit the full version of their manuscripts online through the online paper submission

https://controls.papercept.net/conferences/scripts/start.pl

Important Dates:
Contributed papers, invited session papers: May 30, 2018
Notification of Acceptance / Rejection: July 20, 2018
Final, Camera ready papers due: September 15, 2018
Conference opening: October 24, 2018

For more information please visit the website of the conference

http://lias.labo.univ-poitiers.fr/icsc/icsc2018/

Program Chairs
Joseba Quevedo, Spain
Driss Mehdi, France
Abdelouahab Aitouche, France

General Chair :
Pedor Albertos, Spain

Please feel free to contact Prof. D. MEHDI (driss.mehdi@univ-poitiers.fr)

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5.10. International Symposium on Distributed Autonomous Robotic Systems

Contributed by: Ted Pavlic, tpavlic@asu.edu

CALL FOR PAPERS – DARS 2018
14th International Symposium on DISTRIBUTED AUTONOMOUS ROBOTIC SYSTEMS
October 15–17, 2018
University of Colorado at Boulder, USA

Paper submission: May 15, 2018, 11.59pm Pacific Time
Author Notification: July 30, 2018
Camera ready submission: September 1, 2018

Now in its 14th edition, the International Symposium on Distributed Autonomous Robotic Systems (DARS) provides a forum for scientific advances in the theory and practice of distributed autonomous robotic systems. It is a highly selective, single-track meeting that is soliciting submissions presenting significant, original, and previously unpublished research.

Distributed robotics is an interdisciplinary and rapidly growing area, combining research in computer science, communication and control systems, and electrical and mechanical engineering. Distributed robotic systems can autonomously solve complex problems while operating in highly unstructured real-world environments. They are expected to play a major role in addressing future societal needs, for example, by improving environmental impact assessment, food supply, transportation, manufacturing, security, and emergency and rescue services. DARS 2018 will build upon past successes and provide an exciting environment for researchers to present and discuss the latest technologies, algorithms, system architectures, and applications. All interested researchers and engineers are invited to take part in DARS 2018.

Papers are solicited in all areas of distributed autonomous robotics, including, but not restricted to:

* Architectures for teams of robots
* Self-organizing and self-assembling robotic systems
* Swarm robotic systems
* Hybrid symbiotic teams (humans and robots, animals and robots)
* Learning and adaptation in teams of robots

* Modular robotics
* Localization and navigation in multi-robot systems
* Multi-robot and multi-vehicle motion coordination
* Distributed cooperative perception
* Distributed cooperative action
* Distributed control and planning
* Control issues in multi-robot systems
* Performance metrics for robot teams
* Distributed decision making
* Sensor and actuator networks
* Networking issues in multi-robot systems
* Wireless and robotic sensor networks
* Multi-robot applications in exploration, inspection, coverage, search and rescue, service, environmental monitoring, etc.

SUBMITTING TO DARS 2018

Please submit your paper using https://cmt3.research.microsoft.com/DARS2018

Papers should be formatted according to the style files of Springer Proceedings in Advanced Robotics (SPAR). The page limit is 12 pages.

PUBLICATION DETAILS

All accepted contributions will be included as full-length papers in the Proceedings of DARS 2018. The proceedings will likely be published in the Springer SPAR series (Springer Proceedings in Advanced Robotics).

SPONSORS & EXHIBITORS

DARS 2018 provides four sponsor packages: platinum, gold, silver, and bronze. Sponsors currently include the University of Colorado at Boulder (gold), UC-Boulder College of Engineering and Applied Science (silver), Modular Robotics (silver), and Robotic Materials (bronze).

If you wish to become a sponsor of, or exhibitor at, DARS 2018, please visit http://dars2018.org/ or contact industry chair Christoffer Heckman (christoffer.heckman@colorado.edu) for more information.

DARS 2018 COMMITTEE

General Chair: Nikolaus Correll (University of Colorado at Boulder)
General Co-Chair: Mac Schwager (Stanford University)

Technical Program Co-Chairs:
Marco Dorigo (Université Libre de Bruxelles)
Vijay Kumar (University of Pennsylvania),
Fumitoshi Matsuno (Kyoto University),
Katia Sycara (Carnegie Mellon University)

See http://dars2018.org/ for more information about the Program Committee.

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5.11. IFAC International Conference on Nonlinear Model Predictive Control

Contributed by: Rolf Findeisen, rolf.findeisen@ovgu.de

6th IFAC International Conference on Nonlinear Model Predictive Control - NMPC 2018
August 19th-22nd, 2018
Madison, Wisconsin, US

Submission deadlines:
Invited session proposals 25 MARCH 2018
Regular & invited papers, workshop proposals 5 APRIL 2018
Abstracts contributions 25 APRIL 2018

The 6th IFAC International Conference on Nonlinear Model Predictive Control, will take place in the city of Wisconsin, Madison, US, August 19th-22nd, 2018.

Model predictive control (MPC) is one of the advanced control techniques that has significantly affected control engineering practice with thousands of controllers implemented in various fields, spanning from process industry to automotive and robotics.

NMPC 2018 aims at bringing together researchers interested and working in the field of MPC, from both academia and industry. This allows to reflect and establish the current state-of-the-art and focus the future development of the MPC field towards relevant directions.

Major conference topics are (detailed list see conference webpage):
· Uncertainty and model predictive control
· Stability of model predictive control
· Economic model predictive control
· Big data and predictive control
· Model predictive control in the cloud/IoT and model predictive control
· Learning and model predictive control
· Moving horizon estimation
· Hierarchical and decentralized predictive control
· Embedded and real-time feasible predictive control
· Applications of model predictive control

MADISON
NMPC 2016 will take place in the city of Wisconsin, Madison, USA in the fluno conference center. It is located between the lakes Mendota and Monona on the University of Wisconsin Madison campus, in the downtown and cultural center of Madison. Madison is the capital of the U.S. state of Wisconsin.

For detailed information about the 6th IFAC-NMPC, visit www.nmpc2018.org

We hope to welcoming you at NMPC 2018

Rolf Findeisen, Daniel Limon, Tobias Geyer (IPC chairs)
James B. Rawlings, Victor Zavala, Thomas Badgwell (NOC chairs)
Conference Website: http://www.nmpc2018.org

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Accepted papers will be published in the open-access IFAC-PapersOnLine series hosted on ScienceDirect (http://www.sciencedirect.com/). To this end, author(s) must confer the copyright to IFAC when they submit the final version of the paper through the paper submission process. The author(s) retain the right to use a copy of the paper for personal use, internal institutional use at the author(s)' institution, or scholarly posting at an open web site operated by the author(s) or their institution, limited to noncommercial use. Any other use of the paper requires approval by IFAC."

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5.12. IFAC Conference on Analysis and Control of Chaotic Systems

Contributed by: Alexander Pogromsky, a.pogromsky@tue.nl

The 5th IFAC Conference on Analysis and Control of Chaotic Systems
(http://chaos2018.wtb.tue.nl/) will take place on October 30 - November 1 2018 in Eindhoven, The Netherlands.

This conference is related to analysis and control of chaotic systems.
It provides a forum for the presentation of new developments in the important interdisciplinary field of chaos control, synchronization and complex networks. The research activity in this field is driven by the needs of different application domains such as: biology (brain dynamics, heart beating, etc.), physics (optics, magnetics, fluid dynamics, etc.), mechanics, smart industry, engineering (non-linear dynamics of electronic and power electronic systems, chaos encrypted signals, walking robots, etc.), economics (critical decision, etc.), chemical engineering, and so on. The aim of the conference is to provide the communities of control engineering, physics, economics, biology, fluid dynamics, power electronics, electronic circuits, etc. with an opportunity to exchange information and new ideas and to discuss new developments in the field of chaos control and synchronization. Both theory and applications will be discussed.

The conference will cover all topics related to complex dynamics within the framework of control systems theory and engineering, including (but not limited to) the following: control of complex systems, bifurcations in complex systems, nonlinear time series and identification, brain dynamics, small world networks, applications (biology, chemical engineering, physics, electrical engineering), control and observation via communication constraints, providing a discussion forum for the physics, chaos and control system communities.

This event is organized by IFAC Technical Committee
TC2.3 (Non-linear control systems) and co-sponsored by the following IFAC Technical Committees:
TC1.2: Adaptive Learning Systems
TC1.3: Discrete Event and Hybrid systems
TC1.5: Networked Systems
TC2.1: Control design
TC8.2: Biological and Medical Systems

Confirmed plenary speakers: M. Cao, T. Iwasaki, R. Sepulchre We invite you to submit papers and invited session proposals.

The submission deadline is April, 15, 2018.

IPC Chairs: J.-I. Imura, A. Fradkov
NOC Chair: H. Nijmeijer

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5.13. IFAC Symposium on Robust Control Design and Workshop on Linear Parameter Varying Systems

Contributed by: Eugênio B. Castelan, eugenio.castelan@ufsc.br

ROCOND'18 & LPVS'18 (Extended deadline for submissions: March 15, 2018)
9th IFAC Symposium on Robust Control Design (ROCOND'18) and 2nd IFAC Workshop on Linear Parameter Varying Systems (LPVS'18) - Florianopolis, SC, Brazil, September 03-05, 2018.

http://rocond18.ufsc.br http://lpvs18.ufsc.br

Updated Important Dates:
Open track session submission deadline March 15, 2018 (No further extensions)
Draft paper submission deadline March 15, 2018 (No further extensions)
Acceptance/rejection notification May 15, 2018

Submission site - https://ifac.papercept.net

The Organizing Committees have the pleasure of inviting you to participate in the joint9th IFAC Symposium on Robust Control Design (ROCOND'18) and 2nd IFAC Workshop on Linear Parameter Varying Systems (LPVS'18) to be held in Florianopolis, Brazil, September 3-5, 2018. The joint ROCOND'18 and LPVS'18 will be held at the conference center of Majestic Palace Hotel near downtown Florianopolis. Majestic Palace Hotel is a 5-star hotel offering luxury accommodation, stunning views of the North Bay, and located just minutes from Shopping Malls, several beaches on the north, south and east of Santa Catarina Island.

Author Guidelines
The joint ROCOND'18& LPVS'18 invite four types of submission: ROCOND Regular or Open Invited Track papers, and LPVS Regular or Open Invited Track papers. For the purpose of review only, all submitted manuscripts may be up to eight (8) pages long. However, normal length for the final manuscript is limited to six (6) pages. Papers exceeding the normal length may be submitted upon payment of over length page charges of EUR 100.00 for each page in excess of six. A maximum of two extra pages above normal six are permitted.

Scope and Topics:
ROCOND 2018 - Over the last three decades, robust control has been a topic of active research and development of new theoretical principles, numerical methods and effective control algorithms to design and implement complex engineering control systems that provide adequate performance and stability when implemented in real plants. Emphasis will be put on current challenges and new directions in development of theoretical and computational tools for versatile practical applications implemented on advanced control systems (networked, embedded, distributed control systems) and are not purely devoted to robust control design.

LPVS 2018 - The class of Linear Parameter Varying (LPV)systems can be used to represent several types of dynamical systems such as time varying uncertain, non-linear, switching or multi-models ones. The LPV modeling allows also the design of the so-called LPV controllers, where the control law parametersare up dated according to the measurable plant varying parameters. In the last two decades, LPV systems and control have been an active topic of research in the control systems community. This Workshop aims at presenting new results in the field of LPV systems and their applications in real life and industry (automotive, aerospace, robotics, chemical processes, biological systems, energy and nuclear, network controlled-systems), including aspects on modeling, identification, stability, control design, observation and diagnosis.

We have already confirmed plenary speakers for:
- ROCOND 2018: Mario Sznaier, Jose C. Geromel and Karl H. Johansson,

and
- LPVS 2018: Javad Mohammadpour and Ricardo Sanchez-Pena

Plenary information, including titles, abstracts and speaker biographies are available on the conference website.

IFAC Young Author Prize
It will be awarded a prize for the best paper in the joint ROCOND'18 and LPV'18for an author younger than 30 years by September 1st 2018. The author should be the first (corresponding) and presenting author of the paper. The prize and a certificate will be awarded at the closing ceremony of the joint ROCOND'18 and LPV'18.

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5.14. CEAS Conference on Guidance, Navigation and Control

Contributed by: Marco Lovera, marco.lovera@polimi.it

5th CEAS Conference on Guidance, Navigation and Control (EuroGNC 2019)
(http://eurognc19.polimi.it)
First announcement and call for papers

On behalf of the Organizing Committee and the Council of European Aerospace Societies (CEAS) it is a pleasure to invite you to participate in the 5th CEAS Conference on Guidance, Navigation and Control (EuroGNC 2019), which will be held Wednesday through Friday, April 3-5, 2019 at the Bovisa Campus of Politecnico di Milano, Italy.

EuroGNC brings together on a biannual basis an international community of researchers and practitioners in the field of aerospace guidance, navigation and control to discuss new research results, perspectives on future developments, and innovative applications relevant to aeronautics and space. Scientists and engineers from industry, research institutes and universities involved in the development of novel GNC methods, applications or technologies are invited to attend the 5th EuroGNC. Presentations should focus on technical and scientific aspects of GNC architectures, algorithms and methods as well as on actual experience gained from real-life applications in those fields.

The 2019 EuroGNC is organized by the Council of European Aerospace Societies (CEAS), with the support of the Italian Member Society – Associazione Italiana Di Aeronautica e Astronautica (AIDAA) and the co-sponsorship of the American Institute of Aeronautics and Astronautics (AIAA) and of the Japan Society for Aeronautical and Space Science (JSASS).

Conference topics include (but are not limited to):
Flight experiments and lessons learned; atmospheric applications; manned fixed-wing and rotary-wing aircraft; missiles; unmanned aerial vehicles; autonomous aerial vehicles; special and unconventional configurations; space applications; reentry, descent and landing; attitude and orbit control; multi-spacecraft applications; high performance satellite control; launcher and ascent control; innovative methods, algorithms, systems and architectures for guidance and control; fault-tolerant control; FDIR algorithms and techniques; nonlinear, adaptive and other novel methods and algorithms; certification aspects; development methods and tools (modeling & simulation, control design, testing, verification and validation); sensors, data fusion, navigation and estimation; inertial & coupled navigation; novel navigation methods (visual, bio-inspired, acoustic, terrain-based. . .).

IMPORTANT DATES
September 15, 2018: Full Papers/Invited Papers Due
December 15, 2018: Acceptance/Rejection Notification
January 15, 2019: Upload Final, Camera Ready Papers

PAPER SUBMISSION
Details on paper submission will be provided in the updated calls for papers and on the conference website eurognc19.polimi.it.

CONFERENCE CHAIR
Marco Lovera, Politecnico di Milano, marco.lovera@polimi.it

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5.15. IFAC Workshop on Distributed Estimation and Control in Networked Systems

Contributed by: Bart Besselink, b.besselink@rug.nl

7th IFAC Workshop on Distributed Estimation and Control in Networked Systems (NecSys18)

August 27-28, 2018
University of Groningen, Groningen, the Netherlands
https://fwn06.housing.rug.nl/necsys2018/

INVITATION
The Organising Committee has the pleasure of inviting you to participate in the 7th IFAC Workshop on Distributed Estimation and Control in Networked Systems (NecSys18) to be held at the University of Groningen, the Netherlands, August 27-28, 2018.

SCOPE
Networked systems and complex dynamical systems can be taken as composed of a large number of simple systems interacting through a communication medium. These systems arise as natural models in many areas of engineering and sciences, such as sensor networks, autonomous and unmanned vehicles, Internet of Things (IoT), smart manufacturing systems (Industry 4.0), biological networks, and animal cooperative aggregation.

The workshop will focus on recent theoretical and experimental developments in the last few years for the analysis, design, identification, estimation and control of networked systems. The aim of this workshop is to bring together researchers from control, computer science, communication, game theory, statistics, mathematics and other areas, as well as practitioners in the related industrial or educational fields, to discuss emerging topics in networked systems of common interest.

PROGRAMME & PLENARY SPEAKERS
Following the tradition of previous NecSys workshops, the workshop will be single track and will feature plenary presentations and poster/interactive sessions of contributed papers. The plenary speakers who have so far confirmed their presence are:

- Carlos Canudas de Wit (CNRS, GIPSA-Lab)
- Jorge Cortes (University of California San Diego)
- Florian Dorfler (ETH Zurich)
- Antoine Girard (CNRS, L2S)
- Julien Hendrickx (UC Louvain)
- Paul van den Hof (TU Eindhoven)
- Steve Morse (Yale University)

- Giuseppe Notarstefano (University of Salento)
- Lacra Pavel (University of Toronto)

IMPORTANT DATES

* Paper submission deadline: April 15, 2018
* Notification of acceptance: June 30, 2018
* Final paper submission deadline: July 20, 2018

COMMITTEES

Conference Co-chairs

* Claudio De Persis (University of Groningen)
* Ming Cao (University of Groningen)

International Programme Committee Chair

* Mehran Mesbahi (University of Washington)

International Programme Committee Co-chairs

* Hyungbo Shim (Seoul National University)
* Kanat Camlibel (University of Groningen)

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6. Positions

6.1. PhD: CEA LIST, France

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

PhD: Commissariat à l'énergie atomique et aux énergies alternatives (CEA), France, Strasbourg University, and Poitiers University, France

A fully funded Ph.D. position is available in the area of control theory and collaborative robots at the Interactive Robotics Laboratory (IRL) of the CEA LIST, France. The appointment will be for 3 years.

In order to improve the industrial production as well as to reduce some important manufacturing costs, robots and people must nowadays have the potential to work in the same environment – even on the same workpieces – at the same time. Such a practical cooperative robotic framework requires the development of new robots. The involved robots must be built to work safely alongside people thanks to appropriate mechanical structures as well as new dedicated controllers. These specific practical constraints often lead to compliant mechanical actuation designs characterized by intrinsic or active, control-adjustable compliance. These new design specifications imposed by the collaborative application requirements, raise specific identification and control issues which must be solved to ensure a safe cooperative human-robot work. The goal of this Ph.D. project consists in developing new automatic control tools for (i) the identification of multivariable models from frequency data, that suit to the context of co-manipulation and with (ii) the goal of enabling the synthesis of robust control laws. The aim is to nicely combine the advantages of black-box and gray-box models to lead to passive representations capable of representing complex dynamics such as high frequency flexible modes. Experimental validation will be carried out on the demonstrators available at CEA-LIST.

More details are available on http://icube-avr.unistra.fr/en/index.php/Open_positions#PdD_:_Identification_of_multivariable_robot_co-manipulation_with_passivity_certificates.

Candidate requirements: applicants should have a Master's degree from a good-quality university in applied mathematics, engineering, computer science or a related field. They should possess a strong background and interest in mathematics and, ideally, in identification, advanced control and robotics. They should

have excellent analytical and problem solving skills and, preferably, well-developed programming skills. Applicants should have a good knowledge of Matlab. The candidate should have excellent oral and written communication skills in English.

Application procedure: To apply for this Ph.D. position, send an email to laroche@unistra.fr, guillaume.mercere@univ-poitiers.fr, Neil.ABROUG@cea.fr with "PhD application: Identification of multivariable models for human-robot co-manipulation with passivity certificates" as subject, attaching an academic CV, a cover letter, a pdf of your diplomas and transcript of course work and grades, a certificate of proficiency in English, and any other document deemed necessary by the candidate which can enrich the application.

DEADLINE FOR THE APPLICATION: April 27 2018!!!

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6.2. 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 previously worked with power systems such as wind turbines and/or PVs, smart grid. The successful candidate is expected to have a strong background in control systems theory, and a very good knowledge of power systems in general. 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.

Interested individuals should send their detailed curriculum vitae to Dr. Afef Fekih (afef.fekih@louisiana.edu).

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6.3. PhD: Aarhus University, Denmark

Contributed by: Erdal Kayacan, erdal.kayacan@gmail.com

Applications are invited for a fully funded PhD studentship position within the Department of Engineering at Aarhus University, Denmark starting in the fall 2018. At Aarhus University, you will have thrilling opportunity to apply the latest artificial intelligence technologies to solve real-world problems, in particular advanced autonomy for aerial robots.

Research area and project description:

We are looking for qualified and talented enthusiast PhD students who wish to investigate embedded guidance, control and navigation problem of unmanned aerial systems using artificial intelligence/machine learning methods with emphasis on reinforcement learning, deep neural networks, and learning controls for robotics.

Our aim is to leverage the current state-of-the-art autonomy level towards smarter robots, which will learn and interact with their environment, collaborate with people and other robots, plan their future actions and execute the given task accurately.

If you wish to shape the future through the marriage of robotics with artificial intelligence/machine learning, come and join us, we can create this vision with your help through the alliance of robotics with artificial intelligence/machine learning.

What you stand to gain? A fully funded PhD position for 3 years (starting Fall 2018) at the Department of Engineering, Aarhus University; a fun environment to drive your passion for robotics.

Qualifications and specific competences:

Required:

" A master's degree in mechanical engineering, electrical engineering, aerospace engineering, computer science/engineering, control theory, mechatronics, applied mathematics, or other related disciplines
" Excellent verbal and writing skills in English with very good communication skills
" Experience in Robot Operating System (ROS)
" Concrete knowledge in C/C++

Preferred:

" Experience in machine/deep learning
" Hands on experience in UAVs
" Demonstration of research activities (conference or journal papers)

Application:

Please refer to the official advert [1] for application details and guideline. The deadline for applications via the online system [1] is 01 May 2018.

[1] http://talent.au.dk/phd/scienceandtechnology/opencalls/calls-on-specific-projects/may-2018/phd-position-in-artificial-intelligence-and-advanced-autonomy-in-aerial-robotics/

Do you want to study for a PhD at a top 100 university?

Aarhus University is a modern, academically diverse and research-intensive university with a strong commitment to high-quality research and education and the development of society nationally and globally. The university offers an inspiring research and teaching environment to its 42,500 students and 11,500 employees and has an annual budget of EUR 840 million. Over the course of the past decade, the university has consolidated its position in the top 100 on the most influential rankings of universities world-wide.

Learn more at http://www.au.dk/en/ and http://www.au.dk/en/about/profile/rankings/

Denmark is home country for Aarhus University and provides a safe and stable environment with great conditions as well as lots of social opportunities. Aarhus is innovative and international, big city but in walking distance, surrounded by forests, parks and sea.

Learn more at http://talent.au.dk/working-at-aarhus-university/

Salary range:

PhD fellows are employed on the basis of academic trade union agreements, and the salary is regulated accordingly (depending on seniority). The salary amounts to approx. DKK 26,000 per month before tax, excluding pension and holiday (2017). The working and fiscal status of a recipient of a PhD fellowship is that of a university employee.

Learn more at http://talent.au.dk/phd/scienceandtechnology/financing/

Contacts:

Applicants seeking further information are invited to contact:

Associate Professor Erdal Kayacan, e-mail: erdal.kayacan@gmail.com

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6.4. PhD: Delft University of Technology, The Netherlands

Contributed by: Sergio Grammatico, s.grammatico@tudelft.nl

PhD position: Cooperative Network Games
Delft Center for Systems and Control (DCSC), Delft University of Technology, The Netherlands.

We are looking for a talented candidate 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).

Project description: The candidate will conduct multi-disciplinary, algorithmic, research on complex multi-agent systems characterized by the presence of: (i) mixed cooperative and noncooperative agents; (ii) high volume of historic data (big data) and forecast on the uncertain variables; (iii) nonlinear system dynamics. The key challenges are to extract the knowledge hidden in the historic data, e.g. via statistical learning, and to coordinate the states and the decisions of the agents to an efficient equilibrium solution, e.g. via the principles of the sharing economy. With this aim, distributed statistical learning shall be developed for cooperative game theory. The main application area is distributed, peer-to-peer, energy trading in smart power grids.

The PhD position is in the context of the research project "Enabling peer-to-peer energy trading by leveraging prosumer analytics" (P2P-TALES), funded by the Netherlands Organization for Scientific Research (NWO) as collaborative project on Energy Systems Integration and Big Data (ESI-BIDA):
https://www.nwo.nl/en/research-and-results/research-projects/i/45/30545.html.

Conditions of employment: The appointment will be for 4 years. The PhD student 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 employee of TU Delft, the PhD student 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 inquires shall be emailed to prof. Sergio Grammatico (s.grammatico@tudelft.nl).

The call for applications will remain open until the ideal candidate is found. The starting date is flexible, but ideally would be April/May/June 2018.

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

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6.5. PhD: University of Cambridge, UK

Contributed by: Ioannis Lestas, icl20@cam.ac.uk

A PhD position in the area of control of networks is available at the University of Cambridge, Department of Engineering (control group) with a start date on October 1st 2018. Full funding (both fees and maintenance) will be provided to the successful applicant. The project will be supervised by Dr Ioannis Lestas (icl20@cam.ac.uk) who can also be contacted for any inquiries.

Applications can be made via the university Application Portal
https://www.graduate.study.cam.ac.uk/how-do-i-apply
by specifying Dr Ioannis Lestas as project supervisor.
Applications should be received preferably by March 31st, though early submissions are strongly encouraged.

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6.6. PhD/PostDoc: Paderborn University, Germany

Contributed by: Daniel Quevedo, dquevedo@ieee.org

The Automatic Control Group (Prof. Daniel Quevedo) in the Department of Electrical Engineering at Paderborn University is seeking a Research Associate (Wissenschaftliche/r Mitarbeiter/in). This is a full-time position, limited to three years, and which is to be filled as soon as possible. We will welcome doctoral students and postdocs.

Your duties and responsibilities:
The candidate will be actively involved in research on stochastic optimisation-based control methods within the project "Privacy-preserving collaborative Control and Optimisation in Vehicular Ad Hoc Networks". The latter is funded by the German Research Foundation (DFG) within a newly established joint Sino-German research initiative.
For further information on our activities, see http://control.upb.de

Your profile:
- A Master's or a doctoral degree in control theory from an excellent University.
- Postdoctoral applicants must have a proven capacity for high-quality research and publications in leading international journals in systems control.
- Fluency in English is required, knowledge of German is an advantage.

We offer a stimulating work environment in an international team and an attractive remuneration package according to pay scale TV-L EG 13 of the German public service (approx. EUR 3.600-4.000/month). Applications from women are particularly welcome and, in case of equal qualifications and experience, will receive preferential treatment according to state law (LGG). Qualified disabled people (in the sense of the German social law SGB IX) are also encouraged to apply. The applicant may choose to have the staff council (WPR) involved in his/her appointment.

Please send your application (including a cover letter, your CV, list of publications, and contact details of at least two referees) to Ines Kaiser, ines.kaiser@upb.de by 15.03.2018. In your application, please mention the reference no. 3262.
For further information, see http://controlsystems.upb.de/en/openings.html

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6.7. PhD/PostDoc: University of Melbourne, Australia

Contributed by: Girish Nair, gnair@unimelb.edu.au

One Post-doctoral and two PhD positions are available to investigate the use of nonstochastic and zero-error information theory in filtering and control problems with deterministic disturbances or unknown noise dis-

tributions. These positions are based in the Department of Electrical and Electronic Engineering, University of Melbourne, Australia, and support an Australian Research Council Future Fellowship project.

**Post-doctoral applicants should have a theoretically-focused PhD in a relevant area. Knowledge of probability theory and random sampling methods would be useful.

Salary: from AU$87,415/year before tax, plus employer superannuation contribution of 9.25%.

Duration: one year including probation period. Extensions are subject to performance and funding.

Starting date: flexible.

To express interest, please email a research statement and CV, with 3 referees listed, to Prof. Girish Nair, gnair@unimelb.edu.au

**PhD candidates should have a 4-year Bachelors and/or a Masters degree with a strong background in control or information theory. Knowledge of probability theory would be helpful. Candidates must also meet the PhD admission requirements of the Department of Electrical and Electronic Engineering and the University of Melbourne.

Stipend: AU$30,000/year tax-free for 3-4 years, with up to AU$15,00 for travel and conferences; subject to satisfactory progress, including passing Departmental confirmation after one year.

Starting date: flexible

To express your interest, please email a research statement and CV, with 2 referees listed, to Prof. Girish Nair, gnair@unimelb.edu.au

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6.8. PhD/PostDoc: KULeuven/VUB/UCL/UMons, Belgium

Contributed by: Ivan Markovsky, ivan.markovsky@vub.ac.be

PhD and postdoc positions EOS project KULeuven/VUB/UCL/UMons, Belgium

We are advertising several PhD and postdoctoral positions for an EOS project on "Structured Low-Rank Matrix/Tensor Approximation: Numerical Optimization-Based Algorithms and Applications" (2018-2021). This excellence-of-science project involves a consortium of four Belgian universities: KULeuven (L. De Lathauwer, B. De Moor, P. Patrinos, M. Van Barel), VUB (I. Markovsky, M. Ishteva), UCL (P.A. Absil, F. Glineur) and UMons (N. Gillis).

We are seeking outstanding candidates who have obtained a master's or doctoral degree in mathematical engineering, computer science, electrical engineering, mathematics or physics. Strong candidates have a proven record in numerical mathematics, optimization, systems & control, machine learning and/or signal processing. A good knowledge of linear algebra is mandatory but experience with tensor techniques is not required. Candidates must be fluent in English.

Further information and application form are available from https://www.esat.kuleuven.be/stadius/selma/ .

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6.9. Researcher: University of Warwick, UK

Contributed by: Zhuqing Meng, xiaowei.zhao@warwick.ac.uk

Marie Sklodowska-Curie Early Stage Researcher in Wind Turbine Control (two posts)

Fixed Term positions (2 posts available) for 36 months.

The School of Engineering of University of Warwick is looking to appoint two full-time Marie Sklodowska-Curie Early Stage Researchers (two posts) to undertake independent and collaborative research in wind turbine control.

These positions are two of the 15 positions available within the ConFlex project, sponsored by the H2020-MSCA-ITN Program. The ConFlex consortium consists of 15 academics in 10 beneficiary universities located in 6 countries (UK, Israel, France, Spain, Germany and the Netherlands). In addition, we have four partner universities in Canada, China, USA and France and 11 prestigious industry partners who will be hosting the early stage researchers (ESRs) for secondments, mostly from Europe. The ConFlex consortium will provide the ESRs with extensive technical and interpersonal skills training. Each ESR will have internship opportunities in at least one of the industry partners and will visit at least one of the academic collaborators. The main task of the University of Warwick is to work on the advanced control of wind turbines.

It is essential that you have a good honours degree and hold, or be near completion of, a Master's degree in the fields of Control Engineering, Electrical Engineering, Applied Mathematics, Data Science or Mechanical Engineering. You will have a developing research profile with the ability to publish high quality research output. 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, and be able to evidence excellent interpersonal skills with relevant experience of working independently and as part of a team. The successful candidate will have experience and/or knowledge in at least one of the following areas: controller design, optimisation, wind turbines and/or data science.

You will be required to meet Marie Curie Early Stage Researcher eligibility criteria. As a condition of the project at the time of recruitment the researcher shall NOT have resided or carried out his/her main activity in the UK for more than 12 months in the 3 years immediately prior to his/her recruitment under the project, and you must not have been awarded a doctoral degree. Applicants must be in the first four years of their research career (e.g. working as a researcher after obtaining your Master's degree) and you will be registered, or demonstrate a willingness to register, for a PhD degree at the University of Warwick.

Funding is for 3 years at approximately 41,276EUR per annum including mobility allowance and will be paid in GBP, subject to exchange rate and tax, national insurance & pension deductions for both employer & employee. Details of the exchange rate arrangements will be provided in any offer of employment made.

These posts are for a fixed term of 36 months to start on 1 April 2018, or as soon as possible after this date.

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

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.

Closing date: 11 March 2018 (UK time)

Full details of the duties and selection criteria for this role are found in the vacancy advert on the University of Warwick jobs page with the link below
https://atsv7.wcn.co.uk/search_engine/jobs.cgi?owner=5062452&ownertype=fair&jcode=1714033

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6.10. Researcher: University of Klagenfurt, Austria

Contributed by: Kornelia Lienbacher, kornelia.lienbacher@aau.at

Open Research Position

The Institute of Networked and Embedded Systems at the University of Klagenfurt has an opening for a research staff member position in the field of industrial sensor networks (UWB technology).

Your work will comprise:

Research in wireless, networked sensor systems for industrial applications: communications protocols, ultra-wideband (UWB) communications and experimental performance analysis
Dedicated participation in a third party funded research project in cooperation with two companies and three research organizations
Independent research with the aim to submit a dissertation
Student mentoring

The research group works on the design, modeling and analysis of future systems for mobile and wireless communications as well as for robotic and drone systems. We furthermore address interdisciplinary questions in the field of self-organization and network theory.

Our team is very international and committed to quality research and teaching. The offices and laboratories are located in the well-equipped Lakeside Science & Technology Park. Working language is English. The Institute cooperates with national and international partners in research and industry. It is part of the research cluster Lakeside Labs (self-organizing networked systems) and the Karl-Popper-Kolleg Networked Autonomous Drones.

The Alpen-Adria-Universität (AAU) is a young and vibrant campus university and hosts approximately 10,000 students. It is located in the southern part of Austria, a region with outstanding quality of life at the intersection of alpine and Mediterranean culture which is underlined also by our motto "Overcoming boarders".

Requirements:

A university degree (Master or Diplom-Ingenieur) in the field of electrical engineering, computer engineering, ICT, telematics, communications engineering, telecommunications or technical informatics graded with "good". Studies have to be concluded before 1 March 2018.
Fluent in written and spoken English
Experience in two or more of the following fields of mobile communications, communications protocols, communications engineering, experimental performance analysis and sensor networks
Profound programing skills in C/C++

We expect

social and communicative competences
first relevant scientific publications (beyond the master thesis)
relevant international experience
knowledge in UWB communications

The annual gross salary is EUR 38.234 (40 hours weekly according to Uni-KV: B1). It might be increased depending on previous experience. Employment is for now limited to 1.5 years and intended to be commenced as soon as possible.

The university strives at raising the number of female scientific staff members and therefore specifically invites women to apply. In case of equal qualifications, women will receive priority consideration.

Please address applications including the usual documents to Univ.-Prof. Dr. Christian Bettstetter a.s.a.p. and send a single PDF file to my secretary (kornelia.lienbacher@aau.at). Further information regarding the Institute can be found on our website https://nes.aau.at.

Travel expenses in connection with the application procedure cannot be reimbursed.

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6.11. Researcher: University of Klagenfurt, Austria

Contributed by: Kornelia Lienbacher, kornelia.lienbacher@aau.at

Open Researcher Position: 5G and Drones
The Faculty of Technical Sciences at the University of Klagenfurt has over 10 years of experience in performing research with small drones, with a strong emphasis on wireless communication, distributed coordination, autonomous navigation, path planning, and system aspects (see Dronehub K). The university recently established the Karl Popper doctoral school on networked autonomous aerial vehicles with the Jet Propulsion Laboratory (JPL) and T-Mobile being external collaboration partners.

To strengthen our team further, we are searching for a researcher (PhD student or junior PostDoc) who will perform the following tasks:
Experimental, hands-on research in wireless communications over LTE-A and 5G for aerial robots
Dedicated participation in a third party funded research project
Independent research with the aim to submit a dissertation
Student mentoring

The expected starting date is as soon as possible. The University of Klagenfurt is a young and vibrant campus university hosting 10,000 students. It is located in the southern part of Austria, a region with outstanding quality of life at the intersection of Alpine and Mediterranean culture. Offices and laboratories are located in the well-equipped Lakeside Science & Technology Park. Our team is very international with English being the working language. For further information see nes.aau.at

Requirements:
University degree (Master or Dipl.-Ing.) in electrical engineering, computer engineering, communications engineering, or technical informatics graded with "good" or better.
Fluent in written and spoken English
Profound programming skills

We expect:
Social and communicative competences
First relevant scientific publications (beyond the master thesis)
Relevant international experience

The contract will be based on a minimum annual gross salary of 39.702 Euros (40 hours weekly) or 29.776 Euros (30 hours weekly) according to Uni-KV: B1. It might be increased depending on previous experience. The contract is initially for 1.5 years and intended to be commenced as soon as possible.
The university strives at raising the number of female scientific staff members and therefore specifically invites women to apply. In case of equal qualifications, women will receive priority consideration.

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6.12. PostDoc: Texas A&M University, USA

Contributed by: Alfredo Garcia, alfredo.garcia@tamu.edu

Position Description: A postdoctoral research assistantship is available at Department of Industrial and Systems Engineering at Texas A&M University. The candidate is expected to work on several research topics related to distributed optimization and iterative mechanism design. The work is currently supported by NSF and AFOSR.

Qualifications: We are seeking candidates that have a record of scholarship optimization, game theory and network science who have the potential to publish in premier journals. Candidates may come from different backgrounds, such as operation research, electrical engineering, economics, computer science or a related field.

Application: The position is available immediately and offered for one-year terms, subject to renewal based on performance. Salary is competitive and commensurate with rank and qualifications. Review of applications will begin immediately and continue until the positions are filled.

Applications should include a cover letter and (a) full curriculum vitae, (b) a brief statement of research interests, (c) evidence of excellence in research, (d) the names and contact info of three references, and (e) two representative papers related.

Please send all materials to: Alfredo Garcia at alfredo.garcia@tamu.edu. Please use as subject of your email "Application for the post-doc position"

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6.13. PostDoc: Delft University of Technology, The Netherlands

Contributed by: Simone Baldi, s.baldi@tudelft.nl

Post-doc position at the Faculty Mechanical, Maritime and Materials Engineering, TU Delft

The Departments of Maritime and Transport Technology and Delft Center for Systems and Control of Delft University of Technology, The Netherlands, are seeking qualified candidates for a one-year position as a post-doctoral fellow within the research area of autonomous operation of construction crane vessels

The challenge:
Highly automated vessels are needed for offshore transportation and construction to improve the safety and operational efficiency of the construction work. Adaptive control systems for construction vessels that can handle changing conditions during offshore installation works could help with achieving autonomous operation of construction vessels. To achieve this goal, we need to develop an integrated simulation model that can reliably capture the dynamics of the vessel-crane system under different environmental conditions and loads, and supplement it with the design of adaptive controllers for synchronized operation of cranes and propulsion system. Four main systems should be integrated: vessel dynamics, hydraulic crane, propulsion system, and adaptive control system. The parameters of both the vessel and the crane should be made adaptable to different construction stages and environmental conditions (including higher sea states). The adaptive control system should be designed to handle the changes during off-shore construction operations and improve the safety and operational efficiency in the presence of uncertainties within the system.

Requirements:
We are looking for a candidate with a PhD degree in Systems and Control, Mechanical Engineering, Maritime Engineering or a closely related discipline, with a strong background in Lagrangian and Hamiltonian mechanics and/or in guidance, navigation and control of vessels. An excellent publication record will be evaluated very positively. A good command of the English language is required.

Conditions of employment:
TU Delft offers an attractive benefits package, including a flexible work week, free highspeed Internet access from home, and the option of assembling a customised compensation and benefits package (the 'IKA'). Salary and benefits are in accordance with the Collective Labour Agreement (CAO) of the Association of Universities in the Netherlands (VSNU), and are depending on the qualifications and experience of the candidate selected.

Information and application:
For more information about this position, please contact Dr. Milinko Godjevac (m.godjevac –at- tudelft.nl) and Dr. Simone Baldi (s.baldi –at- tudelft.nl). Applicants should submit their letter of application along with a detailed curriculum vitae, a research statement indicating your background and interests and how they align with the position (around one page long), a list of publications, title and abstract of your PhD dissertation, the PDF files of two key publications, contact information for at least two academic references and all other information that might be relevant to your application to Dr. Milinko Godjevac and Dr. Simone Baldi. A first selection will be made based on the submitted material, and selected candidates will undergo a Skype interview.

The initial application deadline for the position is April 1, 2018, but the position will stay open until a suitable candidate has been appointed.

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6.14. PostDoc: Delft University of Technology, The Netherlands.

Contributed by: Giulia Giordano, g.giordano@tudelft.nl

Postdoctoral position: Complex Dynamical Networks

Delft Center for Systems and Control (DCSC), Delft University of Technology, The Netherlands.

We are looking for a talented post-doctoral research fellow with background and interest in System Theory, Automatic Control, Optimisation; strong mathematical skills; a track record of publications in high-quality journals and/or conferences; and an excellent command of the English language (knowledge of Dutch is not required).

The researcher will conduct fundamental theoretical and algorithmic research on complex dynamical networks, with possible applications to systems in both engineering and biology.
The researcher will not be assigned to a pre-defined project. She/He will be free to follow her/his own preferences within the research activities and expertise of the group. For more information on the possible research topics, see:
http://giordanogiulia.altervista.org/research.html
http://giordanogiulia.altervista.org/publications.html.

Requirements:
Applicants should have the following qualifications
- Ph.D. degree (or close to completion) in Systems and Control, Operations Research, Applied Mathematics, Electrical Engineering, or a related field.
- Strong mathematical skills, along with ability and interest to work at the intersection of several technical research domains, in particular System Theory, Automatic Control, Optimisation.
- Good programming skills (e.g., in Matlab).
- Excellent command of the English language and communication skills.

Expertise in either networked dynamical systems, decentralised control or systems biology is highly appreciated.

Conditions of employment:
The TU Delft offers a customisable compensation package, a discount for health insurance and sport memberships, and a monthly work costs contribution. Flexible work schedules can be arranged. An International Children's Centre offers childcare and an international primary school. Dual Career Services offers support to accompanying partners. Salary and benefits are in accordance with the Collective Labour Agreement for Dutch Universities.

Information and application:
For more information about this position, please contact dr Giulia Giordano, e-mail: g.giordano@tudelft.nl.
An application dossier consists of the following documents:
- detailed curriculum vitae and list of publications;
- a brief statement of motivation, research interests and vision (1-2 pages);
- academic transcripts of all exams taken and obtained degrees (in English);
- names and contact information of up to three references (e.g. PhD supervisors);
- up to five publications (possibly, also currently unpublished work ad PhD thesis).

Applications can be submitted to Irina Bruckner, e-mail: application-3mE@tudeflt.nl.
When applying for this position, please refer to vacancy number 3ME18-11.

The call for applications will remain open until the ideal candidate is found.
The starting date is flexible, but ideally would be May/June 2018.

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6.15. PostDoc: Delft University of Technology, The Netherlands

Contributed by: Sergio Grammatico, s.grammatico@tudelft.nl

PostDoc position: Game theory and Optimization for Automated Driving.
Delft Center for Systems and Control (DCSC), Delft University of Technology, The Netherlands.

We are looking for a talented postdoctoral research fellow with a Ph.D. degree (or close to completion) in Systems and Control, or Operations Research, or related field, with 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.

Project description: The research fellow will conduct fundamental and algorithmic research on complex multi-agent systems with application to automated driving in highways. The key challenge is to design distributed control algorithms with mixed-integer decision variables for noncooperative, multi-agent and dynamic environments, such as semi-automated highways. With this aim, game-theoretic and optimization-based distributed control shall be developed.

Conditions of employment: The appointment will be for 1 year, with the possibility for extension. As an employee of TU Delft, the research fellow will receive a competitive salary in accordance with the Collective Labour Agreement for Dutch Universities (CAO) of about 2.5k EUR/month gross, possibly about 2.1k EUR/month after taxes, plus holiday allowance (8% of gross annual income) and end-of-year allowance (8.3% of gross annual income), 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-oriented documents (e.g. thesis, conference/journal publications).

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

The call for applications will remain open until the ideal candidate is found. The starting date is flexible.

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6.16. PostDoc: University of Pennsylvania, USA

Contributed by: James Weimer, weimerj@seas.upenn.edu

Postdoctoral Research Positions in Assured Autonomy
at
PRECISE Center
School of Engineering and Applied Science
University of Pennsylvania
http://precise.seas.upenn.edu/

The PRECISE center at University of Pennsylvania is seeking applications for postdoctoral researchers to work on the project, entitled "Integrated Static and Dynamic Approaches to High-Assurance for Learning-Enabled Cyber-Physical Systems (LE-CPS)," which is funded by the DARPA Assured Autonomy Program (https://www.darpa.mil/program/assured-autonomy). The project is aimed to develop the foundations and tools for the rigorous design of high-assurance LE-CPS in a systematic way.

Researchers with an interest and experience in machine learning, adversarial learning, formal methods, hybrid and control systems, assurance cases, confident arguments, run-time verification, and tool development are encouraged to apply. We are particularly seeking candidates whose interests are in more than one of the mentioned areas.
They are expected to work with the following project team members:
Rajeev Alur (alur@cis.upenn.edu),
Nicola Bezzo (nb6be@virginia.edu),
Daniel Lee (ddlee@seas.upenn.edu),
Insup Lee (lee@cis.upenn.edu),
Manfred Morari (morari@seas.upenn.edu),
George Pappas (pappas@seas.upenn.edu),
Oleg Sokolsky (sokolsky@is.upenn.edu), and
James Weimer (weimerj@seas.upenn.edu).

Positions are offered for the initial period of one year, with an option to renew for subsequent years.
Positions will be available until qualified candidates found. A competitive salary will be offered.

Please email a complete CV including a research statement to Insup Lee (lee@cis.upenn.edu).

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6.17. PostDoc: University of Pennsylvania, USA

Contributed by: James Weimer, weimerj@seas.upenn.edu

Postdoctoral Research Positions in Resilient Cyber-Physical Systems
at
PRECISE Center
School of Engineering and Applied Science
University of Pennsylvania
http://precise.seas.upenn.edu/

The PRECISE center at University of Pennsylvania is seeking applications for postdoctoral researchers to work on model-based design, verification, and synthesis of cyber-physical systems as part of the DARPA CASE program. The project is aimed at ensuring resiliency of systems in response to evolving requirements and newly discovered vulnerabilities.

Researchers with an interest and experience in any related areas are welcome to apply. Particular areas of expertise include:

- Verification and synthesis of hybrid systems
- Security of embedded control systems
- Model-based design for cyber-physical systems

Candidates with proven tool development skills will be preferred.

Positions are offered for the initial period of one year, with an option to renew for subsequent years. A competitive salary will be offered.

Please email a complete CV including a research statement to one of the PIs of the project: Rajeev Alur (alur@cis.upenn.edu), Insup Lee (lee@cis.upenn.edu), Rahul Mangharam (rahulm@seas.upenn.edu), Mayur Naik (mhnaik@seas.upenn.edu), Oleg Sokolsky (sokolsky@is.upenn.edu), and James Weimer (weimerj@seas.upenn.edu)

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6.18. PostDoc: University of New Mexico, USA

Contributed by: Meeko Oishi, oishi@unm.edu

Multiple postdoctoral positions are available in the Hybrid Systems and Controls Laboratory (http://hscl.unm.edu) at the University of New Mexico to work on projects funded by the NSF National Robotics Initiative ("NRI: Planning, collaborative guidance, and navigation in uncertain, dynamic environments") and by Sandia National Laboratories ("Autonomous Sensor Tasking and Scheduling Across Multiple Platforms"). The postdoctoral associates will work with researchers in Electrical and Computer Engineering and Computer Science to develop theory and algorithms to enable collaborative autonomy in dynamic and uncertain environments. Researchers with interest and experience in optimization, hybrid systems and control, stochastic optimal control, reinforcement learning, planning, distributed systems, and human cyber-physical systems are encouraged to apply.

Interested candidates should provide a CV, a cover letter summarizing capabilities and interests, and contact information for three professional references. Questions can be directed to Prof. Meeko Oishi (oishi@unm.edu). Please apply through https://hr.unm.edu/unmjobs. Applications received by April 15, 2017 will receive full consideration, although the position will remain open until filled.

UNM is New Mexico's flagship institution, and is located in Albuquerque, NM, USA, a metropolitan area of 650,000 that provides a wide variety of recreational and cultural opportunities. The surrounding area is renowned for outdoor activities including hiking, mountain biking, cycling, skiing, and others.

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6.19. PostDoc: University of Groningen, The Netherlands

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

Postdoctoral Fellowship Engineering Science and Technology (1.0 FTE) (218059-60)

Organisation

The University of Groningen is a research university with a global outlook, currently in or around the top 100 on several influential global ranking lists.
The Faculty of Science and Engineering harbours a kaleidoscope of disciplines and research strengths. Our programmes in research and education range from nanomaterials and biomachinery to astronomy, from mathematics to systems and control theory, from neurosciences to computer science, and from molecular and evolutionary biology to marine biology. On top of its track record of research excellence, the Faculty

offers a large number of bachelor's degree programmes (overseen by our Undergraduate School of Science and Engineering) and master's degree programmes (overseen by our Graduate School of Science and Engineering). Nearly all of our bachelor's (BSc) and master's degree programmes (MSc) are fully English-taught, thus allowing students from all over the world to follow a degree programme with us.

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 day one, 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 1000 per year is dedicated for additional training and career activities. The preferred starting date of these fellows is before July 2018.

Job description

We offer one fellow positions in the field of Systems and Control, with a teaching task in the BSc or MSc Industrial Engineering and Management. The fellow position will be embedded in the Engineering and Technology Institute Groningen (ENTEG). Research in Systems and Control at the University of Groningen has a long tradition and current scientific activities at the Institute of Engineering and Technology focuses on nonlinear systems, hybrid and switched control, robotics and mechatronics, cyber-physical systems, energy networks, with applications ranging from power networks to traffic systems, data centres, smart manufacturing and adaptive optics.

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 salary dependent on qualifications and work experience of EUR 3,111 gross per month up to a maximum of EUR 4,084 (salary scale 10 Dutch Universities) gross per month for a full-time position. The UFO-profile Researcher/Lecturer applies. 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.

In addition to the primary salary the University offers 8% holiday allowance and an end-of-year bonus of 8.3%.

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.

Applications

You may apply for this position until 23 March 23.59h Dutch local time by means of the application form

available at
https://www.rug.nl/about-us/work-with-us/job-opportunities/overview?reply=00347-02S00065JP&cat=wp

If the page is not available, please submit your application to the email address
secsms@rug.nl
with subject "Postdoctoral Fellowship Engineering Science and Technology".

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).

Selection interviews will take place in the second half of March 2018.
The preferred starting date is before July 2018.
Unsolicited marketing is not appreciated.
Information
For information you can contact:
Prof. Claudio De Persis, c.de.persis@rug.nl
Prof. Jacquelien Scherpen, j.m.a.scherpen@rug.nl
(please do not use for applications)
Additional information
https://www.rug.nl/research/enteg/
https://www.rug.nl/bachelors/faculty-of-science-and-engineering
https://www.rug.nl/masters/faculty-of-science-and-engineering

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6.20. PostDoc: University of Texas at Dallas, USA

Contributed by: Reza Moheimani, Reza.Moheimani@utdallas.edu

Three postdoctoral research associate positions are available for joining an established interdisciplinary research group based in the Laboratory for Dynamics and Control of Nanosystems at the University of Texas at Dallas.

Funded by Department of Energy, the researchers will work at the intersection of nanotechnology, control engineering, MEMS design, and high-precision mechatronics. The goal of this three-year project is to develop a novel platform technology for high-throughput atomically precise manufacturing.

The successful candidates will have the opportunity to participate in a host of theoretical and experimental projects, supervise graduate and undergraduate researchers, write reports and manuscripts, attend international conferences, prepare proposals and work closely with collaborating groups based in Zyevx Labs and NIST.

The applicants should have (or be close to completing) a Ph.D. in Electrical Engineering, Mechanical Engineering, or a closely related field, in addition to the following experiences.

Control and high-precision mechatronics: The candidate should have a strong analytical background, be familiar with advanced control design methods and have demonstrated experience with real-time control implementation for laboratory or full scale mechatronic systems.

MEMS: The candidate should have experience with MEMS design, characterization and microfabrication in a cleanroom environment and be able to design interface electronic circuits for MEMS transducers.

Nanotechnology: The candidate should be familiar with scanning probe microscopy methods and have demonstrated and substantial experience with instrumentation design for SPMs. Experience with high-speed AFM will be highly regarded. Regular users of scanning probe microscopes will not be considered.

The positions are available from May 1, 2018 and include a competitive salary and fringe benefits package. Interested applicants should contact Dr. Reza Moheimani at Reza.Mohiemani@utdallas.edu with the following information:

- A detailed CV including a list of publications
- A statement of research interests and background (one page only)
- Names and contact details of three references

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6.21. PostDoc/Visiting Researcher: Huazhong University of Science & Technology, China

Contributed by: Ye Yuan, yye@hust.edu.cn

Prof. Ye Yuan (http://yy311.github.io/bio.html) is looking for a number of postdocs and visiting researchers starting as soon as possible at Huazhong University of Science & Technology (HUST), China.

The research project is broadly on the development of deep learning, system identification and control theory and its application to cyber-physical systems.

1. For Postdoc, we offer

• A competitive salary (USD 35,000 – 50,000 per year);

• Experimental platforms to test ideas (Vicon + Crazyflies, GPU cluster, UR3/5 robot + Kinect, HIL power simulator)

• Full contract for 2 years with the possibility of renewal up to 5 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 (up to USD 9,000 per month);

• Travel cost and local housing.

3. Your Profile

• A Ph.D. degree in Control Theory, Computer Sciences, Mathematics or a closely related field;

• An excellent background in one of the following areas: system identification, control theory, machine learning, neuroscience, robotics.

• Tenured professors in world-leading institutes (for visiting professors).

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 ¡yye@hust.edu.cn¿. We will invite qualified candidates for interview; apologies for not being able to answer your inquiry emails about the application.

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6.22. Faculty: University College Dublin, Ireland

Contributed by: Robert Shorten, robert.shorten@ucd.ie

University College Dublin's School of Electrical & Electronic Engineering has a long and distinguished record of excellence in education and research. The School has an international track record of research achievement across major fields within the discipline, including physical layer communications and integrated circuits,

electrical power systems, optimisation and control, and biomedical engineering (http://www.ucd.ie/eece/). The School is committed to the highest standards of undergraduate and postgraduate teaching, learning and student development within a research-informed environment.

Applications are invited for faculty positions in the following areas:

1. Integrated Circuit Design (with expertise in one or more of the following: monolithic Radio Frequency (RF), Analogue, and Mixed-Signal Circuit Design); and

2. Cyber-Physical Systems (with expertise in one or more of the following: Optimisation, Control, Decision Science, Stochastic Processes, Machine Learning).

Candidates should have outstanding records of research accomplishment in fundamental scientific areas underpinning Electronic Engineering, be qualified to deliver high quality research-informed teaching to doctoral level, and be capable of contributing to Bachelors and Masters degree programmes in Electronic Engineering.

Appointees will be located within the School of Electrical & Electronic Engineering and will be expected to develop into leading figures within Ireland's Engineering community, building up and sustaining internationally important research teams, and interacting with industrial partners and other disciplinary areas within and outside the university.

Lecturer/Assistant Professor (above the bar) Salary Scale: EUR 52,325– EUR 82,267 per annum.

Closing date: 16 April 2018

Full details can be found at https://www.ucd.ie/workatucd/ (Job Refs 010026, 010027).

University College Dublin is an Equal Opportunity Employer

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6.23. Faculty: University of Oxford, UK

Contributed by: Kostas Margellos, kostas.margellos@eng.ox.ac.uk

Associate Professor of Engineering Science (Robotics), Department of Engineering Science, University of Oxford

Applications to be received by 12pm on Monday 5th of March 2018
Grade 30S: From £46,336 p.a.

The Department of Engineering Science intends to appoint an Associate Professor in Engineering Science (Robotics) from 1 September 2018 or as soon as possible after. The successful candidate will work at the Department of Engineering Science (Central Oxford) and will be offered a Tutorial Fellowship at Brasenose College under arrangements described in the Job Description.

The combined University and College salary will be on a scale currently from £46,336 p.a. plus additional benefits including free accommodation in housing provided by the college or a housing allowance of £10,237 p.a. and a fellows allowance of up to £1,700 p.a. (see Job Description for full details). The post of Associate Professor can be an entry level permanent academic position, and can also be held by more senior academic staff, some of whom hold the title of Full Professor for which an allowance of £2,700 p.a. is payable. The appointment will be initially for 5 years at which point, upon completion of a successful review, the postholder will be eligible for reappointment to the retiring age.

This appointment will add further strength to the Department's internationally-renowned research in robotics, which has been located in the Mobile Robotics Group for the past decade. This post is part of the expansion

of the Mobile Robotics Group into the Oxford Robotics Institute, which involves the creation of new academic posts and a move into expanded accommodation in Central Oxford. The Associate Professor will build a research group developing algorithms and systems for machine perception (laser, vision, radar), planning, reconstruction, and platform control.

The successful candidate will be expected to engage in original research in the field of robotics, to secure research funding and to assist in the teaching of their subject at both undergraduate and graduate level. Undergraduate teaching may include lectures and practical classes, and the supervision of undergraduate design and project work.

She or he will have a strong background applicable to research in robotics, including a doctorate in the subject or a cognate discipline, a proven research record of high quality at international level, significant future research potential, and the ability to attract research funding and develop an independent programme of research. The successful candidate will have the ability to teach effectively, both at undergraduate and graduate levels, and have excellent interpersonal skills for undertaking tutorial teaching.

The job ref is: DF18BNC/132521. Please quote this in all correspondence.

Queries about the post that are not answered in the further particulars should be addressed to Professor Lionel Tarassenko CBE FREng FMedSci, Head of Department of Engineering Science, email: academic.recruitment@eng.ox.ac.uk or tel: 01865 273003.

The closing date for applications is 12.00 noon on Monday 5 March 2018. It is expected that the interviews of the shortlisted candidates will take place on Friday 20 April 2018.

Applications are particularly welcome from women and black and minority ethnic candidates, who are underrepresented in academic posts in Oxford.

Contact: Professor Lionel Tarassenko CBE FREng FMedSci (01865 273003)

More information can be found at: http://www.eng.ox.ac.uk/jobs/current-vacancies/vacancy/132521-Associate-Professor-of-Engineering-Science-(Robotics)

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6.24. Faculty: Zhejiang University of Technology, China

Contributed by: Qiu Xiang, qiuxiang@zjut.edu.cn

http://www.ie.zjut.edu.cn/

Zhejiang Control Science and Engineering First-Class (Class A) Discipline Recruitment Announcement

Zhejiang University of Technology (ZJUT), sitting by the beautiful West Lake, Hangzhou, is a Zhejiang Province and the Ministry of Education co-supported, provincially governed key university, who owns one of the only 14 Collaborative Creation Centers in the first initiative of the state "2011 Program". ZJUT has its beautiful campus covering more than 3000 mu, which accommodates 24 Colleges, more than 37,000 full-time students and more than 3,300 staffs. ZJUT is proudly to have 2 self-owned and 2 sharing Fellows of the Chinese Academy of Engineering, as well as more than 1400 faculties with senior professional titles. ZJUT has State Key Disciplines, State Engineering Research Centers, State University Science Parks, Centers for Postdocs, as well as the power of awarding Doctors, Masters, MBAs and recruiting foreign students and those from Hong Kong, Macao and Taiwan.

The Control Science and Engineering Discipline within the College of Information Engineering was one of the Priority-among-Priorities Disciplines (selected by Zhejiang Provincial Government in 2009), and is now one of the Zhejiang First-Class (Class A) Disciplines in the first initiative of the Program in 2015. The Discipline

now has the Doctoral Program at the first-level discipline, the Center for Postdocs, and the Zhejiang Collaborated Key Laboratory of Embedded Systems. The College of Information Engineering where the Discipline is in has 5 undergraduate programs: Automation, Electrical Engineering and Its Automation, Electronic Information Engineering, Communication Engineering, and Electronic Science and Technology. The Discipline is now recruiting faculties in the following areas at the levels of State and Zhejiang Provincial "1000 Plan" high-level talents, Zhejiang "Qianjiang Scholars", ZJUT "Yunhe Specially-Appointed Professors", "ZJUT Professors", outstanding PhDs and postdocs, etc.

(1) Control Science and Engineering, including advanced control theory, robotics, machine vision, pattern recognition, industrial networked control systems, MES, etc.
(2) Electrical Engineering, including electric drive, power electronics, new energy, etc.
(3) Mechatronic Engineering, including high-precision servo control of mechatronic devices, the modelling and dynamic analysis of robots, etc.
(4) Computer Science and Technology, including smart city, smart healthcare, big data, cloud computing, IoT, industrial control software, etc.

A. Selection criteria
High-level talents (Changjiang Scholars, 1000 Plan Scholars, Qianjiang Scholars, etc.) You have major achievements and influence in your research area that have already been recognized by national and international researchers, or have great potentials of future development; You also meet the criteria of corresponding talents programs.
ZJUT Professors /Associate Professors You have a PhD degree obtained from a recognized university or research institutes with at least one year of oversea research experience in a well-known foreign institute; You have research achievements recognized by national and international researchers; Your application also passes the review process at the university level (ZJUT).
Outstanding PhDs/Postdocs You have a PhD degree obtained from a recognized university or research institute; You have high-quality research outputs and the professional skills required by a university lecturer, and great potentials of your future career.

B. Salary and welfare
(1) National-Level Top Tier Talents: Fellows of Chinese Academy of Sciences or Chinese Academy of Engineering, "Special Support Program" Distinguished Talents, Principal Investigators of NSFC Innovative Research Team, or other talents at the equivalent level. Treatment: Negotiation on the case by case basis.

(2) National-Level Top Tier Talents: National "1000 Plan" Scholars (long-term), Changqiang Scholars, NSFC Distinguished Young Scholars, "Special Support Program" Outstanding Talents, winners (rank first) of three major national science awards, or other talents at the equivalent level. Salary (CNY): $\geq$700K /Year; Housing Benefit(CNY):3M-5M; Startup Funds(CNY):Case by case.

(3) National-Level Young Talents: "Special Support Program" Outstanding Young Talents, "1000 Plan" Young Scholars, "Changjiang Young Scholars, NSFC Outstanding Young Scholars, 973 Program Young Scholars, "Millions of Talents Program" Scholars, or other talents at the equivalent level. Salary (CNY):$\geq$ 450K /Year; Housing Benefit(CNY):1.5M-2.5M; Startup Funds(CNY):1M-3M.

(4) Provincial-and-Ministry-Level Talents,Yunhe Specially-Appointed Professors:CAS "100 Plan" Scholars, Zhejiang "Qianjiang Scholars", Zhejiang "1000 Plan" (long-term) Scholars, or other talents who have made significant academic contributions with great potentials of development and who are awarded "Yunhe Specially-Appointed Professors" after the review of ZJUT. Salary (CNY): $\geq$ 350K /Year; Housing Benefit(CNY):1.5M; Startup Funds(CNY):0.5M-1M.

(5) ZJUT Professors,ZJUT Associated Professors:You have a PhD degree obtained from a recognized uni-

versity or research institutes with at least one year of oversea research experience in a well-known foreign institute; You have research achievements recognized by national and international colleges; Your application also passes the review process at the university level. Salary (CNY):Salaries at the appropriate levels; Housing Benefit(CNY):0.4M-0.5M; Startup Funds(CNY):0.1M-0.2M.

(6) Outstanding PhDs/Postdoctors: You have a PhD degree obtained from a recognized university or research institute; You have high-quality research outputs and the professional skills required by a university lecturer, and great potentials of your future career. Salary (CNY):Salaries at the appropriate levels; Housing Benefit(CNY):0.3M.

(7) Postdocs (leading to a faculty): Besides the basic salary and welfare, 50K/Year subsidy is provided for the first two years, with the possibility of continuing this subsidy plus a one-off 200K housing benefit if you are accepted to ZJUT public institution business unit.

C. Required documents

(1) One self-recommendation letter covering your study and professional records, your teaching and research statements, your achievements, your work plan as well as your possible requirements from us.
(2) A list of your research funds, awards, and publications in the recent five years.

D. Contact us

Dr. Qiu,
Email : qiuxiang@zjut.edu.cn
Mobile: +86-13867469319
Address: Xiaoheshan College Park, College of Information Engineering, Zhejiang University of Technology, 310023

Zhejiang Control Science and Engineering First-Class (Class A) Discipline
Feb 7, 2018

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6.25. Faculty: OVGU Magdeburg, Germany

Contributed by: Rolf Findeisen, rolf.findeisen@ovgu.de

The Faculty of Electrical Engineering and Information Technology of the OVGU Magdeburg, Germany, invites applications for a W1 Professorship with Tenure Track (W2, Associated chaired professor equivalent) "Autonomous Automation Systems".

Responsibilities: The professorship should strengthen interdisciplinary research in the field of digitalization at the Department and the University. The responsibilities are research and teaching in the field of automation and control of autonomous systems. We are looking for a candidate with internationally recognized reputation in at least two of the following fields:
-Autonomous automation systems
-Automation, machine learning, and artificial intelligence
-Automation of the Internet of Things (IoT) and the Internet of Everything (IoE)
-Automation and Control of Cyber Physical Systems
-Cooperative automation and control
-Automation exploiting Big Data
Possible fields of application are process automation, Industry 4.0/Smart Factories, energy systems and energy networks, robotics, biotechnology, medical engineering and future transportation systems.

We offer an excellent, interdisciplinary research environment, characterized by a close interaction between the engineering disciplines, mathematics and computer science. Active involvement of the professorship in the state Centre of excellence Dynamic Systems (CDS; www.cds.ovgu.de), and the focal research activities of the university and the Department of Electrical Engineering and Information Technology are desired. The candidate should be willing to contribute to the teaching in the Bachelor and Master study directions of the Department of Electrical Engineering and Information Technology in general and especially towards the study directions systems engineering and engineering cybernetics, medical engineering, and mechatronics.

Qualifications: The job announcement is part of the national and regional program for the support of scientists on an early career level. It is aimed at junior researchers who have a strong potential for a successful career in the sciences. Formal prerequisites for the appointment are set out especially in § 40 of the Higher Education Act for the Federal State of Saxony-Anhalt (Hochschulgesetz Sachsen-Anhalt).

Offer: The professorship will be for an initial period of three years. Remuneration is in accordance with W remuneration (remuneration group W1, Remuneration Act Saxony-Anhalt (Besoldungsgesetz Sachsen-Anhalt). The appointment will be extended for a further three years following a positive interim evaluation. Following a positive final evaluation, the position will be converted to a permanent W2 professorship after six years.

Professors with Tenure Track will be given appropriate resources at the OVGU and take part in performance-related allocation of resources. We understand the Tenure Track Professorship as a career step to-wards taking over a lifetime professorship. Along this path, we hope to support you with indi-vidually tailored development opportunities. We are also happy to help looking for childcare options and with offers for dual career couples.

Application: The OVGU aims to increase the proportion of women scientists within the university and specifically encourages women to apply. Applications from disabled persons will be given priority in the case of equal suitability.

The application along with curriculum vitae including a description of academic positions, a list of publications and teaching experience, copies of certificates should be sent no later than March 29, 2018 to:
Otto-von-Guericke-Universität Magdeburg,
Herrn Prof. Dr.-Ing. R. Vick,
Dekan der Fakultät für Elektrotechnik und Informationstechnik, Postfach 4120, D-39106 Magdeburg

For further information please contact Prof. Dr.-Ing. Rolf Findeisen (rolf.findeisen@ovgu.de, phone: +49 391 67 58708).

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6.26. Faculty: University of Tehran, Iran

Contributed by: Hamed Kebriaei, kebriaei@ut.ac.ir

The University of Tehran offers up to three tenure track assistant professor position in the field of Control in School of Electrical and Computer Engineering (ECE).

University of Tehran (UT) is the first modern and highest rank university in Iran. School of ECE, with more than 2000 students, 84 faculty members, 80 research Laboratories is the largest school in University of Tehran. ECE-UT holds the “Control and Intelligent Processing Center of Excellence” of the country and the Control department of ECE attracts the highest ranked students of the country in the field.

For more information about the control department of ECE you can visit:
http://ece.ut.ac.ir/en/control

The applicants must hold a PhD degree from renowned international universities and have a solid background in Control Systems with a strong academic records and proved world class capabilities in research.

The areas of interest are included: Hybrid/Switched Control Systems, Learning Control Systems, Data Driven Control Systems, Control of Network Systems and Automation Control Systems. The application areas are included but not limited to: Systems Biology, Energy, Cyber Physical Systems, and Complex Networks.

As assistant professor your role will be to:
-Perform fundamental and applied research at the forefront of the systems and control domain;
-Publish in renowned scientific journals and conferences;
-Set up and teach inspiring courses and lab projects in the BSc, MSc and PhD programs at ECE-CS;
-Supervise PhD and MSc students as well as BSc student projects;
-Maintain and expand an effective network of cooperation partners in academia, institutes and industry
-Contribute to acquiring funding for research projects from (inter)national research funding agencies.

What is required in an application pack?
•Cover letter stating your interest in the faculty position in Control department
•A full academic CV,
•Your statement of purpose,
•Details of three references.

Interested candidates should send their application pack for consideration to Dr. Hamed Kebriaei: kebriaei@ut.ac.ir

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6.27. Curriculum Development Director: Vin University, Vietnam

Contributed by: Nicole Rossi, nr399@cornell.edu

Curriculum Development Director of Engineering and Technology Program
Vin University, Hanoi, Vietnam

About Vin University:
Vin University is a new, private, non-profit university established by Vingroup, with the mission to be the first world-class, internationally accredited and ranked university in Vietnam. Vin University has two overarching goals: excellence in teaching, and producing research that contributes to the key economic sectors of Vietnam.
The formation of Vin University has resulted from the collaboration of Vingroup with Cornell University. Cornell, an Ivy League institution based in Ithaca, NY, is involved in every aspect of development from infrastructure and campus reviews, to curriculum development and faculty hiring. Cornell's SC Johnson College of Business is providing extensive academic advisement in a variety of areas, drawing from a wealth of faculty expertise at multiple colleges and units at Cornell. Vin University aims to meet the QS 5-star rating standards and include the following schools: a School of Business, Hospitality, and Real Estate; a School of Engineering and Technology; a School of General Education; a School of Public Health and Health Services; a School of Nursing; and a School of Medicine. The University will be an English Medium Instruction (EMI) institution and plans to open for the inaugural class of students in Fall 2020.

The Opportunity:
Vin University seeks a dynamic and collaborative individual who has an established record of engagement and accomplishments in curriculum development at the university level to be the Curriculum Development Director (CDD) of the Engineering and Technology Program.

The Curriculum Development Director will play a key role in developing a curriculum for the Engineering and Technology Program and building a framework for academic practice and curriculum delivery. The CDD will also play a strategic role in promoting best practices in teaching, learning and assessment; the development of academic staff; and study skills support for students.
This position will collaborate with Program Directors from Cornell University, report directly to the Vin University Project Director, and take on special projects as requested by the Project Director.
This position represents a rare opportunity to be part of building a world-class higher education program in Vietnam from the ground up. It will be a full-time, 1-3 year (negotiable) assignment, with potential following opportunities for Dean, Program

Required Qualifications:
- Ph.D. degree in relevant fields, including mechanical engineering, electrical engineering, or other core engineering discipline.
- Requisite specialty expertise and documented educational experience: at least three years of participation as an active faculty member in a relevant university program.
- Strong record of accomplishment in higher education curriculum development and implementation with international standard and accreditation (preferably with the U.S. accreditation standards).
- English proficiency in reading, speaking, writing, and teaching.

Preferred:
- Expertise in areas such as automotive engineering, control systems, automation such as mechatronics/robotics, or systems engineering is a plus.
- Experience in accreditation.
- Experience in hiring university faculty and in coaching/mentoring university faculty.
- Experience of working in multidisciplinary and collaborative educational teams.
- Strong knowledge/experiences in educational technology/T&L pedagogy.

How to Apply:
To apply, please send to humanresources@vinuni.edu.vn (1) your resume and (2) a cover letter explaining your interest in the position and relevant qualifications. Please include Position Title on the Email Subject. Applications submitted before March 15th, 2018 will receive immediate consideration.
- Application deadline: Open until filled.
- Position start date: Available Immediately.

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6.28. Research Scientist: Bosch Center for Artificial Intelligence, Germany

Contributed by: Mathias Bürger, mathias.buerger@de.bosch.com

Research Scientist Positions at the Bosch Center for Artificial Intelligence

The Bosch Center for Artificial Intelligence is looking for outstanding researchers to support our growing team.

At the Bosch Center for Artificial Intelligence, you will have the opportunity to work in interdisciplinary teams and to bring the latest AI technology to real-world problems. You will have access to advanced AI systems and large-scale data sets across various domains.

We have several scientist positions open. The positions are related to reinforcement learning, control, planning as well as to machine learning in general. You will have the opportunity to shape a research strategy and to develop algorithms for multiple exciting application domains, including mobile robotics and industrial technology.

To find out more, visit our website www.bosch-ai.com and have a closer look at the following positions.

Research Scientist Reinforcement Learning for Autonomous Systems & Robotics
https://your.bosch-career.com/de/web/de/de/bewerben/jobsearch/-/cui/job/ZRB_UNREG_SEARCH/EN/567D863A01021

Research Scientist for Decision Making, Learning and Control for Robotic Sensor Networks
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