Welcome to the 337 issue of the Eletter, available electronically here.
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1. IEEE CSS Headlines

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

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

1.2. IEEE Transactions on Automatic Control
Contributed by: Elizabeth Kovacs, ekovacs2@nd.edu

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1.3. IEEE Transactions on Control Systems Technology
Contributed by: Thomas Parisini, eic-ieeeetst@units.it

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- An Immune System-Inspired Reconfigurable Controller, Y. Ding, N. Xu, S. Dai, L. Ren, K. Hao, and B. Huang, page 1875
- Fixed-Time Attitude Control for Rigid Spacecraft With Actuator Saturation and Faults, B. Jiang, Q. Hu, and M. I. Friswell, page 1892

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:

For a full listing of CSS technically cosponsored conferences, please visit http://ieeecss.org/conferences/technically-cosponsored, and for a list of the upcoming and past CSS main conferences please visit http://ieeecss.org/conferences

1.5. CFP: IEEE-CSS Outreach Fund

Contributed by: Daniel E. Rivera, daniel.rivera@asu.edu

The IEEE CSS Outreach Task Force is pleased to announce the submission window for proposals to the IEEE-CSS Outreach Fund for its 2016 fall solicitation. Proposals will be received starting Monday, October 31 through midnight on Friday, November 18, 2016. Information regarding the program can be found in: http://www.ieeecss.org/general/control-systems-society-outreach-fund

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

2. Awards and Honors

2.1. Nordic Process Control Award

Contributed by: Sigurd Skogestad, skoge@ntnu.no

Wolfgang Marquardt receives Nordic Process Control Award.

The Nordic Process Control Award is awarded for lasting and significant contributions to the field of process control. The 15th recipient of this award is Professor Wolfgang Marquardt who received the award for his contributions on a systematic approach to modelling, analysis, optimization and control of process systems.

The award was presented to Professor Marquardt on August 25, 2016 during the 20th Nordic Process Control Workshop held at Sigtuna, near Stockholm in Sweden. The title of his inspiring award lecture was: “The German Energiewende - a Systems & Control Perspective”.

More information including slides from lecture: http://www.nt.ntnu.no/users/skoge/npc/

Previous winners of the Nordic Process Control Award:
1995: Howard H. Rosenbrock
1997: Karl Johan Åström
1998: F. Greg Shinskey
2000: Jens G. Balchen
2001: Charles R. Cutler
2003: Roger W. Sargent
2004: Ernst Dieter Gilles
2006: Manfred Morari
2007: Jacques Richalet
2009: John MacGregor
2010: Graham C. Goodwin
2012: Lorenz T. Biegler
2013: James B. Rawlings
2015: Rudolf Kalman
2.2. SIAG/CST Prize
Contributed by: Joanna Littleton, littleton@siam.org

Call for Nominations - SIAG/CST Prize
SIAM is accepting nominations for the 2017 SIAG/Control and Systems Theory Prize (SIAG/CST Prize). Submit your nomination at http://www.siam.org/prizes/nominations/nom_siag_cstprize.php. For inquiries, contact the SIAM Prize Program at prizeadmin@siam.org.

The SIAG/CST Prize is awarded every two years to one individual in their early career for outstanding research contributions to the mathematical theory of control or systems. The SIAM Activity Group on Control and Systems Theory (SIAG/CST) will award the prize at the SIAM Conference on Control and its Applications (CT17), to be held jointly with the SIAM Annual Meeting, July 10-12, 2017, in Pittsburgh, PA, USA.

Eligibility Criteria:
The research must contain significant contributions to the mathematical theory of control or systems, as commonly defined in the mathematical and engineering literature. One key paper must be cited as evidencing the contributions, though a body of papers may be discussed in the nomination.

The qualifying key paper must have been published in English in a peer-reviewed journal. For the 2017 award, the paper must have been published between the dates of January 1, 2014 - December 31, 2016. The candidate must have been awarded their PhD no earlier than 2008. The key paper must have been published no more than six (6) years after the candidate received their PhD.

Nomination Deadline:
October 15, 2016

Required Materials:
Nominator’s Letter of Recommendation for Candidate
Candidate’s CV
Bibliographic Citation for Candidate’s Key Contributing Paper
2-3 Letters of Support from experts in the field

3. MISC

3.1. Summer School: Elgersburg School on Mathematical Systems Theory
Contributed by: Fabian Wirth, fabian.wirth@uni-passau.de

2nd Announcement of Summer School: 9th Elgersburg School on Mathematical Systems Theory
9th Elgersburg School on Mathematical Systems Theory
“Control Theory of Digitally Networked Dynamical Systems” and “Optimal Control Techniques”
Location and Date: Elgersburg, Thuringia (Germany), March 26 - April 1, 2017

Organizers:
Achim Ilchmann (TU Ilmenau), Timo Reis (U Hamburg), Fabian Wirth (U Passau)
Website: https://www.tu-ilmenau.de/de/math/forschung/tagungen/elgersburg-schools/elgersburg-school-2017/
Support by the Ernst-Abbe-Foundation is gratefully acknowledged.
Invitation: The organizers have the pleasure to announce the 9th Elgersburg School.

The topics and lecturers are:

“Control Theory of Digitally Networked Dynamical Systems”
Professor Jan Lunze
Universität Bochum, Germany
https://www.ei.rub.de/fakultaet/professuren/lunze/

“Optimal Control Techniques”
Professor Matthias Gerdts
Universität der Bundeswehr München, Germany
https://www.unibw.de/lrt1/gerdts/mitarbeiter/prof.-gerdts

All participants will attend both courses. Each day, there will be 90 minutes of lecture on both courses. Each morning, example sheets to be worked on in the afternoon, and example classes in the evening. See the website for the complete programme.

Registration
The school is addressed to postgraduate students and postdocs in control, either in mathematics or engineering, very good graduate students are also welcome. We would be grateful if you could pass on this information to any potential candidates.

The location has a capacity for 40 participants. Early registrations are encouraged.

The cost for the hotel including full board per person is: EUR 510,- for a single and EUR 410,- for a double room.

Due to the limited number of places there will be an application procedure for participation at the school. Applicants are asked to provide their CV and a letter of reference from their supervisor. The deadline for applications is November 30, 2016. The organizers will then rank the applications according to excellence and suitability. A list of all participants will be available on the web site by January 15, 2017.

Additionally, there are stipends for travel support, accommodation and subsistence for 10 participants.

For further information, please refer to the website or send an email to one of the organizers.

3.2. Meet the Faculty Candidate Poster Session at 2016 IEEE CDC
Contributed by: Francesco Bullo, bullo@engineering.ucsb.edu

Meet the Faculty Candidate Poster Session at the 2016 IEEE CDC in Las Vegas

The program of the 55th IEEE CDC in Las Vegas, USA, will feature a poster session entitled “Meet the Faculty Candidate.” This poster session is a novel initiative that will hopefully establish itself as a recurring event at future CDCs.

The “Meet the Faculty Candidate” poster session provides a great opportunity for faculty, search committee members, and recruiters to speak directly with current graduate students and postdoctoral researchers who are seeking faculty positions.

Faculty candidates, registered for the conference, are invited to register for this poster session by compiling the following online form by Monday October 31st, 2016: https://goo.gl/forms/EmkKj9Rmu4u6dJUy1

The session will be held on Monday December 12th at 6pm-7:45pm in the Juniper 4 room at the ARIA conference hotel. Space will be available on a first-come first-serve basis.
This event is modeled after a successful tradition adopted by the Annual Meeting of the American Institute of Chemical Engineers (AIChE). The 2016 Meet the Faculty Candidate poster session will be chaired by Professor Warren Dixon.

4. Books

4.1. Fundamentals of Computational Intelligence: Neural Networks, Fuzzy Systems, and Evolutionary Computation

Contributed by: Derong Liu, derong@uic.edu

Fundamentals of Computational Intelligence: Neural Networks, Fuzzy Systems, and Evolutionary Computation
by James M. Keller, Derong Liu, David B. Fogel
Hardcover, 378 pages, $120.00

This book covers the three fundamental topics that form the basis of computational intelligence: neural networks, fuzzy systems, and evolutionary computation. The text focuses on inspiration, design, theory, and practical aspects of implementing procedures to solve real-world problems. While other books in the three fields that comprise computational intelligence are written by specialists in one discipline, this book is co-written by current former Editor-in-Chief of IEEE Transactions on Neural Networks and Learning Systems, a former Editor-in-Chief of IEEE Transactions on Fuzzy Systems, and the founding Editor-in-Chief of IEEE Transactions on Evolutionary Computation. The coverage across the three topics is both uniform and consistent in style and notation.

- Discusses single-layer and multilayer neural networks, radial-basis function networks, and recurrent neural networks
- Covers fuzzy set theory, fuzzy relations, fuzzy logic interference, fuzzy clustering and classification, fuzzy measures and fuzzy integrals
- Examines evolutionary optimization, evolutionary learning and problem solving, and collective intelligence
- Includes end-of-chapter practice problems that will help readers apply methods and techniques to real-world problems

Fundamentals of Computational intelligence is written for advanced undergraduates, graduate students, and practitioners in electrical and computer engineering, computer science, and other engineering disciplines.

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5.1. Contents: Automatica
Contributed by: Elisa Capello, automatica@polito.it

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Vol. 71, September 2016
http://www.sciencedirect.com/science/journal/00051098/71

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- Elnaz Kanani Kuchesfehani, Georges Zaccour, “Incentive equilibrium strategies in dynamic games played over event trees”, pages 50-56.
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- Rémi Azouit, Antoine Chaillet, Yacine Chitour, Luca Greco, “Strong iISS for a class of systems under saturated feedback”, pages 272-280.
- Jing Lei, Hassan K. Khalil, “High-gain-predictor-based output feedback control for time-delay nonlinear systems”, pages 324-333.

5.2. Contents: Asian Journal of Control
Contributed by: Lichen Fu, lichen@ntu.edu.tw

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Vol.18, No.4 July, 2016
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Authors: Huan N. Do, Mahdi Jadaliha, Mehmet Temel and Jongeun Choi

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1. Paper Title: Global Output-Feedback Stabilization for Stochastic Nonlinear Systems with Function Control Coefficients (pages 1189-1199)
Authors: Shaoli Jin, Yungang Liu and Yongchao Man
2. Paper Title: Low Frequency Sensitivity Function Constraints for Nonlinear $L_2$-stable Networked Control (pages 1200-1218)
Author: Torbjörn Wigren
3. Paper Title: A Receding Horizon Sliding Controller for Automotive Engine Coldstart: Design and Hardware-in-the-Loop Testing With an Echo State Network High-Fidelity Model (pages 1219-1238)
Authors: Ahmad Mozaffari, Nasser L. Azad, Andreas Hansen and J. Karl Hedrick
4. Paper Title: Characterization, Modeling and $H_{\infty}$ control of n-DOF Piezoelectric Actuators: application
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5. Paper Title: Boundary Geometric Control of a Nonlinear Diffusion System with Time-Dependent Spatial Domain (pages 1259-1268)
Authors: Ahmed Maidi and Jean-Pierre Corriou

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7. Paper Title: Abstraction-Based Verification and Synthesis for Prognosis of Discrete Event Systems (pages 1279-1288)
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8. Paper Title: Frequency Response Estimation from Impulse or Step-like Response by Virtual Experiments (pages 1289-1298)
Author: Giuseppe Fedele

9. Paper Title: Robust Adaptive Soft Landing Control of an Electromagnetic Valve Actuator for Camless Engines (pages 1299-1312)
Author: Paolo Mercorelli

10. Paper Title: Controllability and Observability of Parallel Magnetic Suspension Systems (pages 1313-1327)
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11. Paper Title: Influence of the Tensor Product Model Representation Of QLPV Models on The Feasibility of Linear Matrix Inequality (pages 1328-1342)
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Authors: Khaled Alhazza, Ziyad Masoud and Nehal Alotaibi

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Authors: Seyed Hossein Mousavi and Alireza Khayatian

18. Paper Title: A Model for Residual Life Prediction Based on Brownian Motion in Framework of Similarity (pages 1406-1416)
Authors: Huihui Zhang, Changhua Hu, Xiangyu Kong and Wei Zhang

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  Authors: Sofiane Khadraoui, Hazem N. Nounou, Mohamed N. Nounou, Aniruddha Datta and Shankar P. Bhattacharyya
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  Author: Alka Singh
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  Authors: Qixin Zhu, Kailong Lu and Yonghong Zhu
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  Authors: Fuyang Chen, Kangkang Zhang, Bin Jiang and Changyun Wen

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  Authors: Jaime Rubio-Hervas and Mahmut Reyhanoglu
2. Paper Title: Ratio Control for Continuously Variable Transmissions with Minimal Sensor Configuration (pages 1574-1580)
  Authors: Martin Steinberger and Martin Horn
5.3. Contents: Control Engineering Practice

Contributed by: Martin Böck, cep@acin.tuwien.ac.at

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5.4. CFP: Autonomous Robots
Contributed by: Roderich Gross, r.gross@sheffield.ac.uk

Call for Papers
Autonomous Robots, Springer
Special Issue on Distributed Robots: From Fundamentals to Applications
Paper submission deadline: January 15, 2017

Background:
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.

This special issue aims at presenting state-of-the-art research in distributed robotics, leading to advances in technologies, algorithms, system architectures, and applications.

We are soliciting contributions in all areas of distributed robotics - from fundamentals to applications. Topics of interest include, but are not restricted to:
- Applications of distributed robotics in defense, education, entertainment, environmental monitoring, exploration and inspection, healthcare, manufacturing, mining, search and rescue, service, smart cities, transportation, warehousing etc.
- Architectures for teams of robots
- Distributed control and planning
- Distributed cooperative action
- Distributed cooperative perception
- Distributed decision making
- Distributed robotic systems operating on land, sea, and air
- Hybrid symbiotic teams (humans and robots, animals and robots)
- Learning and adaptation in teams of robots
- Localization and navigation in multi-robot systems
- Modular reconfigurable robots
- Multi-robot and multi-vehicle motion coordination
- Networking issues in multi-robot systems
- Performance metrics for robot teams
- Self-organizing and self-assembling robotic systems
- Sensor and actuator networks
- Smart materials
- Swarm robotics systems
- Wireless and robotic sensor networks

Important Dates:
Paper submission deadline: January 15, 2017
Notification to authors: April 15, 2017
Revised papers due: May 15, 2017
Final decision: June 30, 2017

Paper Submission:
Authors are encouraged to submit high-quality, original work that has neither appeared in, nor is under consideration by, other journals. All papers will be reviewed following standard reviewing procedures for the Journal. Papers must be prepared in accordance with the Journal guidelines: http://www.springer.com/10514 . Manuscripts must be submitted to: http://AURO.edmgr.com . Choose “Distributed Robots” as the article type.


5.5. CFP: International Journal of Robust and Nonlinear Control
Contributed by: Debasish Chatterjee, dchatter@iitb.ac.in

CFP: Special issue of International Journal of Robust and Nonlinear Control: “Stochastic Predictive Control”
With the steady growth in the availability of fast computing machines, control techniques based on algorithmic selection of actions derived from optimisation of a suitable performance index have gained prominence. Model predictive control (or receding horizon control), a framework that is based on such algorithmic selection procedures, has evolved over the years into one of the most useful and applicable control synthesis techniques currently available to a control engineer.

While deterministic and robust versions of model predictive control techniques have pretty much become standardised and are well-documented today, stochastic versions still lack a comprehensive, unified, and systematic treatment. Perhaps a key reason for this lacuna is the fact that the technicalities involved in stochastic model predictive control are significantly more heavy than in the deterministic setting. For instance, consider the issue of closed-loop stability: the bare-essential arguments involved in establishing Lyapunov stability of discrete-time deterministic dynamical systems are only a few and are quite classical. However, the technical arguments and conditions in the theory of stability of Markov chains are by far more in number, and constitute an active area of research even today. In addition, there exist a variety of notions related to performance and qualitative behaviour that are particular to the stochastic setting, that simply do not exist in the deterministic or the robust settings.

Against this backdrop, this special issue seeks to collect the current state-of-the-art directions in theoretical foundations and applications of stochastic model predictive control, with contributions from the finest researchers who are working in this area.

Important dates:
- Submission deadline: 30 Nov 2016 via http://mc.manuscriptcentral.com/rnc-wiley; do not forget to indicate
that you are submitting to this special issue.
- Expected date of publication: January 2018

Guest Editors:
Daniel Quevedo (Paderborn University) and Debasish Chatterjee (Indian Institute of Technology Bombay)

5.6. CFP: Journal of Systems Science and Complexity
Contributed by: Tengfei Liu, tfliu@mail.neu.edu.cn

Call for Papers
Journal of Systems Science and Complexity
“New Directions in Nonlinear and Distributed Control”
*Guest Editors
Tengfei Liu
State Key Laboratory of Synthetical Automation for Process Industries, Northeastern University
Zhong-Ping Jiang
Tandon School of Engineering, New York University

Nonlinearity is ubiquitous in engineering and natural systems. The development of nonlinear control can be traced back to decades ago. To date, the research has reached the stage that emphasizes developing methodologies that can handle the complexity characterized by uncertainty, nonlinearity, time-varying dynamics, delays and interconnections. The new trend of seamless integration of controls, communication and computation motivates quite a few new interesting control problems including quantized control, networked control, distributed control, and event-based control. For cyber-physical systems (CPS) that involve interaction between the “cyber” and the physical processes, the current nonlinear control theory is insufficient to addressing design challenges arising from CPSs and many related engineering applications. Solving the new problems will be of special interest for the control of various practical systems such as robotic networks, electric smart grids, manufacturing production lines, chemical processes and biological systems, and will even contribute to the achievement of smart manufacturing, smart grids and intelligent transportation systems.

The purpose of this special issue is to solicit and report new research results that address some of the new emerging nonlinear control problems, not limited to the ones characterized above.

Topics of interest in the Special Issue include, but are not limited to, the following.
- New stability analysis tools for nonlinear systems
- Quantized control of linear and nonlinear systems
- Decentralized and distributed control subject to communication/network constraints
- Practical control applications

For further information about paper submissions, please contact Dr. Tengfei Liu at tfliu@mail.neu.edu.cn

*Important Dates
- Submission Due: January 15, 2017
- Revision Notification Date: April 15, 2017
- Final Submission Due: May 31, 2017
- Anticipated Publication Date: November 2017

*Submission of Manuscript
Please visit the journal website at http://101.200.86.116/journalx_xtkxyfzx_en/authorLogOn.action and follow the instructions to prepare and submit new manuscripts. You may also directly send the manuscript
to the email box of the editorial office at xtkx2@amss.ac.cn. Please specify that your submission is to the special issue.

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5.7. CFP: ASME Journal for Dynamic Systems, Measurement, and Control
Contributed by: Tarunraj Singh, tsingh@buffalo.edu

Call for Papers: Commemorating the life, achievements and impact of Rudolph E. Kalman

The purpose of this commemorative special issue in the ASME Journal for Dynamic Systems, Measurement, and Control is to celebrate the rich legacy of Professor Rudolph E. Kalman’s contributions to the mathematical theory of systems and control. These contributions include his seminal 1960 paper “A new approach to linear filtering and prediction problems,” which introduced the Kalman filter. This paper was published in the Journal of Basic Engineering which was renamed in 1972 to the ASME Journal for Dynamic Systems, Measurement, and Control. One of the early successes of the Kalman filter was in the navigation system of the Apollo capsule, which helped bring President Kennedy’s call of “Landing a man on the moon” to fruition. During the past five decades, the Kalman filter continues to have a major impact in applications ranging from navigation and control of engineering systems (such as airplanes, satellites and cars), GPS, computer vision, structural health monitoring, econometrics, weather forecasting and many more. To celebrate Professor Kalman’s seminal achievements, the ASME Journal for Dynamic Systems, Measurement, and Control, is soliciting contributions for this special commemorative issue. Given the sheer breadth of his work, a single issue will not do justice to the lasting legacy of his work. The focus of this special issue will be on theory and applications of filtering and estimation. Contributions are invited in both theory and applications: Theoretical topics of interest include linear and nonlinear filtering theory, Kalman filtering, importance sampling and particle filtering, particle flow methods, geometric approaches and nonlinear observers, filter stability, filtering in high-dimensional spaces, duality between optimal filtering and control, and estimation over networks. Applications include both classical topics such as target state estimation, navigation, GPS, structural health monitoring, as well as new and emerging applications in biology, networks, and machine learning.

Submission guidelines are as follows:
1. Corresponding authors should submit a one-page abstract to one of the Guest Editors listed below by 10/15/2016. The authors will be notified of the suitability of the proposed paper to the special issue by 10/30/2016.
2. Final submissions of the approved papers are due by the 01/15/2017 to the ASME Journal for Dynamic Systems, Measurement, and Control website (http://journaltool.asme.org/). The submitted papers will go through the standard review process prior to acceptance and publication. For authors who already have a paper under review in the ASME Journal for Dynamic Systems, Measurement, and Control and would like the paper to be considered for the special issue, please send an email to one of the Guest Editors with a one-page Abstract.

Submissions of the abstract can be emailed to:
- Tarunraj Singh, tsingh@buffalo.edu
- Puneet Singla, psingla@buffalo.edu
- Prashant Mehta, mehtapg@illinois.edu

https://www.asme.org/shop/journals/administration/call-for-papers

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6. Conferences

6.1. International Symposium on Advanced Control of Industrial Processes

Contributed by: Jong Min Lee, jongmin@snu.ac.kr


On behalf of the organizing committee, we are pleased to invite you to submit papers and proposals for the 6th International Symposium on Advanced Control of Industrial Processes (AdCONIP 2017) which will take place in Taipei, Taiwan, May 28-31, 2017.

AdCONIP 2017 aims at bringing together researchers and practitioners from academia and industry to discuss the state of the art developments/techniques in advanced control and their applications in industry. Major symposium topics include, but are not limited to:
- Process Control and Automation
- Signal Processing
- Identification and Estimation
- Controller Performance Evaluation
- Fault Detection and Diagnosis
- Data Reconciliation
- Data Mining and Data Analytics
- Computer Integrated Manufacturing
- Safe Process Operating Systems
- Integration of Process Design and Control ? Health Informatics and Bioinformatics
- Factory Automation
- Intelligent Control
- Adaptive and Learning Systems
- Robotics and Mechatronics
- Process Integration and Optimization

The International Program Committee invites authors to submit 6-page papers (or 2-page abstract for authors from industry) in English through http://AdCONIP2017.org. Proposals and papers for invited sessions are especially welcome. They should contain the title of the session, a list of at least 5 speakers and titles of their papers, together with papers completed according to the above instructions. Please address requests and questions to the NOC Chair, C. L. Chen, at CCL@ntu.edu.tw.

AdCONIP 2017 proceedings will be included in IEEE Xplore and indexed by EI/Compendex. Extended versions of selected high-quality papers will be invited to submit to special issues in international journals including Control Engineering Practice after the conference.

Important Dates
- 6-page paper submission Jun 1 - Sep 30, 2016
- 2-page abstract (industry) Jun 1 - Sep 30, 2016
- Invited session proposal Jun 1 - Sep 30, 2016
- Acceptance notification Dec 15, 2016
- Final paper submission Jan 31, 2017
- Early-bird registration Mar 31, 2017

Plenary Speakers
- Richard Braatz (MIT, USA)
6.2. Workshop: Stability and Control of Infinite-Dimensional Systems
Contributed by: Fabian Wirth, fabian.wirth@uni-passau.de

Workshop: “Stability and Control of Infinite-Dimensional Systems”

This is to announce the workshop “Stability and Control of Infinite-Dimensional Systems” which takes place in Passau, Germany, 12 - 14 October 2016.

The scope of the workshop includes
- Stability and control of partial differential equations
- Stability and control of time-delay systems
- Input-to-state stability of infinite-dimensional systems
- Stabilizability of infinite-dimensional systems
- Semigroup and admissibility theory

The list of invited speakers and the program of the workshop can be found at http://www.fim.uni-passau.de/en/dynamical-systems/infdim16/program/

The attendance of the workshop is free, online registration http://www.fim.uni-passau.de/en/dynamical-systems/infdim16/registration/ is mandatory.

Organizers:
Sergey Dashkovskiy (University of Würzburg)
Birgit Jacob (University of Wuppertal)
Andrii Mironchenko (University of Passau)
Fabian Wirth (University of Passau)

Contact for questions concerning the workshop:
Andrii Mironchenko, andrii.mironcheko@uni-passau.de

6.3. International Conference on Information Fusion
Contributed by: Zhansheng Duan, zsduan@mail.xjtu.edu.cn

20th International Conference on Information Fusion (FUSION 2017)
July 10-13, 2017
Xi’an, China
URL: http://www.fusion2017.org

The International Conference on Information Fusion is a premier forum for interchange of the latest research in information fusion and discussion of its impacts on our society. The conference brings together researchers and practitioners from industry and academia to report on the latest scientific and technical advances. Authors are invited to submit papers describing advances and applications in information fusion.

Fusion 2017 will be held in Xi’an, China at the Wyndham Hotel on July 10-13, 2017. Xi’an is the best representative city of Ancient China. It has more than 3100 years of history. Since the 11th century BC it had been China’s Capital for more than 1100 years under 13 dynasties, including several most important ones such as Zhou, Qin, Han, Sui, and Tang. Xi’an was the root of the Silk Road, which connected the East and
the West, and is the home of the world-famous Terracotta Army of more than 2200 years ago. In modern
times, Xi’an has re-emerged as the center of the northwest China.

Topics of interest
1. Theory and Representation: Probability theory, Bayesian inference, fuzzy sets and fuzzy logic, Dempster-
   Shafer theory, belief functions, logic-based fusion and preference aggregation, random sets, finite set statistics,
topic modeling.
2. Algorithms: Registration, detection, localization and signal processing, automatic target recognition and
classification, nonlinear filtering, tracking and data association, automated situation assessment, prediction,
pattern and behavioral analysis, distributed fusion process and sensor resource management.
4. Data Specific Processing and Fusion: Image and video, radar, passive sensors; soft data sources.
5. Modeling, simulation and evaluation: Target and sensor modeling, benchmarks, testbeds, fusion performance
   modeling and evaluation.
6. Applications: Aided fusion, sensor networks, persistent surveillance, defense and intelligence, security,
   robotics, transportation and logistics, manufacturing, economics and financial, environmental monitoring,
   medical care, bioinformatics.

20th Anniversary Forum: Fusion 2017 will organize a special forum to celebrate the 20th anniversary.
Candidate topics include: the (early) history of the Fusion Conferences and ISIF, significant achievements
and major challenges of fusion research representative successful applications of fusion technologies, future
trend and development of fusion research and technologies.

Paper Submissions: Prospective authors are invited to submit papers electronically via the system found at
the conference web page. Paper templates and submission instructions will be available at the conference
website. Paper submissions are due by 1 March 2017 and should be no more than ten pages in length. There
will be a charge for each additional page beyond eight pages. All papers must be approved for public release
via the appropriate procedure of their employers/funding agencies prior to submittal. The research papers
published in Fusion proceedings had been indexed by EI. All accepted papers must be written in English
and will be published in Fusion conference proceedings, which will be indexed by EI and IEEE Xplore.

Special Session Proposals: Proposers are invited to submit via the conference web page the theme of the
special session as well as a list of possible committed papers. Proposals for special sessions are due by 1
February 2017. Papers for special sessions must also be submitted for review by 1 March 2017.

Tutorial Proposals: The first day of the conference will be devoted to tutorials on information fusion.
Proposals for tutorials are invited. A title and description of the tutorial and biographical sketch of the
instructor are due via the conference web page by 1 February 2017.

Student Paper Program: Fusion 2017 is featuring a student paper program to encourage the involvement
of young engineers and scientists in information fusion. Conference fees will be discounted for all student
attendees. Further details will be available at the conference website.

Important Deadlines:
Special session proposals, tutorial proposals February 1, 2017
Full paper submission March 1, 2017
Notification of acceptance May 1, 2017
Final paper submission, early registration June 1, 2017
The 13th IEEE International Conference on Control & Automation (IEEE ICCA 2017) will be held on July 3-6, 2017, in Ohrid, Macedonia. It is to create a forum for scientists and practicing engineers throughout the world to present the latest research findings and ideas in the areas of control and automation. The conference is featured with Best Paper Award and Best Student Paper Award. Past IEEE ICCA Proceedings have been included in EI Compendex, IEEE Xplore and ISI Proceedings.

The conference will be held in Ohrid, a beautiful city in the Republic of Macedonia and the seat of Ohrid Municipality. It is the largest city on Lake Ohrid and notable for once having had 365 churches. It was accepted as Cultural and Natural World Heritage Sites by UNESCO and one of only 28 sites that are part of UNESCO’s World Heritage that are both Cultural and Natural sites.

Important Dates
Deadline for Manuscript Submissions: December 31, 2016
Notification of Acceptance: March 15, 2017
Submission of Final Manuscripts: April 15, 2017
Conference: July 3-6, 2017


Submission of Papers:
Authors should submit the full version of their manuscripts online through the conference website at http://www.ieee-icca.org (or http://uav.ece.nus.edu.sg/ icca17/). General inquiries should be addressed directly to Program Chair, Professor Lu Liu, at City University of Hong Kong (email: lliu4579@gmail.com).

Proposals for invited sessions in the related areas are also solicited and should be submitted through email to Invited Session Chair, Professor Keyou You at Tsinghua University(email: youky@tsinghua.edu.cn).

More detailed information about conference sponsors, conference technical program, organizing committee and more can be found on the conference web page.
Chinese Control and Decision Conference (CCDC) is an annual international conference. The 29th Chinese Control and Decision Conference (2017CCDC) will be held in Chongqing, China, during May 28 - 30, 2017. Its purpose is to create a forum for scientists, engineers and practitioners from all over the world to present the latest advancement in Control, Decision, Automation, Robotics and Emerging Technologies. The conference is co-organized by Northeastern University, China, IEEE Industrial Electronics (IE) Chapter, Singapore and Technical Committee on Control and Decision of Cyber Physical Systems (TCCDCPS), Chinese Association of Automation, China. CCDC conferences have been technically co-sponsored by IEEE Control Systems Society since 2008.

Conference content written in English will be submitted for inclusion into IEEE Xplore as well as other Abstracting and Indexing (A&I) databases.

The 29th CCDC covers both theory and applications in all the areas of systems, control and decision. The topics of interest include, but are not limited to:

Control and Decision:
Adaptive control; Robust and H-infinity control; Process control; Variable structure control; Optimal control and optimization; Complex networks and systems; Cooperative control; Signal processing; Data processing; Data-driven control; Identification and estimation; Nonlinear systems; Intelligent systems; Discrete event systems; Game theory; Decision-making theory and method; Decision supporting system and production planning and scheduling; Supervisory control; Hybrid systems; Distributed parameter systems; Stochastic systems; Distributed control systems; Networked control systems; Sensor network systems; Fault diagnosis and fault-tolerant control; Delay systems; Neural networks; Fuzzy systems; Social economy systems; Motion control; Control applications; Control engineering education.

Automation:
Man-machine interactions; Process automation; Intelligent automation; Factory modeling and simulation; Home, laboratory and service automation; Network-based systems; Planning, scheduling and coordination; Nano-scale automation and assembly; Instrumentation systems; CIMS and manufacturing systems

Robotics:
Robot control; Mobile robotics; Mobile sensor networks; Perception systems; Micro robots and micro-manipulation; Visual servoing; Search, rescue and field robotics; Robot sensing and data fusion; Medical robots and bio-robotics; Human centered systems; Human robot interaction; Space and underwater robots; Tele-robotics; Multirobot systems

Emerging Technologies:
Cyber-physical systems; Smart grids; Renewable energies; Energy management systems; Modeling, control and simulations of biological systems; Micro-electromechanical systems, Electric vehicles and intelligent transportation; Traffic control; Optimization and control of HVAC systems; Integrated systems and processes.

Invited Sessions:
Prospective organizers are invited to directly submit proposals to the Special and Invited Session Chair, Prof. Zongli Lin (zl5y@virginia.edu).

Two Special Sessions:
1. Control and Management of Smart City. For more details about it, please contact the Special Session Co-chair, Professor Yahui Wang (yahui-wang@vip.sina.com).
2. Intellisense and Advanced Sensing, Detection Technology. For more details about it, please contact Professor Yong Zhao (zhaoyong@ise.neu.edu.cn).
Zhang Si-Ying (CCDC) Outstanding Youth Paper Award:
Authors under the age of 35 are eligible for the award. Selection of the award-winning paper will be made by the Award Evaluation Committee, based on both the technical contents and presentation.
There will be KEYNOTE ADDRESSES and DISTINGUISHED LECTURES covering the State-of-the-Art in both theory and applications of Systems, Control and Decision.
Invited Keynote Addresses will be delivered by
Prof. Edwin K. P. Chong, Colorado State University, USA;
Prof. Petros Ioannou, University of Southern California, USA;
Prof. Stephen P. Boyd, Stanford University, USA.
Invited Distinguished Lectures will be delivered by
Prof. Zhiyong Chen, University of Newcastle, Australia;
Prof. Joe Dong, University of Sydney, Australia;
Prof. Zhi-Hong Guan, Huazhong University of Science & Technology, China;
Prof. Haibo He, Rhode Island University, USA;
Prof. Min Huang, Northeastern University, China;
Prof. Karl H. Johansson, KTH Royal Institute of Technology, Sweden;
Prof. Hong Qiao, University of Chinese Academy of Sciences, China;
Prof. Tie-Long Shen, Sophia University, Japan.
Submission Notices for Authors:
Full papers describing original work and special/invited session proposals should be submitted by 31 October, 2016. Upon acceptance, authors will be required to register and present their papers at 2017 CCDC. For further information, please refer to
Website - http://www.ccdc.neu.edu.cn; Email - secretary.ccdc@ise.neu.edu.cn
Authors of strong papers will be invited to submit an expanded version for possible publication in Journal of Control and Decision (JCD). The primary aim of the JCD is to provide a platform for scientists, engineers and practitioners throughout the world to present the latest advancement in control, decision, automation, robotics and emerging technologies. For full Aims and Scope, please visit the journal’s homepage: www.tandfonline.com/tjcd
Important Dates:
Deadline for Full Paper submission 31 October 2016
Deadline for Invited Session Proposals 31 October 2016
Notification of Acceptance/Rejection 10 February 2017
Deadline for Camera Ready Manuscript Submission 10 March 2017
Deadline for Advance Registration 10 March 2017

6.6. International Workshop on Hybrid Systems Biology
Contributed by: Eugenio Cinquemani, eugenio.cinquemani@inria.fr

HSB 2016: The 5th International Workshop on Hybrid Systems Biology
20-21 October 2016, Grenoble (France)
http://hsb2016.imag.fr/

The 5th International Workshop on ‘Hybrid Systems Biology’ will be held on October 20th and 21st in Grenoble (France). Previous editions have been held in Newcastle upon Tyne (UK), Taormina (Italy),
HSB is a single-track Systems Biology workshop with emphasis on hybrid approaches in a general sense. Hybrid dynamical modelling but also other dynamical modelling approaches are equally part of the scope of the workshop.

Registrations to the conference are now open via the conference website above. Early bird registration deadline is September 25.

Invited speakers:
- Dennis Bray (University of Cambridge)
- Albert Goldbeter (Université Libre de Bruxelles)
- Linda Petzold (UC Santa Barbara)
- Guillaume Beslon (INSA-Lyon)

Papers accepted for oral presentation:
- Elisabetta De Maria, Alexandre Muzy, Daniel Gaffé, Annie Ressouche and Franck Grammont, Verification of Temporal Properties of Neuronal Archetypes Modeled as Synchronous Reactive Systems
- Eugenio Cinquemani, On observability and reconstruction of promoter activity statistics from reporter protein mean and variance profiles
- Sucheendra K. Palaniappan, Matthieu Pichené, Gregory Batt, Eric Fabre and Blaise Genest, A Look-ahead Simulation Algorithm for DBN Models of Biochemical Pathways
- Hugues Mandon, Stefan Haar and Loïc Paulevé, Relationship between the Reprogramming Determinants of Boolean Networks and their Interaction Graph
- Luca Bortolussi, Alberto Policriti and SimoneSilvetti, Logic-based Multi-Objective Design of Chemical Reaction Networks
- Matej Hajnal, David Šafraňek, Martin Demko, Samuel Pastva, Pavel Krejčí and Lubos Brim, Toward Modelling and Analysis of Transient and Sustained Behaviour of Signalling Pathways
- Mostafa Herajy and Monika Heiner, Accelerated Simulation of Hybrid Biological Models with Quasi-disjoint Deterministic and Stochastic Subnets
- Thilo Krüger and Verena Wolf, Hybrid stochastic simulation of rule-based polymerization models
- Alexandre Rocca, Thao Dang, Eric Fanchon and Jean-Marc Moulis, Application of the Reachability Analysis for the Iron Homeostasis Study
- Andreea Beica and Vincent Danos, Synchronous Balanced Analysis

A poster/demo session will also be organized. Please refer to the conference website for a possible new call for posters.

6.7. “Robust and Quantum Control Theory” Workshop at CDC 2016
Contributed by: Daoyi Dong, daoyidong@gmail.com

CDC Workshop WS21 - Robust and Quantum Control Theory: A Workshop Dedicated to Ian R Petersen’s 60th Birthday
Organizers: Daoyi Dong (University of New South Wales, Australia), S. O. Reza Moheimani (University of Texas at Dallas, USA), Valery Ougrinovski (University of New South Wales, Australia)
Speakers: B. Ross Barmash (University of Wisconsin, USA), Matthew R. James (Australian National University, Australia), S. O. Reza Moheimani (University of Texas at Dallas, USA), Valery Ougrinovski (University
Abstract: Ian R. Petersen, a Fellow of the IEEE and the IFAC, a key figure in the development of robust and quantum control theory, and an ARC Laureate Fellow at UNSW Canberra, will turn 60 this year. We propose to celebrate this occasion with a half-day workshop. This workshop brings together 6 of his collaborators and former postdocs and students who will present a broad range of contemporary topics in different areas of systems and control theory. These talks involve: On a state-space model for matching buyers and sellers in the stock market; Linear quantum systems theory: An overview; Fast estimation of amplitude and phase in high-speed dynamic mode atomic force microscopy; On distributed robust estimation via optimization of $H_{\infty}$ disagreement and minimum energy; Negative imaginary systems theory: An overview; Robust control theory framework for safe autonomous robot navigation.

Target Audience: All are welcomed. For more information, please see http://cdc2016.ieeecss.org/workshops.php#w21

6.8. CFP: “Control and Coordination for Synchromodal Transport Systems” Track at IFAC World Congress 2017
Contributed by: Rudy Negenborn, r.r.negenborn@tudelft.nl

Contributions invited for “Control and Coordination for Synchromodal Transport Systems” Track at IFAC World Congress 2017

We kindly invite you to consider submitting a contribution to the Track on: “Control and Coordination for Synchromodal Transport Systems”, organized as part of the IFAC World Congress 2017, Toulouse, France, July 2017, https://www.ifac2017.org/. This track will be devoted to:
* control for seaports, container terminals, and intermodal terminals;
* control for road vehicles and road networks;
* control for vessels, locks, and water networks;
* control for rail systems, trains and rail networks;
* coordination methods for synchromodal freight transport systems.

Deadline for submission of papers is October 31, 2016.
Find here details regarding further important dates and the track code: https://www.ifac2017.org/OIT#t8phq

Track Organizers:
Rudy Negenborn (Delft University of Technology)
Simona Sacone (University of Genova)
Silvia Siri (University of Genova)

6.9. CFP: “Modelling, Identification and Control of Quantum Systems” Track at IFAC World Congress 2017
Contributed by: Daoyi Dong, daoyidong@gmail.com

CFP: “Modelling, identification and control of quantum systems” Open Invited Track at IFAC World Congress 2017
Submissions invited for “Modelling, identification and control of quantum systems” Open Invited Track at IFAC World Congress 2017

We kindly invite you to submit your papers to the Open Invited Track on: “Modelling, identification and control of quantum systems”, organized as part of the IFAC World Congress 2017, Toulouse, France, July 2017.

Topics include but not limited to
- Modelling and analysis of quantum control systems
- State estimation of quantum systems
- Hamiltonian identification of quantum systems
- Parameter identification of open quantum systems
- Linear quantum systems theory
- Quantum optimal control
- Quantum robust control
- Quantum measurement-based feedback and quantum coherent feedback
- Learning control of quantum systems
- Quantum control applications in molecular systems, quantum metrology and quantum information

Deadline for submission of papers is October 31, 2016.

For details, please see the IFAC World Congress’s website: https://www.ifac2017.org/OIT#5mny2

Open Invited Track Organizers:
Daoyi Dong (University of New South Wales, Australia)
Naoki Yamamoto (Keio University, Japan)
Rebing Wu (Tsinghua University, China)

7. Positions

7.1. PhD: University of South Florida, USA
Contributed by: Tansel Yucelen, yucelen@lacis.team

The Laboratory for Autonomy, Control, Information, and Systems (LACIS, http://www.lacis.team/) at the University of South Florida is looking for exceptional doctoral students with creative skills and a solid background in systems and control.

These students are expected to perform high quality scholarly work on our research focus areas including adaptive and robust control of safety-critical systems; distributed estimation and control of networked multiagent systems; resilient and secure robotics, autonomous vehicles, and cyber-physical systems; and biologically-inspired complex, large-scale, and modular systems. Our intention is to give a strong guidance to maximize the chances of our students for building a rewarding career.

If you are interested in joining the LACIS to do transformative discoveries, please send an email to Dr. Tansel Yucelen (yucelen@lacis.team), the Director of the LACIS, and include 1) your curriculum vitae; 2) a concise paragraph explaining your theoretical and experimental experience related to systems and control; 3) a list of your undergraduate and especially graduate courses taken (with your grades) related to systems and control as well as mathematics; and 4) one of your (published) papers. Please also include contact information (name, affiliation, and email) of your current advisor and at least one other reference.

Dr. Tansel Yucelen
Assistant Professor of Mechanical Engineering
7.2. PhD: University of Sannio, Italy
Contributed by: Davide Liuzza, davide.liuzza@unisannio.it

PhD Position available at the Department of Engineering of the University of Sannio in Benevento, Italy

Contacts: Prof. Luigi Glielmo (email glielmo@unisannio.it), Dr. Carmen Del Vecchio (email c.delvecchio@unisannio.it), Dr. Davide Liuzza (email davide.liuzza@unisannio.it), Prof. Luigi Iannelli (email luigi.iannelli@unisannio.it)

The GRACE (Group for Research on Automatic Control Engineering) at the University of Sannio offers a PhD position in control theory and applications to be started in October 2015. The successful candidate will collaborate to researches of our group in control and optimization theory both theoretical and implemented in different areas. Sectors of applications of the research include, but are not limited to, optimization and control of energy flows in smart grid, machine learning application to industrial processes, analysis and stability of nonlinear systems, analysis and control of biological systems.

Our ideal candidate has a sound knowledge in control and optimization methods from his/her Bachelor and Master degree, an excellent academic track record, well developed analytical and problem solving skills and a strongly motivated personality. Interests in both theoretical research and applications to practical control problems as well as the ability of working independently complete the candidate profile.

The candidate will be selected according to applicant fulfilment of the above qualifications.

Interested candidates must send detailed CV and two contacts to whom we can ask references to the email address reported above. The selected candidate will join a friendly and young team of 8 PhD students, 4 post Docs and 5 Professors with several expertise in identification, control and optimization of dynamical systems. The attracting but not distracting environment of the historical town of Benevento is an additional plus.

7.3. PhD: University of Luxembourg, Luxembourg
Contributed by: Jorge Goncalves, jmg@uni.lu

The Doctoral Training Unit “Critics” at the University of Luxembourg, recently established in the frame of the PRIDE scheme of the Luxembourg National Research Fund, has open positions for Doctoral Candidates (PhD students) in Systems Biomedicine (m/f)

Ref. PRIDE

The successful applicants will be a member of the highly interdisciplinary and truly collaborative graduate school on early warning signals and critical transitions in complex systems. This inter-institutional research group will integrate experimental biology and biomedicine approaches with mathematical concepts from non-equilibrium physics, system control theory and finance mathematics to develop the foundation of a future predictive, preventive and personalised medicine.

These particular studentships are theoretical with a focus on
- Control theory (Jorge Goncalves)
- Non-equilibrium physics (Massimiliano Esposito)
- Dynamical systems theory (Alexander Skupin)
- Behavioural finance (Roman Kräussl)

Your Profile: the ideal candidate would hold a Master in Mathematics, Theoretical Physics, Control Systems or Theoretical Machine Learning.

We will only consider students that graduate in their top 20% undergraduate and Master’s class rank (equivalent to a UK first class degree).

Further Information at http://emea3.mrted.ly/159wg

Applications should contain the following documents:
- A detailed Curriculum vitae that includes your class rank.
- A motivation letter, including a brief description of past research experience and future interests. If possible, please include the name of a potential supervisor from the above list.
- Copies of diploma.
- Please ask at least two references to email their confidential letters directly to Mrs Brigitte Melchior (brigitte.melchior@uni.lu) within two weeks of submitting the application.

Only complete applications will be considered.

Review of applicants will begin immediately and will continue until the position is filled.

For further information, please contact Jorge Goncalves (jorge.goncalves@uni.lu) or one of the above researchers.

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

7.4. PhD: MPI, Germany & KTH, Sweden

Contributed by: Sebastian Trimpe, strimpe@tuebingen.mpg.de

PhD position

MPI for Intelligent Systems, Tuebingen, Germany, and
KTH Stockholm, Sweden

Distributed and Event-based Wireless Control for Cyber-physical Systems

The Autonomous Motion department (research group Dr. Sebastian Trimpe) at the Max Planck Institute (MPI) for Intelligent Systems in Tuebingen, Germany and the Department of Automatic Control (Prof. Karl Henrik Johansson) at KTH Stockholm are looking for an outstanding and highly motivated PhD researcher in control, networks, and autonomous multi-agent systems. The PhD researcher will be located at the MPI, with regular exchange visits, co-supervision and the option of obtaining a degree from KTH.

About the project:

The next generation of engineered systems will tightly integrate the physical world with computing and communication systems. In these cyber-physical systems (CPSs), estimation, control, and learning is distributed among multiple autonomous agents that interconnect to form large-scale dynamic networks. This project targets the joint design and tight integration of distributed event-based control and low-power wireless networking to demonstrate tangible benefits of CPS design over traditional systems design in terms of, for example, superior performance and robustness, reduced costs, and unprecedented flexibility. CPSs are widely anticipated to play a major role in future applications such as transportation, smart grid, or autonomous robotics. Within this project, the PhD researcher will do cutting-edge research on novel methods and theory for distributed and event-based control and learning, a principled framework for the co-design
of control and communication systems, theoretical guarantees for wireless control systems, and other topics depending on the candidate’s interest and aptitude. For validating the developed theory, a novel CPS hardware demonstrator will be developed, and also several state-of-the-art robotic platforms at MPI are available. This research is expected to have high impact both in science and industry.

Candidates:
Suitable candidates have a Master’s degree in engineering, computer science, mathematics, or related disciplines, with a strong background in dynamic systems and control. Successful candidates will typically have ranked at or near the top of their classes, have a good mathematical background, relevant computer programming skills, and are proficient in oral and written English. Experience with real-time control implementations is a plus.

Max Planck Institute:
Max Planck Institutes are internationally renowned and regarded as one of the world’s foremost organizations for fundamental research. The MPI for Intelligent Systems is a young, highly dynamic, and internationally oriented institution with excellent research opportunities and close ties to several national and international partners. The working language is English. The Max Planck Society is committed to increasing the number of individuals with disabilities in its workforce and therefore encourages applications from such individuals.

Applications:
Applications should be sent as a single PDF file by e-mail to Dr. Sebastian Trimpe (strimpe@tuebingen.mpg.de) and include a research statement (indicating your motivation for a PhD with us and how your interests relate to this project, max. 2 pages), a CV, grade transcripts (with ranking information), two sample research documents (e.g., publication, thesis), and contact details of at least two references (letters of reference are not requested until possibly a later stage of the application process).

Please contact Dr. Trimpe (strimpe@tuebingen.mpg.de) or Prof. Johansson (kallej@kth.se) with questions. For more information, see: http://tiny.cc/PhD_MPI_KTH

7.5. PhD: Southern Illinois University, USA
Contributed by: Arash Komaee, akomae@siu.edu

We are searching for PhD students to work on funded research assistant positions in the Department of Electrical and Computer Engineering at Southern Illinois University (SIU), Carbondale, IL, USA. The positions are available as early as Spring 2017 and contingent on satisfactory performance and fulfillment of the department requirements can be extended up to four years.

The positions are in the general area of dynamical systems and control with an emphasis on either magnetic control of micro-robots or on feedback control and optimization of power converters. For the former area, applicants with a BS degree in electrical, mechanical, or aerospace engineering or applied physics are considered, while for the latter, the applicants must hold a BS degree in electrical engineering. For both areas, a relevant MS degree is a definite advantage. Applicants must demonstrate strong courage for independent experimental work in the lab, in addition to interest in theory development.

Interested applicants may send their application package or inquiries to Dr. Arash Komaee at akomae@siu.edu. A complete application package includes a Curriculum Vitae, name and contact information of three references, a brief description of the applicant’s research interests, GRE score, and TOEFL/IELTS score for international applicants.
7.6. PhD: University of Lincoln, UK
Contributed by: Andrea Paoli, apaoli@lincoln.ac.uk

The University of Lincoln (UK) is offering a fully-funded PhD studentship in Automation and Robotics Systems applied to the Agri-Tech industry in which the UK has built up a world-leading position. This is a unique opportunity to join a thriving and dynamic research environment, play a key role in a ground-breaking project and work in collaboration with both leading academics and key international industrial partners in the Agri-Tech sector. We welcome applications from outstanding, enthusiastic and highly-motivated students from the UK and EU.

Title: ‘Automation technologies for soft fruit packing lines’

The soft fruit industry is under severe price pressure as a result of intense retailer competition and likely changes to legislation that will drive up labour costs. As a consequence, sustainability and competitiveness of the sector is ultimately dependent on the large scale adaption of technology and automation in any of the key production processes from the field, into and through the packhouse. In this framework, a key action the industry needs to take to mitigate these impacts is to radically transform the typical packhouse from being semi-automated - and therefore strongly dependent on the presence of human operators - to a ‘smart factory’, i.e. a fully automated plant where innovative data exchange and manufacturing technologies that define the fourth industrial revolution ‘Industry 4.0’ are widely adopted.

The objective of this project will be to design and develop a ‘model” for the Industry 4.0 packhouse. The PhD student will investigate, design, adapt and integrate the latest technologies in the field of:
- Machine vision;
- Smart sensors for fruit inspection and grading;
- Robotics arms and soft end-effectors for fruit manipulation;
- Data collection and tracing; and,
- Distributed factory automation.

The student will deliver a number of engineering solutions to overcome challenging technical barriers, including the deployment of soft robotic handling systems, high speed automated fruit packing and punnet weighing.

This project is funded by Berry Gardens, the UK’s leading berry and stone fruit production and marketing group with sales in 2015 of £278 million, a market share in excess of 30% and a year round business supplying most of Britain’s leading retailers.

The student will be supervised by Dr Andrea Paoli, Senior Lecturer in Automation and Robotics, and Prof Simon Pearson, Professor of Agri-Food Technology.

The project will also benefit from the establishment of an ‘Industrial Advisory Board’ that will guarantee access to the latest technologies and related support and training.

A minimum of an upper second-class honours (2:1), or master qualification in an appropriate subject is required.

Tuition fees included (capped at UK/EU fee level): £4,121 per year
Stipend/Living Allowance: £14,296 per year Bench/material/professional costs/travel: £15,000
Start Date: October 2016
Duration: 36 months
Application Deadline: 11 September 2016
Candidate notified if successful for interview by w/c: 12 September 2016
Interviews anticipated w/c: 19 September 2016
To apply please email a CV and covering letter to: engineeringenq@lincoln.ac.uk

### 7.7. PhD: Nanyang Technological University, Singapore & KTH, Sweden
**Contributed by: Yilin Mo, ylmo@ntu.edu.sg**

One fully funded Ph.D. position is available starting Spring 2017 for a joint Ph.D. program between Nanyang Technological University (NTU) and Royal Institute of Technology (KTH) in the area of control of cyber-physical systems. The student will be supervised by Prof. Yilin Mo, NTU, and Prof. Karl H. Johansson, KTH. The nominal time for the Ph.D. program is 4 years with full scholarship covering both tuition and stipend. NTU will be the home university for the Ph.D. student, who is expected to spend about half of the study period at NTU and the other half at KTH. Upon successful completion of the program, the student will receive a joint Ph.D. degree certificate from NTU.

We are looking for highly talented candidates with strong analytical skills and excellent academic records.

**Requirements:**
- A bachelor or master degree in electrical engineering or related field;
- GRE scores. TOEFL or IELTS is also required if English is not the applicant’s first language;
- Strong background in mathematics;
- Knowledge in system and control theory is preferred (but not required);
- Proficiency in programming languages (e.g., Matlab, Python) is preferred (but not required).

**How to apply:**
Send the following documents to ylmo@ntu.edu.sg:
- Cover letter explaining your research interests and relevant academic or professional background.
- Resume
- Transcript
- English test scores

For further information on the position, please, contact:
- Prof. Yilin Mo, ylmo@ntu.edu.sg, [http://www.ntu.edu.sg/home/ylmo/index.html](http://www.ntu.edu.sg/home/ylmo/index.html)
- Prof. Karl H. Johansson, kallej@kth.se, [https://people.kth.se/~kallej/](https://people.kth.se/~kallej/)

### 7.8. PhD: TU Berlin, Germany
**Contributed by: Joerg Raisch, raisch@control.tu-berlin.de**

PhD position at TU Berlin

In the context of their Priority Programme on “Cyber-Physical Networking”, the German Science Foundation (DFG) will fund a project on “Cooperative Consensus-based Control of Multiagent Systems over Wireless Channels” at TU Berlin. The central objective of this proposal is to investigate and exploit trade-offs and synergies involving control and communication in the context of cooperative control of multiagent systems over wireless channels. The PhD researcher will be associated with the Control Systems Group at TU Berlin and will primarily focus on control-theoretic aspects within this project. She/he will interact closely with a second PhD researcher, who will be associated with the Network Information Theory Group at TU Berlin. Salary will be according to the pay-scale E13 TV-L Berliner Hochschulen (full time). The position will be available for three years, starting from October 1st 2016.
Requirements:
MSc degree in Electrical Engineering, Engineering Cybernetics, Applied Mathematics etc.; excellent knowledge in control theory; basic knowledge in communication theory; ability and motivation for interdisciplinary cooperation; excellent English language skills; a basic knowledge of German is desirable

Please send your application with reference number IV-421/16 before September 10th 2016 to raisch@control.tub-berlin.de

7.9. PhD: Technische Universität München, Germany
Contributed by: Matthias Althoff, althoff@in.tum.de

PhD Position in Formal Verification of Electrical Circuits (Munich, Germany)
The Research Group Cyber-Physical Systems of Prof. Matthias Althoff at the Technische Universität München offers a PhD position in the DFG-funded project “Formal Abstraction and Verification of Analog Circuits (faveAC)”. The offered position has a strong focus on formal verification of analog/mixed-signal (AMS) systems, which is especially interesting to applicants with expertise in verification, signals & systems, and circuit theory. Technische Universität München is one of the top research universities in Europe. The university fosters a strong entrepreneurial spirit and international culture that places it at the forefront of research in a diversity of disciplines. If you are interested in applying, please follow the guidelines of the full job announcement at http://portal.mytum.de/jobs/wissenschaftler/NewsArticle20160821_213002

7.10. PhD: University of Rhode Island, USA
Contributed by: Chengzhi Yuan, cyuan@uri.edu

Description:
Applications are invited for PhD positions in Dr. Yuan’s group at The University of Rhode Island. The research of the prospective candidates will focus on multidisciplinary research projects on modeling, control and diagnosis of Robotics/Power Systems, Biomedical Systems, and Autonomous Vehicles.

Qualifications:
(1) Successful candidates are required to have a strong background in Mathematics and Control Theory.
(2) Knowledge and experience related to hybrid control systems, multi-agent systems, robotics, signal processing are a plus.
(3) Strong interest in cutting-edge scientific research, ambitions in publishing high-impact papers, and self-motivation are also very important assets of the successful candidates.
(4) An earned master degree is preferred.

The positions are immediately available. Interested parties should send a CV/resume, academic transcripts, together with a letter indicating their interests and qualifications for the position, to Dr. Chengzhi Yuan at chengzhiyuan16@gmail.com

Visiting students/scholars, master-thesis students, who are interested in the research of Dr. Yuan’s group, are also encouraged to send a CV/resume to chengzhiyuan16@gmail.com.

For more details about Dr. Yuan’s research, please refer to his personal page at: sites.google.com/site/chengzhiy16, or send direct request through the above email address.
**7.11. PhD: Imperial College London, UK**

Contributed by: Thulasi Mylvaganam, thulasi.mylvaganam06@imperial.ac.uk

Distributed Control of Multi-Agent Systems

Imperial College London

DEPARTMENT OF AERONAUTICS

PhD Studentship in Cooperative Control

Applications are invited for a PhD studentship on distributed control for multi-agent systems within the Department of Aeronautics, Imperial College London.

It is widely recognised that a team of (aerial) robots, forming a multi-agent system, cooperatively can successfully perform complicated tasks which would be difficult, or impossible, to accomplish using a single more complex robot. To increase the autonomy of teams of robots it is crucial to develop novel methods for efficient and effective cooperative control.

The goal of the PhD studentship is to develop methods for designing distributed controllers for multi-agent systems. Teams of aerial robots equipped with sensors could, for example, be employed to monitor large regions to aid search and rescue missions or perform tasks related to environmental monitoring. Drawing inspiration from the monitoring problem the student will develop methodologies for designing distributed controllers for general systems, which will be useful for a range of different problems involving multi-agent systems.

Applicants should have a keen interest and solid background in Mathematics and Control Engineering and have experience with using MATLAB. Knowledge of Nonlinear Control is preferable. Applications are invited from candidates with (or who expect to gain) a first-class honours degree or an equivalent degree in Engineering or a related discipline.

“Funding is available for UK citizens and EU citizens who have resided in the UK for the past three years. The studentship is for 3.5 years starting as soon as possible and will provide full coverage of tuition fees and an annual tax-free stipend of approximately £16,296.”

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

Informal enquiries and requests for additional information for this post can be made to: Dr Thulasi Mylvaganam via email: thulasi.mylvaganam06@imperial.ac.uk.

To apply, please go to http://www.imperial.ac.uk/study/pg/apply/how-to-apply/ Any queries regarding the application process should be directed to Ms Lisa Kelly by email at l.kelly@imperial.ac.uk.

Closing date for applications: Open until filled

Start Date: As soon as possible

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**7.12. PhD/PostDoc: Ohio State University, USA**

Contributed by: Mingjun Zhang, zhang.4882@osu.edu

Post-doc/PhD Positions on Bio-inspired Robotics at OSU

We have one post-doctoral researcher and two PhD student positions opening to work on bio-inspired robotics at Bio-inspired Nanoparticles and Bio-inspired Robotics lab at The Ohio State University. The lab’s long-term research goal is on nanoparticle-based self-assembling to integrate sensing, actuation and control for
bio-inspired underwater robotics. While multi-scale perspective is desired, the focus of current positions is on dynamics, control and fabrication of propulsion mechanisms for an autonomous underwater vehicle. Interested applicants should send in CVs along with 2-3 publications to Mingjun Zhang at zhang.4882@osu.edu.

Mingjun Zhang
Professor of Biomedical Engineering
The Ohio State University

7.13. PostDoc: AreteX Systems, USA
Contributed by: Behnood Gholami, bgholami@aretexeng.com

AreteX Systems, a medical technology startup company accelerating the use of information technology in healthcare, has an immediate opening for a 2-year NSF-Sponsored Postdoctoral Fellow in its office located in New York City area. The annual salary is $75,000 and benefits such as health insurance are provided. The position involves developing adaptive control methods for innovative biomedical technologies. We are looking for a self-motivated, highly talented individual with an excellent background in dynamical systems and control, and specifically, adaptive control. The successful candidate will work closely with a team of physicians, nurses, engineers, and scientists in designing new medical technologies.

Requirements:
- PhD in electrical engineering, mechanical engineering, biomedical engineering, applied mathematics, or a similar discipline.
- Research experience in nonlinear and adaptive control systems
- Knowledge of machine learning techniques is a plus.
- Experience with Python is a plus.
- Applicants must be U.S. citizens, U.S. nationals or U.S. permanent residents.
- Applicants must have received a Ph.D. degree in the seven years prior to the application date.

Send your cover letter and CV to info@aretexeng.com.

7.14. PostDoc: Concordia University, Canada
Contributed by: Concordia University, horizon.postdocs@concordia.ca

POSTDOCTORAL FELLOWSHIP AVAILABLE IN ELECTRICAL AND COMPUTER ENGINEERING
Project title: Cyber Security, Monitoring, Diagnostics and Resilient Control Recovery of Critical Cyber-Physical Systems (CPS) Infrastructure

Are you an exceptional early researcher, keen to explore exciting challenges at the leading edges of research and creative activity, to mentor your researchers, and to make an impact with your work? Apply now to receive a Horizon Postdoctoral Fellowship from Concordia University.

Additional Salary Information: $47,500 per year plus benefits and full access to Concordia’s services
For more information on the program, including academic and eligibility requirements and details regarding the application process, please visit https://www.concordia.ca/research/students-and-postdocs/postdoctoral-fellows/horizon-postdoctoral-fellowships/1025.html

About Concordia University
Concordia University has secured a unique legacy for supporting and developing people and their aspirations
in order to enrich the world’s wealth of knowledge, bridge communities and, most important of all, enable individuals to grow and contribute. A next-generation university, Concordia is one of the top 100 universities under 50 and top 200 international universities in the world.

7.15. **PostDoc: Concordia University, Canada**

Contributed by: Concordia University, horizon.postdocs@concordia.ca

**POSTDOCTORAL FELLOWSHIP AVAILABLE IN ELECTRICAL ENGINEERING**

Project title: Millimeter-wave reconfigurable antennas for wireless communication and imaging systems

Are you an exceptional early researcher, keen to explore exciting challenges at the leading edges of research and creative activity, to mentor your researchers, and to make an impact with your work? Apply now to receive a Horizon Postdoctoral Fellowship from Concordia University.

Additional Salary Information: $47,500 per year plus benefits and full access to Concordia’s services

For more information on the program, including academic and eligibility requirements and details regarding the application process, please visit [https://www.concordia.ca/research/students-and-postdocs/postdoctoral-fellows/horizon-postdoctoral-fellowships/1030.html](https://www.concordia.ca/research/students-and-postdocs/postdoctoral-fellows/horizon-postdoctoral-fellowships/1030.html)

About Concordia University

Concordia University has secured a unique legacy for supporting and developing people and their aspirations in order to enrich the world’s wealth of knowledge, bridge communities and, most important of all, enable individuals to grow and contribute. A next-generation university, Concordia is one of the top 100 universities under 50 and top 200 international universities in the world.

7.16. **PostDoc: University of Luxembourg, Luxembourg**

Contributed by: Jorge Goncalves, jmg@uni.lu

Postdoc (Research Associate) in Machine Learning, System Identification or Control Systems

The Systems Control Group (SCG) of the Luxembourg Centre of Systems Biomedicine (LCSB) seeks a highly skilled Postdoctoral Fellow (Research Associate). The project aims to develop new theoretical mathematical tools to model continuous-time nonlinear dynamical systems from time-series data. The Postdoctoral Fellow is expected to work together with Ph.D. students both at the LCSB and at the University of Cambridge.

Your Profile

To hold a Ph.D. degree in machine learning, signal processing, control systems, system identification or mathematics. Excellent working knowledge of English.

We offer

Full contract for 1 year with the possibility of renewal up to 5 years contingent on performance and availability of funding. A very competitive salary.


Applications should contain the following documents:

A detailed Curriculum vitae. A motivation letter. Please ask at least three references to email their confidential letters directly to Jorge Goncalves (jmg@uni.lu) within two weeks after submitting the application.

Review of applicants will begin immediately and will continue until the position is filled. For further information, please contact Jorge Goncalves (jorge.goncalves@uni.lu).
The University of Luxembourg is an equal opportunity employer. All applications will be treated in the strictest confidence.

**7.17. PostDoc: KTH, Sweden**

Contributed by: Dimos Dimarogonas, dimos@kth.se

A number of postdoctoral positions in hybrid systems with robotics applications are available at KTH. The full announcement and details on the requirements for the positions can be found here:


For any further required information, please contact Assoc. Prof. Dimos Dimarogonas, dimos@kth.se, http://people.kth.se/~dimos/.

**7.18. PostDoc: UC Riverside & Boston University, USA**

Contributed by: Elisa Franco, efranco@ucr.edu

Postdoc positions at UC Riverside and Boston University

We are hiring two postdoctoral scholars to work on the development of models and theory for biomolecular feedback control systems. The project is interdisciplinary, and focuses in particular on feedback reaction networks built with RNA. Research topics/directions include:

- Data-driven development and validation of mathematical models
- Robustness and sensitivity analysis
- Model reduction
- Controller tuning, identification of performance limitations

Research will be conducted within a research team that includes multiple universities (UC Riverside, Boston University, University of Minnesota, North Carolina State University, and Northwestern). The individuals will focus on modeling and analysis and will engage in regular discussions with team members conducting experiments.

Requirements: Candidates must have a PhD in engineering, computer science, physics, or mathematics with prior research focus on control/dynamical systems theory, and synthetic biology, biophysics, or molecular biology

Timeline and application instructions: Start date is October 2016. The appointment will be for 18 months, with a possibility of reappointment based on performance and availability of funds.

Applicants should email Prof. Elisa Franco efranco@engr.ucr.edu or Prof. Mary J. Dunlop mj dunlop@gmail.com by September 8, 2016 attaching the following items:

1) Cover letter - describing previous experience and research/career goals,
2) CV - with list of publications/research accomplishments (2 pages max),
3) Contact information for three references.

**7.19. PostDoc: University of Cambridge, UK**

Contributed by: Carl Edward Rasmussen, cer54@cam.ac.uk

2 postdoc positions in machine learning in Cambridge
We are seeking up to two highly creative and motivated Research Assistants/Associates to join the Machine Learning Group (http://mlg.eng.cam.ac.uk) in the Department of Engineering, University of Cambridge, UK. The positions will involve research in direct collaboration with Professor Carl Edward Rasmussen.

The key responsibilities and duties of the roles are: conducting research in the fields of probabilistic machine learning, non-linear time series modelling (system identification) and reinforcement learning with applications to autonomous systems and control. Developing research objectives and proposals; presentations and publications; assisting with teaching and learning support; liaising and networking with colleagues and students; planning and organising research resources and workshops. The role will combine strong theoretical and analytical skills with programming experience.

Successful applicants will have or be near to completing a PhD in computer science, information engineering, statistics or a related area, and will have extensive research knowledge and experience in addition to a strong publication record in machine learning, including ideally papers in top machine learning conferences such as NIPS, UAI, ICML, and AISTATS. Excellent mathematical and programming skills are essential. Experience in two or more of the following areas: probabilistic modelling and scalable approximate inference (See: http://www.automaticstatistician.com/); probabilistic programming and bayesian nonparametrics research on an existing probabilistic programming language; MCMC methods; message passing and approximations of partition functions in regards to inference in graphical models will be necessary.

For more information and to apply see http://www.jobs.cam.ac.uk/job/11220

7.20. PostDoc: University of Colorado Boulder & Colorado School of Mines, USA

Contributed by: Lucy Pao, pao@colorado.edu

Post-doctoral position opening in control of wind turbines

We are seeking an outstanding post-doctoral researcher for the development, validation, implementation, and experimental field testing of controllers for a novel wind turbine rotor design. This post-doctoral position is available starting approximately April 2017 for a duration of up to 24 months. Candidates should have a strong background in aerospace, mechanical, and/or electrical engineering with a specialization in control systems, and have strong hands-on experimental skills. Familiarity with issues related to the control of wind turbines and NREL-developed software tools for evaluating wind turbine control algorithms will be beneficial, as will leadership and mentoring skills. The candidate will work as part of a collaborative, creative, interdisciplinary team and should have excellent written and oral communication skills. The position will be jointly appointed at both University of Colorado Boulder (Boulder, CO) and Colorado School of Mines (Golden, CO), and the applicant must meet requirements to gain site access at the US National Renewable Energy Laboratory where the field testing will be performed.

To apply for the position, please send the following all in one PDF file to both email addresses below: (1) a cover letter summarizing your interest, (2) CV, and (3) contact information for at least three references.

Professor Lucy Y. Pao
Electrical, Computer, & Energy Engr. Dept.
425 UCB
University of Colorado Boulder
Boulder, CO 80304 USA
Email: pao@colorado.edu
http://ecee.colorado.edu/~pao
7.21. PostDoc: McGill University, Canada  
Contributed by: Ahmad Haidar, ahmad.haidar@mcgill.ca

Postdoctoral Fellowship: Control and Estimation for the Artificial Pancreas

The Department of Biomedical Engineering at McGill University is seeking outstanding candidates for a Postdoc position. The successful candidate will develop a learning algorithm for an electromechanical artificial pancreas in type 1 diabetes. The artificial pancreas is a closed-loop system to regulate glucose levels. A model predictive control is already in place and has been extensively tested in human clinical trials, but it requires further development to handle more efficiently slow changes in insulin needs over time. The successful candidate will develop and implement a learning algorithm based on recursive state estimation methods, conduct extensive simulations, and lead the design and the conduction of a clinical trial to test their algorithm.

The successful candidate will have the opportunity to work with a multi-disciplinary team that includes researchers with backgrounds of endocrinology, control engineering, biomedical engineering, pediatrics, and computer science. This is a great opportunity for a highly motivated applicant who wants to utilize their expertise in control systems to tackle medical problems.

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

Apply with your curriculum vitae to Prof. Ahmad Haidar (ahmad.haidar@mcgill.ca). The candidate will be supervised by Prof. Ahmad Haidar and Prof. Robert Kearney. The position’s duration is 2-3 years

7.22. Faculty: University of Sydney, Australia  
Contributed by: Ian Manchester, ian.manchester@sydney.edu.au

The University of Sydney has multiple openings for new faculty members in the School of Aerospace, Mechanical and Mechatronic Engineering (AMME) at the University of Sydney. These are continuing positions (roughly equivalent to tenure-track/tenured) at various levels from Lecturer to full Professor.

To find details, go to http://sydney.nga.net.au and search by job reference listed below. Of particular interest for Control Systems researchers may be:
- Lecturer/Senior Lecturer in Mechatronic Engineering, Ref: 1132/0716
- Associate Professor/Professor in Aerospace Engineering, Ref: 1131/0716
Additionally, there are 3 openings for Lecturer/Senior Lecturer in Mechanical Engineering, Ref: 1134/0716

AMME staff conduct world leading research and development in the areas of aerospace, biomedical, combustion, design, fluid dynamics, materials, rheology, robotics and thermodynamics. Staff in mechatronic engineering are all part of the Australian Centre for Field Robotics and conduct world-leading research in the areas of robotics and intelligent systems, with substantial industry engagement through initiatives such as the Rio Tinto Centre for Mining Automation, the Qantas Centre for Aviation and Logistics, intelligent transport systems, agricultural and marine robotics. We also conduct fundamental research in areas of navigation, control systems, planning, machine learning and systems engineering.

7.23. Faculty: Chalmers University of Technology, Sweden
Contributed by: Bengt Lennartson, bengt.lennartson@chalmers.se

Faculty: Chalmers University of Technology, Sweden
Contributed by: Bengt Lennartson, bengt.lennartson@chalmers.se

Full Professor / Associate Professor in Automatic Control
www.chalmers.se/en/about-chalmers/vacancies/Pages/default.aspx

The Department of Signals and Systems offers a position as a Professor in Automatic Control with the Division of Systems and Control, which has about 60 employees. The position is on the level of Full Professor or Associate Professor, depending on the qualifications.
- The division of Systems and Control has well-established research activities, mainly directed towards the transportation, energy and ICT areas, including important collaboration with ABB, Volvo, Scania, Autoliv, Siemens, etc.
- The recruited professor is expected to bring complementing competence to the division and the department, and to build a basis for new research directions in control.
- The ideal candidate would be a person with an excellent track record in research, PhD supervision and research funding, and with an active international network.
Application deadline: 30 September 2016
For more information: www.chalmers.se/en/about-chalmers/vacancies/Pages/default.aspx

7.24. Faculty: EPFL, Switzerland
Contributed by: Colin Jones, colin.jones@epfl.ch

Faculty Position in Mechanical Systems at EPFL

The Institute of Mechanical Engineering, EPFL is soliciting applications for a faculty position at the level of tenure-track assistant professor or tenured associate professor in a broad range of research areas related to mechanical systems.

Of particular interest for this search are applicants with specific technical interest that includes but is not limited to: vibration and structural control, instrumentation and monitoring, distributed sensing, design and mechatronics. Applicants should have a demonstrated record of excellence in their chosen technical area.
As a faculty member of the School of Engineering, the successful candidate will be expected to initiate an independent and creative research program and participate in undergraduate and graduate teaching. Internationally competitive salaries, start-up resources and benefits are offered.

EPFL, with its main campus located in Lausanne, Switzerland, is a dynamically growing and well-funded institution fostering excellence and diversity. As a technical university covering essentially the entire palette of engineering and science, EPFL offers a fertile environment for research cooperation between different disciplines. EPFL has a highly international environment that is multi-lingual and multi-cultural with English often serving as a common interface.

Applications should include a cover letter with a statement of motivation, curriculum vitae, list of publications and patents, concise statement of research and teaching interests. Applicants for Assistant Professor should request letters of recommendation to be sent to the committee, while applicants for Associate Professor should provide the names and addresses of at least five potential recommenders. Applications must be uploaded in PDF format to the recruitment web site:

go.epfl.ch/igm-search

Formal evaluation of candidates will begin on December 1st, 2016 and continue until the position is filled.

Enquiries may be sent to:
Prof. John Botsis
Search Committee Chair
Email: igm-search@epfl.ch

For additional information on EPFL, please consult the web sites: www.epfl.ch, sti.epfl.ch and igm.epfl.ch

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7.25. Faculty: Nanyang Technological University, Singapore
Contributed by: Changyun Wen, eywen@ntu.edu.sg

Tenure-track Assistant Professor in School of EEE, Nanyang Technological University

Young and research-intensive, Nanyang Technological University (NTU Singapore) is ranked 13th globally. NTU is also placed 1st amongst the world’s best young universities. NTU is also placed 1st amongst the world’s best young universities. The School of Electrical and Electronic Engineering (EEE) at NTU Singapore is one of the largest EEE schools in the world and ranks 8th in the field of Electrical & Electronic Engineering in the 2016 QS World University Rankings by Subjects.

Established in 1981, the SCHOOL OF ELECTRICAL AND ELECTRONIC ENGINEERING (EEE) is one of the founding Schools of the Nanyang Technological University. Built on a culture of excellence, the School is renowned for its high academic standards and research. With more than 150 faculty members and an enrolment of more than 4,000, of which about 1,000 are graduate students.

The School of EEE is seeking applications for a tenure-track Assistant Professor position in the field of Power Engineering.

Applicants should possess the following qualification and attributes:

- A Ph.D. degree in Electrical Engineering or in relevant discipline, with an outstanding scholarship record and a strong commitment to excellence in research and teaching;

- Strong background in power engineering, preferably have experience in one of the following areas:
  1) Power system analysis, control, planning, design and protection,
  2) Power generation, transmission and distribution,
3) Electrical and/or smart grids,
4) Power electronics and drive systems,
5) Electric machines and electrical propulsion,
6) Energy conversion and energy systems,
7) Electrical energy storage systems;
8) Energy management and control systems

- Ability to contribute towards strategic research focus in sustainable electrical power and energy systems.
- Preferences are given to candidates with relevant postdoctoral or working/teaching experience in top research institutions or universities but outstanding fresh Ph.D. graduates would also be considered.

Emoluments and General Terms and Conditions of Service:
Salary will be competitive and will commensurate with qualifications and experience. The University offers a comprehensive fringe benefit package.

Apart from the attractive remuneration package, each successful candidate will also receive a start-up package of at least S$300,000 comprising $100,000 (for equipment, manpower, travel etc) and about S$200,000 scholarship to fund a graduate student (PhD) for 4 years.

Join the SCHOOL OF EEE http://www.eee.ntu.edu.sg as a faculty member and embark on a challenging and exciting career in research innovations and discoveries and teaching excellence, so as to prepare engineering leaders of the future.

Application Procedure:
IMPORTANT – Please indicate clearly the post applied for (i.e. Tenure-track Assistant in Power Engineering), when submitting an application or inquiring about this job announcement.

The ”Guidelines for Submitting an Application for Faculty Appointment” is available at: http://www.ntu.edu.sg/ohr/career/submit-an-application/Pages/Faculty-Positions.aspx

Please ensure that all requested information is enclosed in your application and send via email to Chairman, School Search Committee (Area) c/o School of Electrical & Electronic Engineering (eeehr@ntu.edu.sg)

Electronic submission of applications is encouraged. Only short-listed candidates will be notified.

Position Start Date: Available Immediately
Closing Date: Until Position Filled

7.26. Faculty: University of Pennsylvania, USA
Contributed by: George J. Pappas, pappasg@seas.upenn.edu

University of Pennsylvania - Multiple Faculty Positions
The School of Engineering and Applied Science at the University of Pennsylvania is growing its faculty by 33% over the next five years. As part of this initiative, the Department of Electrical and Systems Engineering is engaged in an aggressive, multi-year hiring effort for multiple tenure-track positions at all levels. Candidates must hold a Ph.D. in Electrical Engineering, Systems Engineering, or related area. The department seeks individuals with exceptional promise for, or proven record of, research achievement, who will take a position of international leadership in defining their field of study, and excel in undergraduate and graduate education. Leadership in cross-disciplinary and multi-disciplinary collaborations is of particular interest. We are interested in candidates in all areas that enhance our research strengths in:
Nanodevices and nanosystems (nanoelectronics, MEMS/NEMS, power electronics, nanophotonics, integrated devices and systems at nanoscale),
Circuits and computer engineering (analog, RF, mm-wave, and digital circuits, emerging circuit design, computer engineering, IoT, embedded and cyber-physical systems), and Information and decision systems (control, optimization, robotics, data science, network science, communications, information theory, signal processing, markets and social systems).

Prospective candidates in all areas are strongly encouraged to address large-scale societal problems in energy, transportation, health, food and water, economic and financial networks, critical infrastructure, and national security. We are especially interested in candidates whose interests are aligned with the school’s strategic plan (www.seas.upenn.edu/PennEngineering2020).

Diversity candidates are strongly encouraged to apply. To submit an application go to: http://www.ese.upenn.edu/faculty-staff/index.php

7.27. Faculty: University of Groningen, Netherlands

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

University of Groningen
Engineering and Technology Institute Groningen
Tenure Track position in Optimization and Control

*Organisation*
Since its foundation in 1614, the University of Groningen has enjoyed an international reputation as a dynamic and innovative centre of higher education offering high-quality teaching and research. Balanced study and career paths in a wide variety of disciplines encourage currently more than 30,000 students and researchers to develop their own individual talents. Belonging to the best research universities in Europe and the top 100 universities in the world (see our ranking: http://www.rug.nl/about-us/where-do-we-stand/rankings), the University of Groningen is truly an international place of knowledge.

*Job description*
The successful candidate is expected to develop research in areas at the intersection of optimization and dynamical control systems. These areas include but are not limited to differential games, distributed optimization, optimization and control of network systems, optimal control. Other areas might be considered as well in cases of applications by exceptional applicants. Examples of application areas where the candidate should be willing to work include smart cities, transportation systems, flow networks, energy systems, supply chain networks, optimal actuator/sensor placement. The candidate will be embedded in the SMS-Cyberphysical System group in which research in cyberphysical systems, dynamical networks, nonlinear systems, hybrid and switched control is conducted, with applications ranging from smart grids, to data centers, water and heat networks, as well as adaptive optics.

*Qualifications*
Candidates have:
- a Ph.D. degree in relevant areas such as electrical engineering, systems and control, mechanical engineering, computer engineering, operations research;
- two or more years of experience in a post-doctoral capacity or experience at another educational institution by the time the candidate is hired for the position;
- excellent research qualities, as evidenced by a publication record in international peer-reviewed journals and renowned conferences, and a relevant international network;
- research, teaching and organizational experience appropriate to career stage;
- a working knowledge of the English language;
- evidence of experience in proposal writing or successful acquisition of external funding appropriate to career stage.

Candidates are:
- team players with good communications skills;
- willing to fulfill the requirements for the University Teaching Qualification;
- willing to learn the Dutch language.

*Conditions of employment*
The appointment will be initially for a maximum of 6 years at the level of tenure track assistant professor with a gross monthly salary dependent on qualifications and work experience from euro 3,259 up to a maximum of euro 5,070 (CAO-NU salary scales 11 or 12) gross per month for a full-time position. After 5 years there will be an assessment of performance based on established criteria. If the outcome of the assessment is positive, the assistant professor will be promoted to associate professor with tenure. There will be another assessment at the end of a further 4-7-year period for the promotion to full professor.

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*
Interested candidates are invited to submit a complete application including:
- A letter of motivation;
- A Curriculum Vitae, including a list of publications;
- A list of five self selected ‘best papers’;
- A statement about teaching goals and experience and a description of scientific interest and plans;
- The names of three references complete with title and contact information.

To apply for this position please visit http://www.rug.nl/about-us/work-with-us/job-opportunities/overview?details=00347-02S000538P
You may apply until 12 September/before 13 September 2016 Dutch local time.

*Information*
For information you can contact:
Prof. C. De Persis, c.de.persis@rug.nl
(please do not use for applications)

More information can be found on
http://www.rug.nl/research/sms
http://www.rug.nl/research/enteg

7.28. Faculty: Norwegian University of Science and Technology, Norway
Contributed by: Morten Breivik, morten.breivik@ntnu.no

The Norwegian University of Science and Technology (NTNU, http://www.ntnu.edu/) is establishing the world's first professorship in Big Data Cybernetics in collaboration with KONGSBERG (http://kongsberg.com/), combining the fields of automatic control and multivariate data modelling.
For the successful applicant, this represents a unique opportunity to play a central role in the development of a new interdisciplinary field. The position will be affiliated with the Department of Engineering Cybernetics (Institutt for teknisk kybernetikk - ITK, http://www.ntnu.edu/itk) at NTNU’s Faculty of Information Technology, Mathematics and Electrical Engineering.

ITK has 17 full-time professors, 11 adjunct professors, about 10 postdocs and researchers as well as 70 PhD candidates. Approximately 100 MSc candidates graduate annually from the three study programs in cybernetics, which comprise about 650 students in total. The department is involved in numerous research projects and centers, including the Centre of Excellence for Autonomous Marine Operations and Systems (NTNU AMOS, http://www.ntnu.edu/amos).

The new field Big Data Cybernetics is envisioned to combine methods from automatic control and multivariate data modelling in order to discover systematic structures in the spatial, temporal and property-profile domains, and to convert these structures into quantitative, human-interpretable information.

The main goal is to translate “big data” from a large number of sensor channels into “smart data” represented by a combination of theory-driven and data-driven models, by combining science’s prior knowledge with nature’s unexpected patterns to identify the relevant structures and develop interpretable and useful models. The overlap between cybernetic subspace identification and chemometric partial-least-squares regression could for instance be a fruitful common ground for the desired high-dimensional, spatio-temporal modelling. The outputs from such models shall be intuitively understandable by humans, who then can use their background knowledge and creativity for further refinement and development. This means that black-box modelling, such as e.g. artificial neural networks or support vector machines, are not the focus of Big Data Cybernetics.

The applicants’ methodological basis should include theory and tools for describing scientific knowledge in terms of both first-principles mathematical models as well as unexpected cluster and subspace structures in large data sets. It is required to document solid competence in at least one of the two fields of automatic control and multivariate data modelling, and the applicant must demonstrate a strong interest in merging these two fields. Knowledge in system identification, nonlinear dynamics, feedback control and self-organization, signal processing, image analysis, visualization or machine learning is an advantage. Thus, several different scientific backgrounds are relevant for this new interdisciplinary field.

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


About NTNU, Trondheim and Norway:
- About NTNU: http://www.ntnu.edu/
- NTNU Facts and Figures: http://www.ntnu.edu/facts
- NTNU International Researcher Support: http://www.ntnu.edu/nirs
- About Trondheim: http://trondheim.com/
- About Norway: https://www.visitnorway.com/about/
- Working in Norway: https://www.nav.no/workinnorway/en/Home
7.29. Control Engineer: Ford Research and Advanced Engineering, Germany
Contributed by: Oliver Rizmanoski, Oliver.Rizmanoski@kellyocg.com

Control Engineer for Ford Research and Advanced Engineering in Aachen, Germany
Develop control systems for innovation features in collaboration with colleagues in England and the US. The group Vehicle System Control is part of the global Ford Research and Advanced Engineering organization and responsible for projects in the area of vehicle control. You will work on new control challenges and find robust solutions for our vehicles in an interdisciplinary team.

Responsibilities:
- Improve vehicle-level control systems such as the start-stop system
- Specify, implement, and verify control systems using model-based development methods
- Validate vehicle control algorithms, evaluate and interpret measurement data
- Find and solve problems of interaction between controllers and subsystems
- Identify, based on your expertise, new research areas and projects in control engineering

Your Profile:
- Degree (Bachelor/Master/diploma) in engineering or science
- Several years of experience with the development of embedded controllers
- Good knowledge of control systems engineering, controller synthesis and analysis methods
- Proficient with Matlab/Simulink/Stateflow and RCP systems; knowledgeable in the area of automotive subsystems
- Excellent command of the English language
- You are analytical, have good communications skills, and enjoy both team- and independent work

Location:
Ford Research and Innovation Center in Aachen, Germany

Interested?
We are looking forward to receiving your application (cover letter, CV, transcripts) via our external recruitment partner access KellyOCG GmbH.

Contact: Oliver Rizmanoski, phone +49 221 95 64 90, ext. 499

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7.30. Robotics Engineer: Intuitive Surgical, USA
Contributed by: James Zhang, James.Zhang@IntuSurg.com

Intuitive Surgical, the global leader in surgical robots, has a full time position in its Sunnyvale, CA headquarter - Systems Analyst (Robotics Engineer). Enclosed is the job description. If you have the matching qualifications, send me your resume and links of related projects at James.Zhang@IntuSurg.com. Please start your email subject with “Full Time”.

Primary Function of Position:
Intuitive Surgical, Inc. produces the da Vinci Surgical System, a minimally invasive robotic surgery system that uses proprietary software control, advanced mechanics, and enhanced visualization to extend surgical technique and precision beyond the limits of the human hand. Systems Analysts perform a vital and wide-ranging role in Intuitive’s product development. They are primarily responsible for generating, debugging and tuning the algorithms associated with Intuitive Surgical products. They provide analytic assistance to other engineering groups, such as modal analysis of new mechanisms or communications protocol design for new electrical hardware. Their role in user interface design requires a detailed familiarity with clinical issues.
and an ability to perceive products from a customer’s perspective. The Sr. Systems Analyst will investigate and resolve design issues that impact the performance of systems in the field or design issues related to the manufacturing process. The successful candidate will have both the technical depth to resolve complex control algorithm issues and the ability to work in an interdisciplinary team to troubleshoot higher level system issues. A strong sense of shared responsibility and shared reward is required as well as a commitment to high product quality.

Roles and Responsibilities:
* Resolve design issues related to instrument or robot mechanics, electro-mechanical controls, and software.
  - Investigate and determine root cause of both latent and emerging defects in the existing population of deployed systems
  - Tasks are related to issues found in the field or Manufacturing that require engineering investigation and redesign, including formal design verification testing
* Work in cross-functional teams to ensure all issues related to a design change are understood in advance of implementation
* Develop, implement, test and document solutions for issues according to corporate standard and departmental operating procedures

Skill/Job Requirements:
This position represents a core competitive capability for Intuitive.

Specific requirements for the position are:
* MS or Doctorate in CS, EE, ME, or similar, and 2-3 years experience
* Strong educational emphasis on control theory and practice
* Expertise in the modeling and compensation for
  - Time delay
  - Drive-train friction losses - Mechanical hysteresis and back-lash - Non-co-located sensors and actuators
* Demonstration of a rigorous experimental methodology
* Expertise in the practical implementation of tele-robotic systems, (e.g. experience with real time control systems, multi-tasking, embedded operating systems, etc.)
* An interest in the medical applications of haptics, robotics and machine vision
* Strong ability to isolate and debug mechanical, embedded hardware and software problems
* Ability to communicate effectively across all levels and organizations
* Ability to build and maintain relationships across supported organizations
* Excellent communication (written, oral), presentation and documentation skills
* Comfortable with all phases of the product development lifecycle including design, implementation, debug, verification, qualification, and transfer
* Experience with designing in an FDA or other regulated industry or for mission critical applications is desired; comfort with concepts of design input, design output, traceability, and risk analysis
* A real excitement to learn and get to the bottom of tough technical problems
* A passion for creating robust and reliable products

We are an AA/EEO/Veterans/Disabled employer

James Zhang, PhD
Intuitive Surgical, Inc.
1266 Kifer Road, Sunnyvale, CA 94086
Email: James.Zhang@IntuSurg.com

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7.31. PostDoc/Engineer: GE Global Research Center, USA
Contributed by: David Stamper, stamper@ge.com

The GE Global Research Center in Niskayuna NY has multiple physics based modeling and algorithm analytic non-linear control positions including Post Doc, Research Engineer, Lead Engineer and Senior Engineer. These are research and development positions for industrial applications across GE businesses. For more information reference job numbers 2445017 (Post Doc), 2601449 (Engineer), 2445037 (Lead Engineer) and 2445218 (Senior Engineer) at www.GECareers.com.

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