

## **E-LETTER on Systems, Control, and Signal Processing**

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Welcome to the January 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](mailto: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.

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Contributed by: Elizabeth Kovacs, [ekovacs2@nd.edu](mailto:ekovacs2@nd.edu)

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## 2. MISC

### 2.1. Award: 2015 Unmanned Systems' AeroLion Technologies Outstanding Paper Award

Contributed by: Ben M Chen, [bmchen@nus.edu.sg](mailto:bmchen@nus.edu.sg)

Winners of 2015 Unmanned Systems' AeroLion Technologies Outstanding Paper Award

Unmanned Systems ([www.worldscientific.com/us/](http://www.worldscientific.com/us/)) is pleased to announce the following winners of the journal's inaugural AeroLion Technologies Outstanding Paper Award:

- K. Kang, J. V. R. Prasad, Development and Flight Test Evaluations of an Autonomous Obstacle Avoidance System for a Rotary-Wing UAV, Unmanned Systems, Vol. 1, No. 1 (2013) 3-19.

- N. Kopeikin, S. S. Ponda, L. B. Johnson, J. P. How, Dynamic Mission Planning for Communication Control in Multiple Unmanned Aircraft Teams, Unmanned Systems, Vol. 1, No. 1 (2013) 41-58.

The annual prize money of US\$3000 is equally divided between the two teams. Congratulations, winners!

The two papers were selected from a shortlist of five manuscripts; selected after a preliminary screening based on reviewers' comments and citation records of papers published in Unmanned Systems since 2013. Shortlisted papers were then sent out to some advisory board members for further review. Recommendations from advisory board members led to the unanimous agreement of the editors-in-chief to give the AeroLion Technologies Outstanding Paper Award this year to two winners instead of just one.

The AeroLion Technologies Outstanding Paper Award is to recognize an outstanding paper published in the Unmanned Systems. Sponsored by AeroLion Technologies Private Limited ([www.aerolion.com](http://www.aerolion.com)), the award consists of a cash prize up to US\$3,000 in total each year starting from 2015. The winners will be notified each year by December 1. Authors of papers published in Unmanned Systems during the two calendar years preceding the year of the award are eligible for the award. Nominated work will be judged by an award committee based on its originality, relevance of the application, clarity of exposition, and demonstrated impact on Unmanned Systems technology. More information on the award can be found at <http://www.worldscientific.com/page/us/SG-UAV>.

Unmanned Systems is published quarterly by World Scientific Publishing Co. and is now indexed on the Thomson Reuters' Emerging Sources Citation Index (ESCI), which makes listed journals (and their respective published papers) searchable in the Web of Science; increasing their visibility in the Web of Science Core Collection. Journals listed in ESCI are also being evaluated annually for suitability of being transferred to other indexes such as the SCI, and will be moved to the larger index(es) once deemed to meet the relevant criteria.

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## **2.2. Call for Volunteer: University of Illinois at Urbana-Champaign**

Contributed by: Rebecca Reck, [reck2@illinois.edu](mailto:reck2@illinois.edu)

We are seeking volunteers who have experience teaching control systems laboratories or are currently developing control systems in industry. The purpose of this study is to validate the most important learning outcomes, concepts, and equipment for students to experience in a control systems laboratory. These learning outcomes, concepts, and equipment were generated by forty faculty members via a multi-round survey earlier this year. We are now seeking review and comments on these results from a wider representation of people with experience in this area.

The survey will take 15-20 minutes to complete and will be available until December 15. To participate please go to [https://uiuc.qualtrics.com/SE/?SID=SV\\_8vIMnVWnRmCkiTb](https://uiuc.qualtrics.com/SE/?SID=SV_8vIMnVWnRmCkiTb).

Questions about this research should be directed to Dr. Geoffrey Herman (phone 217-300-3579, e-mail [glherman@illinois.edu](mailto:glherman@illinois.edu)). Questions about your rights as a research participant should be directed to the University of Illinois campus Institutional Review Board (phone 217-333-2670, e-mail [irb@illinois.edu](mailto:irb@illinois.edu)).

Thank you so much for your time and for your participation! Dr. Geoffrey Herman, Visiting Assistant Professor, Illinois Foundry for Innovation in Engineering Education Dr. R.S. Sreenivas, Associate Professor, Department of Industrial and Enterprise Systems Engineering Dr. Michael Loui, Professor Emeritus, Department of Electrical and Computer Engineering Rebecca Reck, Graduate Student, Department of Industrial and Enterprise Systems Engineering University of Illinois at Urbana-Champaign

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### 3. Books

#### 3.1. Iterative Learning Control: An Optimization Paradigm

Contributed by: David H Owens, [d.h.owens@sheffield.ac.uk](mailto:d.h.owens@sheffield.ac.uk)

A new Springer text "Iterative Learning Control: An Optimization Paradigm" authored by David H.Owens is now available from Springer in the Advances in Industrial Control Series. Hard copy ISBN 978-1-4471-6770-9. eBook ISBN 978-1-4471-6772-3. The text brings together and generalizes results describing the applications of inverse model, gradient and quadratic optimization methodologies to the development of new Iterative Control Algorithms. The text also introduces new robust monotonic convergence criteria.

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### 4. Journals

#### 4.1. Contents: Automatica

Contributed by: Elisa Capello, [automatica@polito.it](mailto:automatica@polito.it)

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## 4.2. Contents: Nonlinear Studies

Contributed by: Seenith Sivasundaram, [seenithi@gmail.com](mailto:seenithi@gmail.com)

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#### 4.3. Contents: Mathematics in Engineering, Science and Aerospace

Contributed by: Seenith Sivasundaram, [seenithi@gmail.com](mailto:seenithi@gmail.com)

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Journal Mathematics in Engineering, Science and Aerospace

Vol 6, No 4 (2015)

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#### 4.4. Contents: Control Theory and Technology

Contributed by: Zou Tiefeng, [tfzou@scut.edu.cn](mailto:tfzou@scut.edu.cn)

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Control Theory and Technology

(Original title: Journal of Control Theory and Applications)

Vol. 13, No. 4, November 2015

<http://www.springer.com/engineering/control/journal/11768>

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#### 4.5. Contents: International Journal of Applied Mathematics and Computer Science

Contributed by: AMCS, [amcs@uz.zgora.pl](mailto:amcs@uz.zgora.pl)

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2015, Volume 25, Number 4 (December)

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Editors: Mauro Iacono, Joanna Kolodziej

<http://www.worldscientific.com/us/>

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#### 4.6. Contents: Control Engineering Practice

Contributed by: Tobias Glück, [cep@acin.tuwien.ac.at](mailto:cep@acin.tuwien.ac.at)

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#### **4.7. Contents: IMA Journal of Mathematical Control and Information**

Contributed by: Suzanne Eves, [suzie.eves@oup.com](mailto:suzie.eves@oup.com)

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<http://www.oxfordjournals.org/page/6717/1>

- Vadim Utkin, Mechanical energy-based Lyapunov function design for twisting and super-twisting sliding mode control
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#### **4.8. Contents: Proceedings of the Institute of Applied Mathematics**

Contributed by: IAM, [proceedings.IAM@gmail.com](mailto:proceedings.IAM@gmail.com)

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V.4, N.2, 2015

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- M.A.Sadygov, On an optimization problem for the differential inclusions of variable structure
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- Davoud F., Some new semi-normed sequence spaces of non-absolute type and matrix transformations
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#### **4.9. CFP: IEEE Transactions on Human-Machine Systems**

Contributed by: Mara Tanelli, [mara.tanelli@polimi.it](mailto:mara.tanelli@polimi.it)

Special Issue on "Holistic Approaches for Human-Vehicle Systems: Combining Models, Interactions and Control" in the IEEE Transactions on Human-Machine Systems.

Guest Editors:

Mara Tanelli (Politecnico di Milano, Italy), Dongpu Cao (Cranfield University, UK), Rafael Toledo (Universidad Politécnica de Cartagena, Spain) and Laura Stanley (Montana State University-Bozeman, US).

Deadline for papers submission: April 15, 2016.

More information at <http://www.ieeesmc.org/publications/transactions-on-human-machine-systems/special-issues>

For any inquiry on the SI please email Mara Tanelli: [mara.tanelli@polimi.it](mailto:mara.tanelli@polimi.it).

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#### **4.10. CFP: Asian Journal of Control**

Contributed by: Lichen Fu, [lichen@ntu.edu.tw](mailto:lichen@ntu.edu.tw)

Call for papers

Special Issue on "Recent Emerging Technologies in Atomic Force Microscopy"

<http://www.ajc.org.tw>

Nano-technology is an important research area in the 21st century. There are many relevant applications in various industries, such as for scientific measurement and for high tech. business areas. Atomic Force Microscopy (AFM) opens a new window to the nano-world. It features a high resolution for imaging and manipulating samples on a nanoscale in vacuum, gases, or liquid operational environments, and has now become a widely used tool in the sectors of, for example, biological sciences, industrial inspection, and medical testing, etc. As a result, AFM is becoming more and more important as one of the key approaches in next generation nano-technology.

This special issue invites original articles that address both theoretical and application-oriented papers, including innovative mechanism design, control technological improvements, new scanning methods, and any related technologies in AFM. Topics of potential interest include, but are not limited to:

- AFM mechanism design
- AFM control methods
- New scanning methods in AFM
- AFM actuators or sensors
- Modeling and simulation of AFM systems
- Applications of AFM systems

Guest Editors:

Prof. Ian Petersen

School of Engineering and Information Technology

UNSW Canberra, Australian Defence Force Academy, Australia

Email: [i.r.petersen@gmail.com](mailto:i.r.petersen@gmail.com)

Prof. Reza Moheimani

School of Electrical Engineering and Computer Science

The University of Newcastle, Australia

Email: [Reza.Moheimani@newcastle.edu.au](mailto:Reza.Moheimani@newcastle.edu.au)

Important Dates:

February 15, 2016 Deadline for submissions

May 31, 2016 Completion of First Review

September 30, 2016 Completion of Final Review

October 31, 2016 Receipt of Final Manuscript

March 1, 2017 Publication (Tentatively Vol.19, No. 2)

How to submit:

Potential authors are encouraged to upload the electronic file of their manuscript (in PDF format) through the journal's online submission website: <http://mc.manuscriptcentral.com/asjc>. If you encounter any submission problem, feel free to contact Prof. Li-Chen Fu.

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

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## 5. Conferences

### 5.1. 2nd International Workshop on Symbolic and Numerical Methods for Reachability Analysis

Contributed by: Sergiy Bogomolov, [sergiy.bogomolov@ist.ac.at](mailto:sergiy.bogomolov@ist.ac.at)

2nd International Workshop on Symbolic and Numerical Methods for Reachability Analysis

April 11th, 2016, Vienna, Austria

(Affiliated with CPSWeek 2016)

<https://snr2016.pages.ist.ac.at/>

Important Dates:

Submissions deadline: January 20, 2016

Notification: March 09, 2016

Final version: March 16, 2016

Workshop date: April 11, 2016

Scope:

Hybrid systems are complex dynamical systems that combine discrete and continuous components. Reachability questions, regarding whether a system can run into a certain subset of its state space, stand at the core of verification and synthesis problems for hybrid systems.

There are several successful methods for hybrid systems reachability analysis. Some methods explicitly construct flow-pipes that overapproximate the set of reachable states over time, where efficient computation of such overapproximations requires symbolic representations such as support functions. Other methods based on satisfiability checking technologies, symbolically encode reachability properties as logical formulas, while solving such formulas requires numerically-driven decision procedures. Last but not least, also automated deduction and the usage of theorem provers led to efficient analysis approaches. The goal of this workshop is to bring together researchers working with different reachability analysis techniques and to seek for synergies between symbolic and numerical approaches.

The SNR workshop solicits papers broadly in the area of verification and synthesis of continuous and hybrid systems. The scope of the workshop includes, but is not restricted to, the following topics:

- Reachability analysis approaches for hybrid systems
- Flow-pipe construction; symbolic state set representations
- Trajectory generation from symbolic paths; counterexample computation
- Abstraction techniques for hybrid systems
- Reliable integration
- Decision procedures for real arithmetic
- Automated deduction
- Logics to reason about hybrid systems
- Reachability analysis for planning and synthesis
- Domain-specific approaches in biology, robotics, etc.
- Stochastic/probabilistic hybrid systems
- Tools, benchmarks, and case studies

Submission Information:

The workshop solicits long papers (maximal 10 pages) and short papers (maximal 6 pages). Submissions must present original unpublished work which is not submitted elsewhere. They should be written in English and formatted according to the IEEE guidelines for conference proceedings ([http://www.ieee.org/conferences\\_events/conferences/publishing/templates.html](http://www.ieee.org/conferences_events/conferences/publishing/templates.html)). Papers can be submitted using the EasyChair system: <http://easychair.org/conferences/?conf=snr2016>

Workshop Co-Chairs:

Erika Abraham (RWTH Aachen University, Germany)

Sergiy Bogomolov (Institute of Science and Technology Austria, Austria)

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## **5.2. 3rd International Workshop on Applied Verification for Continuous and Hybrid Systems (ARCH 2016)**

Contributed by: Sergiy Bogomolov, [sergiy.bogomolov@ist.ac.at](mailto:sergiy.bogomolov@ist.ac.at)

3rd International Workshop on Applied Verification for Continuous and Hybrid Systems (ARCH 2016)

Cyber-Physical Systems Week (CPSWeek) 2016, Vienna, Austria, April 11, 2016

<http://cps-vo.org/group/ARCH>

The workshop on applied verification for continuous and hybrid systems (ARCH) brings together researchers and practitioners, and establishes a curated set of benchmarks submitted by academia and industry. Verification of continuous and hybrid systems is increasing in importance due to new cyber-physical systems that are safety- or operation-critical. This workshop addresses verification techniques for continuous and hybrid systems with a special focus on the transfer from theory to practice. Topics include, but are not limited to

- Proposals for new benchmark problems (not necessarily yet solvable)
- Tool presentations
- Tool executions and evaluations based on ARCH benchmarks
- Experience reports including open issues for industrial success

Researchers are welcome to submit examples, tools and benchmarks that have already appeared in brief form, but whose details were omitted. The online benchmark repository allows researchers to include modeling details, parameters, simulation results, etc. Submissions are encouraged, but not required, to include executable data (models, configuration files, code etc.). It is not required to show that the benchmark has a solution; it suffices that the problem is described in enough detail that somebody else can try to solve it.

Prize:

The paper with the most promising benchmark results receives a prize of 500 Euros sponsored by Robert Bosch GmbH, Germany. The winner is preselected by the program committee and determined by an audience voting.

General Submission Guidelines:

Submissions consist of papers (ideally 3-8 pages) and optional files (e.g. models or traces) submitted through the ARCH'16 EasyChair web site at <https://easychair.org/conferences/?conf=arch16>.

ARCH16 will provide proceedings in the EasyChair EPiC series, indexed by DBLP. Authors should use the EasyChair template at [http://www.easychair.org/publications/for\\_authors](http://www.easychair.org/publications/for_authors). The papers have to be classified below their title as benchmark proposal, tool presentation, benchmark results, or experience report by writing the classification in parentheses in a line below the title. Submissions receive at least 3 anonymous reviews, including one from industry and one from academia.

A zip archive with additional data for the benchmark (description details, model files, sample traces, code, known results, etc.) is to be submitted together with the extended abstract. Benchmarks can be academic or industrial, of small size or extensive case studies.

Important Dates:

Submission deadline February 15, 2016

Notification of acceptance March 7, 2016

Final version March 31, 2016

Workshop April 11, 2016

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### **5.3. 5th 2016 International Conference on Systems and Control**

Contributed by: Driss MEHDI, [driss.mehdi@univ-poitiers.fr](mailto:driss.mehdi@univ-poitiers.fr)

Following the previous editions (2007, 2012, 2013, 2015), the 5th edition of the International Conference on Systems and Control will be held from Wednesday to Friday, May 25-27, 2016, at the Faculty of sciences Semlalia, Cadi Ayyad University, Marrakesh, Morocco. The first edition was initiated by the late Prof. E.-K. Boukas and was held in 2007 in Marrakesh.

Topics of interest include but not limited: Linear and nonlinear systems, Modeling of complex systems, Robust control and H-infinity control, Stochastic control, Estimations and identification, Variable structure Systems, Observation and Observer, Multivariable control, Time-delay systems, Industrial control, Manufacturing systems, Intelligent and AI based control, Mathematical systems theory, Fuzzy and neural systems, Robotics, Control algorithms implementation, Control applications, Control education, Guidance and control theory, Motion control, Optimal control, Real time systems, Mechatronics, Networks optimization, Fault detection, Power systems, Modeling and simulation, Optimization, Process control and instrumentation, Control of telecommunications systems

Paper submission: Papers must be submitted electronically via the Web upload system only

<http://lias.labo.univ-poitiers.fr/icsc/icsc2016/>. The guidelines are given at the ICSC'16 Web site.

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

Important Dates:

Invited Session proposals: January 15th, 2016

Contributed papers, invited session papers: January 25th, 2016

Notification of Acceptance / Rejection: March 20th, 2016

Final, Camera ready papers due: April 18th, 2016

Conference opening: May 25th, 2016

Program Chairs:

Driss MEHDI, France

Abdelouahab aitouche, France

Fouad Mesquine, Morocco

General Chairs:

Abdellatif Miraoui, Morocco.

Ahmed Toumi, Tunisia.

Khaled Chikhi, Algeria.

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#### **5.4. 3rd Conference on Control and Fault-Tolerant Systems**

Contributed by: Vicenç Puig, [vicenc.puig@upc.edu](mailto:vicenc.puig@upc.edu)

SysTol'16: 3rd Conference on Control and Fault-Tolerant Systems

September 7-9, 2016 - Barcelona, Catalonia, Spain (<http://systol16.cs2ac.upc.edu>)

The two previous editions of the International Conference on Control and Fault-Tolerant Systems (Systol'10 and Systol'13) were a success and demonstrated the demand for establishing a permanent scientific forum in the general area of system monitoring, fault diagnosis and fault-tolerant control. The third conference on Control and Fault-Tolerant Systems (Systol'16), through its technical program, will provide a unique opportunity for the academic and industrial community to formulate new challenges, share solutions and discuss future research directions.

Faults/failures in technical systems may have many undesired consequences as damage to technical parts of plants, endangering of human life or pollution of the environment. Equipment failures may also have profound negative impact on production costs and product quality. The development of fault diagnosis methods allowing early detection of faults/failures is crucial in order to protect complex manufacturing machineries, to increase human life safety and to support decision making on emergency actions and repairs. Moreover, in highly automated industrial systems where maintenance or repair cannot be carried-out immediately, it is crucial to employ fault-tolerant control systems capable of ensuring acceptable performance even in the

presence of faults. The conference will bring together academics, engineers and practitioners active in the fields of fault diagnosis, fault tolerant control and their application in process monitoring and maintenance.

Important Dates: Invited session proposals, Workshop/Tutorial proposals due: March 7, 2016

Contributed papers, Invited session papers due: March 14, 2016

Notification of acceptance/rejection: June 1, 2016

Final submission and on-line registration, due: July 4, 2016

Paper Submission:

All papers accepted and presented at SYSTOL'16 will be published in the conference proceedings, and included in the IEEE Xplore on line digital library and EI Compendex database.

All papers must be submitted and uploaded electronically. Go to <https://www.controls.papercept.net> Click on the link "submit a contribution to SysTol'16" and follow the steps.

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### **5.5. 24th Mediterranean Conference on Control and Automation - MED'16**

Contributed by: Didier THEILLIOL, [didier.theilliol@univ-lorraine.fr](mailto:didier.theilliol@univ-lorraine.fr)

24th Mediterranean Conference on Control and Automation - MED'16

Athens, Greece

June 21-24, 2016

<http://www.med2016.org>

The theme of MED'16 centers on control and automation challenges and opportunities in the 21st century and on control of autonomous systems. MED'16 spans four full days. June 21 is devoted to Tutorials and Workshops, followed by the three day technical conference on June 22-24. The conference, through its technical program and keynote presentations, will provide a unique opportunity for the academic, research and industrial community to address new challenges, share solutions and discuss future research directions. A broad range of topics is proposed, following current trends of combining control and systems theory with hardware/software and communication technologies, as well as new developments in robotics and mechatronics, autonomous systems, unmanned systems, cyber physical systems, network controlled systems, with the goal of strengthening cooperation of control and automation scientists with industry.

For topics of interest please visit the conference website.

Paper Submission:

The Program Chairs are soliciting contributed technical papers for presentation at the Conference and publication in the Conference Digital Proceedings. All papers must be submitted and uploaded electronically. Go to <https://controls.papercept.net>. Click on the link "Submit a Contribution to MED'16" and follow the steps. The paper format must follow IEEE paper submission rules, two-column format using 12 point fonts, Times New Roman. The maximum number of pages per submitted paper is 6. Up to two additional pages will be permitted for a charge of 100 euro per additional page. Illustrations and references are included in the page count.

Invited and Special Sessions:

Proposals for invited and special sessions by topic of interest must be submitted and uploaded electronically. A Summary Statement describing the motivation and relevance of the proposed session, invited paper titles and author names must be uploaded electronically by February 1, 2016. In addition, authors must submit full versions of invited papers electronically, through <https://controls.papercept.net>. Each such paper must be marked as 'Invited Session Paper'.

Workshops - Tutorials:

Proposals for workshops - tutorials should contain the title of the session, the list of speakers, and extended summaries (2000 words) of their presentations. Proposals must be sent by e-mail to the Tutorial and Workshop Chair by February 1, 2016.

Paper Review Process:

All submitted papers will undergo a peer review process coordinated by the Program Chairs, Advisory Committee Members, IPC members and qualified reviewers.

Authors are encouraged to accompany their presentations with multimedia material (i.e., videos), which will be included in the Conference Digital Proceedings. Conference Proceedings will be acquired by IEEE and they appear in IEEE Xplore.

For information and details about the Conference, contact by e-mail the General or Program Chairs.

Important Dates/Deadlines:

Full Papers / Invited Sessions / Tutorial Proposals: February 1, 2016

Acceptance / Rejection Notification: April 15, 2016

Upload Final, Camera Ready Papers: May 6, 2016

Early Registration: April 15 - May 6, 2016

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## **5.6. 16th International Conference on Control, Automation and Systems (ICCAS 2016)**

Contributed by: ICCAS2016, [conference@icross.org](mailto:conference@icross.org)

2016 16th International Conference on Control, Automation and Systems (ICCAS 2016)

October 16(SUN)-19(WED), 2016

HICO, Gyeongju, Korea

<http://2016.iccas.org>

ICCAS 2016 CFP: [http://icross.org/data/download/ICCAS2016/ICCAS2016\\_CFP.pdf](http://icross.org/data/download/ICCAS2016/ICCAS2016_CFP.pdf)

The aim of the ICCAS is to bring together researchers and engineers worldwide to present their latest works, and disseminate the state-of-the-art technologies related to control, automation, robotics, and systems.

Important Dates

May 6, 2016: Submission of organized session proposals

May 13, 2016: Submission of full papers

July 15, 2016: Notification of paper acceptance

August 12, 2016: Submission of final camera-ready papers

Organizing Chair: Soon-Geul Lee (Kyung Hee Univ., Korea)

Program Chair: Kang-Hyun Jo (Univ. of Ulsan, Korea)

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## **5.7. 10th IFAC Symposium on Nonlinear Control Systems (NOLCOS 2016)**

Contributed by: Wei Kang, [wkang@nps.edu](mailto:wkang@nps.edu)

NOLCOS 2016, 10th IFAC Symposium on Nonlinear Control Systems

Marriott Hotel Monterey, California, USA. August 23-25, 2016

Every three years the International Federation for Automatic Control (IFAC) has organized a Nonlinear Control System Symposium (NOLCOS). They have been held in Capri (I) 1988, Bordeaux (F) 1992, Lake Tahoe (USA) 1995, Enschede (NL) 1998, Saint Petersburg (RUS) 2001, Stuttgart (DE) 2004, Pretoria (ZA)

2007, Bologna (IT) 2010, and Toulouse (FR) 2013. The 10th NOLCOS will be held in beautiful Monterey, CA, USA.

The scope of these symposia are the theory and applications of nonlinear control systems. With advances in science, technology and computing these topics have grown in importance. NOLCOS is acknowledged as the major international gathering of leading experts in the field of nonlinear control from industry and academia.

NOLCOS in Monterey aims at strengthening worldwide contacts between academia and industry to build up new networks and cultivate existing relations. High-level speakers will present the global spectrum of nonlinear control systems, state-of-the-art applications and developing directions. NOLCOS 2016 is also meant as a forum for young scientists from all over the world. They will be given the opportunity to introduce their research ambitions and scientific work to an audience of international experts.

Opening paper submission: September 15, 2015

Deadline for paper submission: January 18, 2016

Acceptance/Rejection: April 15, 2016

Final manuscript submission: May 25, 2016

Early registration Deadline: June 10, 2016

Conference Website:

<https://www.math.ucdavis.edu/static/conferences/nolcos.2016/>

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## **5.8. 13th International Symposium on Neural Networks**

Contributed by: Long Cheng, [long.cheng@ia.ac.cn](mailto:long.cheng@ia.ac.cn)

Cfps: the 13th International Symposium on Neural Networks

<http://isnn.mae.cuhk.edu.hk/>

Sponsors: City University of Hong Kong, Saint-Petersburg State University

Technical co-sponsors: Russian Neural Networks Society, Asia Pacific Neural Network Society, International Neural Network Society, Springer

Following the successes of previous events, thirteenth International Symposium on Neural Networks (ISNN 2016) will be held in Saint Petersburg, Russia. ISNN 2016 aims to provide a high-level international forum for scientists, engineers, and educators to present the state of the art of neural network research and applications in related fields. The symposium will feature plenary speeches given by world renowned scholars, regular sessions with broad coverage, and special sessions focusing on popular topics.

Call for Papers and Special Sessions

Prospective authors are invited to contribute high-quality papers to ISNN 2016. In addition, proposals for special sessions within the technical scopes of the symposium are solicited. Special sessions, to be organized by internationally recognized experts, aim to bring together researchers in special focused topics. Papers submitted for special sessions are to be peer-reviewed with the same criteria used for the contributed papers. Researchers interested in organizing special sessions are invited to submit formal proposals to ISNN 2016. A special session proposal should include the session title, a brief description of the scope and motivation, names, contact information and brief biographical information of the organizers.

Topic Areas

Topics areas include, but not limited to, computational neuroscience, connectionist theory and cognitive science, mathematical modeling of neural systems, neurodynamic analysis, neurodynamic optimization and

adaptive dynamic programming, embedded neural systems, probabilistic and information-theoretic methods, principal and independent component analysis, hybrid intelligent systems, supervised, unsupervised, and reinforcement learning, deep learning, brain imaging and neural information processing, neuroinformatics and bioinformatics, support vector machines and kernel methods, autonomous mental development, data mining, pattern recognition, time series analysis, image and signal processing, robotic and control applications, telecommunications, transportation systems, intrusion detection and fault diagnosis, hardware implementation, real-world applications.

#### Paper Submission

Authors are invited to submit full-length papers (10 pages maximum) by the submission deadline through the online submission system. Potential organizers are also invited to enlist five or more papers with cohesive topics to form special sessions. The submission of a paper implies that the paper is original and has not been submitted under review or is not copyright-protected elsewhere and will be presented by an author if accepted. All submitted papers will be refereed by experts in the field based on the criteria of originality, significance, quality, and clarity. The authors of accepted papers will have an opportunity to revise their papers and take consideration of the referees' comments and suggestions. Papers presented at ISNN 2016 will be published in the EI-indexed proceedings in the Springer LNCS series and selected good papers will be included in special issues of several SCI journals.

#### Important Dates

Special session proposals deadline: January 15, 2016

Paper submission deadline: February 15, 2016

Notification of acceptance: March 15, 2016

Camera-ready copy and author registration: April 15, 2016

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### **5.9. 2nd International Conference on Industrial Engineering, Applications and Manufacturing (ICIEAM-2016)**

Contributed by: Andrey Radionov, [radionov.mail@gmail.com](mailto:radionov.mail@gmail.com)

2016 the 2nd International Conference on Industrial Engineering, Applications and Manufacturing (ICIEAM-2016)

Conference website: <http://icie-rus.org/index-ieam.html>

Call for Papers: [http://icie-rus.org/doc/call\\_for\\_papers.pdf](http://icie-rus.org/doc/call_for_papers.pdf).

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### **5.10. 2016 International Conference on Unmanned Aircraft Systems (ICUAS'16)**

Contributed by: Youmin Zhang, [Youmin.Zhang@concordia.ca](mailto:Youmin.Zhang@concordia.ca)

2nd Call-for-Papers: 2016 International Conference on Unmanned Aircraft Systems (ICUAS'16) (<http://www.uasconferences.com>)

On behalf of the ICUAS'16 Organizing Committee, this is to invite you to submit your contributions to the 2016 International Conference on Unmanned Aircraft Systems, ICUAS'16, <http://www.uasconferences.com>, to be held in Key Bridge Marriott, Arlington, VA, USA during June 7-10, 2016. The conference is co-sponsored by the IEEE CSS and RAS, and several other organizations. June 7 will be a Workshop/Tutorial day, followed by a three-day technical Conference on June 8-10. Details may be found at <http://www.uasconferences.com> and related links. ICUAS'16 is fully sponsored by the ICUAS Association, a nonprofit organization; Information about the organization may be found at [www.icuas.com](http://www.icuas.com).

The theme of ICUAS'16 will focus on the very challenging and timely topic of 'designing high-confidence autonomous unmanned systems'. National and international organizations, agencies, industry, military and civilian authorities are working towards defining roadmaps of UAS expectations, technical requirements and standards that are prerequisite to their full utilization, as well as legal, policy and ethical issues. The next generation of UAS is expected to be used for a wide spectrum of civilian and public domain applications. Challenges to be faced and overcome include, among others, see-and-avoid systems, robust and fault-tolerant flight control systems, payloads, communications, levels of autonomy, manned-unmanned swarms, network-controlled swarms, as well as challenges related to policies, procedures, regulations, safety, risk analysis assessment, airworthiness, certification issues, operational constraints, standardization and frequency management, all of paramount importance, which, coupled with 'smart', 'environmentally friendly' cutting edge technologies will pave the way towards full integration of UAS with manned aviation and into the respective national airspace.

Conference topics include:

Airspace Control Integration See-and-Avoid Systems; Airspace Management Interoperability Security; Airworthiness Levels of Safety; Sensor Fusion; Air Vehicle Operations; Manned/Unmanned Aviation Simulation; Autonomy Micro- and Mini- UAS Smart Sensors; Biologically Inspired UAS Navigation Standardization; Certification Networked Swarms Swarms; Control Architectures Payloads Technology Challenges; Energy Efficient UAS Path Planning Training; Environmental Issues Regulations UAS Applications; Fail-Safe Systems Reliability of UAS UAS Communications; Frequency Management Risk Analysis UAS Testbeds.

Unmanned system collaboration and coordination, formation control, validation and verification and unmanned system design for assured autonomy, are topics of great interest to ICUAS'16.

Important Dates:

February 5, 2016: Full Papers/ Invited Papers/Tutorial Proposals Due

April 15, 2016: Acceptance/Rejection Notification

May 6, 2016: Upload Final, Camera Ready Papers

April 15 - May 6, 2016: Early Registration

Paper Submission:

All papers must be submitted and uploaded electronically. Go to <https://contols.papercept.net>. Click on the link "Submit a Contribution to ICUAS'16" and follow the steps.

General Chairs:

Anibal Ollero, Universidad de Sevilla, [aollero@us.es](mailto:aollero@us.es)

Paul Oh, University of Nevada Las Vegas, [paul.oh@unlv.edu](mailto:paul.oh@unlv.edu)

Kimon Valavanis, University of Denver, [kimon.valavanis@du.edu](mailto:kimon.valavanis@du.edu)

Program Chairs:

Antonios Tsourdos, Cranfield Univ., [a.tsourdos@cranfield.ac.uk](mailto:a.tsourdos@cranfield.ac.uk)

YangQuan Chen, UC Merced, [yangquan.chen@ucmerced.edu](mailto:yangquan.chen@ucmerced.edu)

Ivan Maza, Universidad de Sevilla, [imaza@us.es](mailto:imaza@us.es)

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### **5.11. 12th International Conference on Intelligent Unmanned Systems (ICIUS 2016)**

Contributed by: Youmin Zhang, [Youmin.Zhang@concordia.ca](mailto:Youmin.Zhang@concordia.ca)

Call-for-Papers: The 12th International Conference on Intelligent Unmanned Systems (ICIUS 2016, <http://www.icius2016.org>)

On behalf of the ICIUS'16 Organizing Committee, this is to invite you to submit your contributions to the 2016 International Conference on Intelligent Unmanned Systems (ICIUS 2016), <http://www.icius2016.org>, to be held at the famous historical city: Xi'an, China, during Aug. 23-25, 2016.

The 2016 International Conference on Intelligent Unmanned Systems (ICIUS 2016) will be held in Xi'an, Shaanxi Province, China, from August 23rd to 25th, 2016. The conference offers a unique and interesting platform for scientists, engineers and practitioners throughout the world to present and share their most recent research and innovative ideas in the areas of unmanned systems, robotics, automation, and intelligent systems.

The aim of the ICIUS2016 is to stimulate among researchers active in the areas pertinent to intelligent unmanned systems. The topics of interests include, but are not limited to:

- Unmanned Systems: Micro air vehicle, Underwater Vehicle, Micro-satellite, Unmanned aerial vehicle, Multi-agent systems, Autonomous ground vehicle, Blimp, Swarm intelligence.
- Robotics and Biomimetics: Artificial muscle actuators, Smart sensors, Design and applications of MEMS/NEMS system, Intelligent robot system, Evolutionary algorithm, Control of biological systems, Biological learning control systems, Neural networks, Bioinformatics.
- Control and Computation: Distributed and embedded systems, Embedded intelligent control, Complex systems, Pervasive computing, Soft computing, Discrete event systems, Hybrid systems, Networked control systems, Delay systems, Identification and estimation, Nonlinear systems, Precision motion control, Control applications, Control engineering education, Computer Architecture & VLSI, Signal, Image and Multimedia Processing
- Intelligent System: Ubiquitous computing, Algorithms, Distributed intelligence, Distributed/decentralized intelligent control, Fuzzy systems, AI and expert systems, Virtual Reality, Wearable computers, Information Systems and Retrieval, Software engineering, Knowledge Data Engineering, Data communications and compression.

All accepted papers would be further reviewed for post conference journal publications in International Journal of Intelligent Unmanned Systems (IJIUS), Journal of Unmanned System Technology (JUST), Journal of Instrumentation, Automation and Systems (JIAS), and International Journal of Mechatronics and Robotics (IJMR). A special issue with selected papers will also be published at journal Unmanned Systems (US), Journal of Intelligent & Robotic Systems (JINT), and International Journal of Intelligent Computing and Cybernetics (IJICC). Any contributed or invited paper can be nominated for the ICIUS 2016 Best Conference Paper Award and the ICIUS 2016 Best Student Paper Award. The final evaluation by the awards committee will take into account the presentations at ICIUS 2016.

Contributed Papers:

Prospective authors are invited to submit the full version of their manuscripts in MS Word or LaTeX format. A maximum of 6 pages in the standard ICIUS format is allowed for each paper. Detailed instructions for paper submission are available on the conference website.

Invited Sessions:

The conference will feature invited sessions on new topics and innovative applications. These sessions will consist of 5-6 articles and undergo a regular review process. Prospective organizers should include a brief statement of purpose for the session as well as the abstracts of the papers.

Important dates:

Deadline for Submission: April 1, 2016

Acceptance Notification: May 1, 2016

Deadline for Final Papers: June 1, 2016

Deadline for Early Bird Registration: July 31, 2016

Conference: August 23-25, 2016

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### **5.12. 4th IFAC International Conference on Intelligent Control and Automation Sciences**

Contributed by: Kevin Guelton, [kevin.guelton@univ-reims.fr](mailto:kevin.guelton@univ-reims.fr)

IFAC ICONS 2016,

4th IFAC International Conference on Intelligent Control and Automation Sciences, Reims, France, 1-3 June 2016.

ICONS 2016 website: <http://icons2016.univ-reims.fr>

Download the pdf CFP: [http://icons2016.univ-reims.fr/CFP\\_IFAC\\_ICONS2016.pdf](http://icons2016.univ-reims.fr/CFP_IFAC_ICONS2016.pdf)

Extended deadline for paper submission: January 15, 2016.

Scope:

The aim of ICONS is to serve as a platform for scientists, researchers, and practitioners to discuss their forefront research results and findings, to shape their future directions and development, and to exchange their knowledge and perspectives in the field of intelligent control, automation science, engineering, and integration into the industry and society. It constitutes the primary forum for cross-industry, multidisciplinary research, and provides an opportunity to have a unique and rich cultural experience with excellent technical and social programs.

ICONS 2016 welcomes contributions related to Intelligent Control and Automation Sciences, covering all aspects from theory to applications. Contributors are invited to submit papers that, if accepted, will be scheduled for oral or poster presentation. All accepted papers will appear in the proceedings of the meeting, will be hosted on-line on ScienceDirect (<http://www.sciencedirect.com>) through the IFACPapersOnLine series and will be indexed in SCOPUS and EI/Compendex.

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### **5.13. Nonlinear Partial Differential Equations and Applications**

Contributed by: Prieur, [christophe.prieur@gipsa-lab.fr](mailto:christophe.prieur@gipsa-lab.fr)

Conference: "Nonlinear Partial Differential Equations and Applications".

Location: Paris, France

Dates: 2016, June 20–24

Registration is free, but mandatory using the website conference:

<http://www.ljll.math.upmc.fr/coron60/>

This conference is organized in the honor of Jean-Michel Coron for his 60th birthday.

Plenary speakers:

Andrei Agrachev, Brigitte d'Andre´a-Novel, Abbas Bahri, Georges Bastin, Henri Berestycki, Alberto Bressan, Hai´m Brezis, Roger Brockett, Maria Esteban, Enrique Fern´andez-Cara, Roland Glowinski, Helmut Hofer, Miroslav Krstic, Gilles Lebeau, Pierre-Louis Lions, Laurent Praly, Jean-Pierre Puel, Tristan Rivie´re, Pierre Rouchon, Sylvia Serfaty, Eduardo Sontag, Michael Struwe, He´ctor Sussmann, Xu Zhang, Enrique Zuazua.

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## 6. Positions

### 6.1. PhD: Chalmers University of Technology, Sweden

Contributed by: Tomas McKelvey, [tomas.mckelvey@chalmers.se](mailto:tomas.mckelvey@chalmers.se)

Topic: Emission aware energy management of hybrid electric vehicles

The PhD position is located at the Department of Signals and Systems at Chalmers University of Technology, Sweden.

Starting date: 1 March 2016 (or earlier).

Information about the project:

In hybrid vehicles a combustion engine is complemented with an electric generator, an electrical machine and a battery. For electric hybrid vehicles, with a parallel configuration, it is common to place an energy management system on top of the control hierarchy, which primarily decides on a torque split between the electric machine and the combustion engine. To reduce the exhaust emissions from the combustion engine after-treatment systems are employed. From a control perspective the challenges are to make the best use of all subsystems for all situations the vehicle is involved in. In today's energy management systems, the dynamic effects of the combustion system and after-treatment systems are mostly neglected. This can lead to inefficient use of the overall propulsion system of the vehicle in terms of both emissions as well as fuel consumption.

This project aims to:

- 1) Quantify the potential of an energy management controller that is aware of the full state of the combustion and after-treatment system.
- 2) Design an energy management control architecture that can utilize state-information from the combustion system (including the after-treatment system) and provide near optimal control of the involved subsystems for a range of vehicle drive cycles.
- 3) Evaluate the developed control architecture by vehicle testing in a hybrid test rig for a limited set of drive cycles.

Who should apply:

By the starting date the applicant should have a Master of Science degree or equivalent in Electrical Engineering, Engineering Physics, Mechanical Engineering, Applied Math or in a related discipline. A successful applicant should have a strong background in control theory and optimization and be familiar with system modelling tools. Knowledge of combustion engine control and after-treatment systems are welcome. Programming skills in Matlab are required and in other high level languages are welcome. A genuine interest and curiosity in the subject, excellent oral and written English communication skills are needed.

More information:

<http://www.chalmers.se/en/about-chalmers/vacancies/?rmpage=job&rmjob=3622>

Contact: Professor Tomas McKelvey, [tomas.mckelvey@chalmers.se](mailto:tomas.mckelvey@chalmers.se)

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### 6.2. PhD: Autoliv Research in collaboration with Chalmers University, Sweden

Contributed by: Jonas Sjöberg, [jonas.sjoberg@chalmers.se](mailto:jonas.sjoberg@chalmers.se)

Ph.D position at Autoliv Research in collaboration with Chalmers University

The current research project, titled "Driving automation in complex environments", will be lead by professor Jonas Sjöberg, with co-supervision from associate professor Paolo Falcone, at Signals and Systems, Chalmers.

Researchers at Autoliv will also be directly involved in the project, but the intention is to let Chalmers be the leading part and to build corporate knowledge through this research collaboration. This network of outstanding PhD students and senior researchers will provide unique opportunities for both the student's personal development and the research project. It is expected that the PhD student will play an important role in the development of automated driving systems during and after the finishing of this research project.

Profile: Applicants should have successfully finished an M.Sc. within, e.g., electrical engineering, computer science, engineering physics or mechatronics and it is meriting with courses and experience from robotics, computer programming, computer vision, automatic control, and vehicle dynamics.

See more information at <http://www.nyteknik.se/jobb/article3951392.ece>

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### **6.3. PhD: University of Texas at San Antonio (UTSA), USA**

Contributed by: Yongcan Cao, [yongcan.cao@utsa.edu](mailto:yongcan.cao@utsa.edu)

Fully funded PhD positions are available starting Fall 2016 in distributed data-driven control for heterogeneous vehicles with focus on cooperative control, distributed optimization, sensor fusion, machine learning, and motion planning. Research will be conducted in the Department of Electrical and Computer Engineering, University of Texas at San Antonio (UTSA), under the supervision of Dr. Yongcan Cao.

Position description:

Required

- A Bachelor's degree in electrical engineering, computer science, mechanical engineering, aerospace engineering, or a related field;
- Strong background in systems and control theory and signal processing;
- Excellent writing and communication skills;
- Proficiency in Matlab and C++.

Preferred

- Master's degree;
- Experience in Robot Operating System, machine learning, and computer vision;
- Hands-on experience in UAVs or ground robots;
- Demonstrated research experience (i.e., a good publication record).

As a minority institution, we welcome applications from underrepresented students such as African American, Hispanic, and Native American students.

How to apply:

Send the following documents in a single PDF file

- One page cover letter describing your interest, goal, and how your background fits well;
- CV or resume;
- Transcripts;

to [yongcan.cao@utsa.edu](mailto:yongcan.cao@utsa.edu)

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### **6.4. PhD: The University of Sheffield, U.K.**

Contributed by: Dario Bauso, [d.bauso@sheffield.ac.uk](mailto:d.bauso@sheffield.ac.uk)

PhD Studentship

The Department of Automatic Control and Systems Engineering (ACSE), The University of Sheffield.

ACSE is one of the largest departments devoted to the subject in Europe, with 29 academic staff, 43 research staff, 29 professional and support staff, and nearly 400 taught and research students. We are a world leading research department; our research was ranked 1st for quality of research publications and 3rd for overall research quality in the UK in the 2014 Research Excellence Framework (REF) assessment.

ACSE offers opportunities for a PhD in one of the two topics below.

Topic 1: Opinion Dynamics, and Diffusion of Innovation in Social Networks.

You will deal with convergence analysis of consensus network dynamics under the influence of external manipulators, malicious agents, stubborn agents, or zealots. You will develop multi-scale multi-level dynamic models combining complex networks (structured environment), game theory (strategic thinking), and control theory (feedback and learning) both at a behavioral and information level.

Topic 2: Collective Decision Making for Energy Efficiency and Intelligent Mobility.

You will deal with the analysis and design of market mechanisms, incentive schemes, business models to induce socially optimal behaviors of end-use customers. You will develop micro-macro models capturing the interactions between individuals, groups and the environment. You will use mean-field game theoretic models to describe how individuals respond to a population behavior and how the population behavior evolves if individuals are rational decision-makers. You will build coalitional game models to study incentives for people to join demand-side-management programs.

Prospective Applicants can also apply for University's PhD Scholarships or Departmental PhD Scholarships specifying Dr. Dario Bauso as supervisor. Full details of the Scholarships program can be found at:

<http://www.sheffield.ac.uk/postgraduate/research/scholarships>

<http://www.sheffield.ac.uk/postgraduate/research/scholarships>

Prospective Applicants should have a good first degree and/or Masters degree in mathematics or engineering or related subject. In addition, they should also have a background in systems and control theory, optimization, operational research, or game theory as well as a familiarity with computing software (MATLAB or similar). An interest in interdisciplinary studies is also desirable.

Interested candidates are encouraged to contact Dario Bauso ([d.bauso@sheffield.ac.uk](mailto:d.bauso@sheffield.ac.uk)) for more information on the proposal and scholarship submission procedure.

The deadline for PhD Scholarship applications is 5pm, Tuesday 2 February 2016.

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## **6.5. PhD: Monash University, Australia**

Contributed by: Mohsen Ramezani, [mohsen.ramezani@monash.edu](mailto:mohsen.ramezani@monash.edu)

PhD student in Transportation

Monash University, Melbourne, Australia

We are currently seeking highly motivated and talented graduate students to pursue the Ph.D. degree. Candidates should hold a B.Sc. or M.Sc. degree in Civil Engineering, Electrical Engineering, Computer Science, Operations Research, Applied Mathematics and Physics or other related field and be interested in transport systems research. Preferred experiences include: traffic modelling, stochastic analysis, optimization, machine learning and programming. The funding waives the tuition fee and includes a competitive stipend. The research topic is in the area of traffic modelling, control and estimation. Potential applicants are encouraged to contact [mohsen.ramezani@monash.edu](mailto:mohsen.ramezani@monash.edu) (submitting their CV and transcripts.)

Scholarship: \$25,849 p.a. (tax free, indexed annually) over 3 years (plus a 6 month extension option).

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

but ideally would be within March 2016.

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## **6.6. PhD: Marie Skłodowska-Curie training network INCITE, France**

Contributed by: Fernando D. Bianchi, [fbianchi@irec.cat](mailto:fbianchi@irec.cat)

PhD: Marie Skłodowska-Curie training network INCITE

14 PhD positions will be available in the Horizon 2020 Marie Skłodowska-Curie Innovative Training Network (ITN) INCITE (Innovative controls for renewable source integration into smart energy systems - Grant No. 675318)

INCITE is a Marie Skłodowska-Curie European Training Network (ITN-ETN) funded by the HORIZON 2020 Programme, which brings together experts on control and power systems, from academia and industry with the aim of training 14 young researchers capable of providing innovative control solutions for the future electrical networks. INCITE is a multidisciplinary network formed by:

- IREC (Catalonia Institute for Energy Research), Barcelona, Spain (Coordinator)
- UPC (Universitat Politècnica de Catalunya), Barcelona, Spain
- TUDelft (Delft University of Technology), Delft, Netherlands
- VITO (Flemish Institute for Technological Research), Mol, Belgium
- UniBo (Università di Bologna), Bologna, Italy
- UGA (Université Grenoble Alpes), Grenoble, France
- GE Global Research, Munich, Germany
- EFACEC ENERGIA, Porto, Portugal
- 3E, Brussels, Belgium (Partner organisation)

The network supports the recruitment of 14 Early Stage Researchers (ESRs) during 36 months. Each ESR will be working on an Individual Research Project (IRP) in the host institution and will have secondments related to her/his research in other academic and industrial partners of the network. Strong interactions among the different ESRs and institutions is expected. All ESRs will be enrolled in a PhD programme and the development of the IRPs will be part of their thesis. The network will support training activities (including scientific, personal and transferable skills) and periodical events. This is a unique opportunity for highly motivated young researchers of developing their career in a multi-sectorial and multi-national environment and obtain a wide knowledge on the control of electrical networks.

In Marie Skłodowska-Curie Actions, ESRs are paid a competitive salary (adjusted for the host country), including a Mobility Allowance and a Family Allowance (subject to family situation). To be eligible as an ESR, the researcher should be within four years of the diploma granting her/him access to doctorate studies at the time of recruitment and must not have spent more than 12 months in the host country within the 3 years prior to starting. More information about eligibility criteria and Marie Skłodowska-Curie European Training Networks can be found in: [http://ec.europa.eu/research/mariecurieactions/about-msca/actions/itn/index\\_en.htm](http://ec.europa.eu/research/mariecurieactions/about-msca/actions/itn/index_en.htm)

PhD positions:

- ESR1.1: Partitioning and optimisation-based non-centralised control of dynamical energy grids (UPC)
- ESR1.2: Decentralised control for RES by fast market-based MAS (TUDelft)
- ESR1.3: Hybrid agent-based optimisation model for self-scheduling generators in a market environment (TUDelft)
- ESR1.4: Development of non-intrusive and intrusive energy-management algorithms (VITO)
- ESR2.1: Energy flexible and smart grid/energy ready buildings (IREC)

- ESR2.2: Control and management of storage elements in micro-grids (UPC)
- ESR2.3: Robust management and control of smart multi-carrier energy systems (TUDelft)
- ESR3.1: Control strategies for hybrid AC-DC grids (IREC)
- ESR3.2: A new modelling approach for stabilisation of smart grids (UGA)
- ESR3.3: Distributed control strategies for wind farms for grid support (IREC)
- ESR4.1: Integrated simulation for MAS design and testing (UniBo)
- ESR4.2: Fault detection and isolation for renewable sources (UGA)
- ESR4.3: Advanced monitoring and control of electrical distribution grid (GE)
- ESR4.4: Advanced functionalities for the future smart secondary substation (Efacec)

The expected starting date for all positions is June 2016, except for ESR4.1 that is September 2016.

The full description of the job positions and application procedure will be announced between January and February 2016 at [www.incite-itn.eu](http://www.incite-itn.eu).

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## 6.7. PhD: Maynooth University, Ireland

Contributed by: John Ringwood, [john.ringwood@eeng.nuim.ie](mailto:john.ringwood@eeng.nuim.ie)

PhD Position (4 year studentship@ euro 18k p.a. + fees)

Position reference: COERPhDMoment

The Centre for Ocean Energy Research (COER) at Maynooth University, Ireland has an opportunity for well-qualified applicants interested in undertaking a PhD in nonlinear control design for wave energy converters, starting early 2016.

A variety of control algorithms have been developed for wave energy devices (WEDs), which provide optimal load force signals for a WED, given current and future knowledge of the excitation force on the device. However, many WED control algorithms are based on linear models, which rely on a linearising assumption, which is rarely satisfied in the case of WEDs, where the objective is to exaggerate the device motion.

This project, in close partnership with Prof. Alessandro Astolfi's control group in Imperial College London, will examine the possibility of nonlinear control design using moment assignment for WED energy conversion maximisation.

The successful candidate will join a major Science Foundation Ireland project entitled "Development of the next generation of controllers for wave energy devices", which has a total team count of 7 dedicated researchers, covering hydrodynamic modelling, system identification and control design, in addition to the topic of this PhD project. That project exists within a wider COER group of 16 researchers and has a range of international academic and industrial collaborators, including Prof. Alain Clement (EC Nantes), Prof. Frederic Dias (UCD), Prof. Alessandro Astolfi (Imperial College), Prof. Marta Molinas (NTNU), Ocean Power Technology (US), Aquamarine Power (UK) and the Wave Energy Corporation of America (US).

Candidates should be well-qualified academically to bachelors (preferably H1) or masters level. The project will require a mix of skills, including mathematical, modelling, programming and simulation skills, as well as the development of state estimation and forecasting algorithms. Applicants with backgrounds in mechanical, mechatronics and electrical/electronic engineering, applied mathematics or control systems are especially suitable, though other areas such as fluid mechanics, hydrodynamics, etc may also be considered. Candidates must have excellent written and oral communication skills and programming ability.

Further information on COER is available at: <http://www.eeng.nuim.ie/coer/> or contact Prof. John Ringwood ([john.ringwood@eeng.nuim.ie](mailto:john.ringwood@eeng.nuim.ie)) for further information.

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## 6.8. PhD: Maynooth University, Ireland

Contributed by: John Ringwood, [john.ringwood@eeng.nuim.ie](mailto:john.ringwood@eeng.nuim.ie)

PhD Position (4 year studentship@ euro 18k p.a. + fees)

Position reference: COERPhDForecast

The Centre for Ocean Energy Research (COER) at Maynooth University, Ireland has an opportunity for well-qualified applicants interested in a PhD in estimation and forecasting for wave energy applications, starting early 2016.

A variety of control algorithms have been developed for wave energy devices (WEDs), which provide optimal load force signals for a WED, given current and future knowledge of the excitation force on the device. However, the wave excitation force cannot be measured directly and future knowledge of the excitation force is required for the majority of WED controllers, which are non-causal.

This project will directly address the problem of excitation force estimation and prediction, by developing estimation and prediction algorithms suitable for both linear and nonlinear WED models, and linear and nonlinear wave descriptions. As a guide, previous linear wave forecasting algorithms are reported in [1].

[1] Fusco, F. and Ringwood, J.V.. Short-Term Wave Forecasting for Real-Time Control of Wave Energy Converters. IEEE Transaction on Sustainable Energy, vol 1, no. 2, pp. 99-106, 2010 [download]

The successful candidate will join a major Science Foundation Ireland project entitled “Development of the next generation of controllers for wave energy devices”, which has a total team count of 7 dedicated researchers, covering hydrodynamic modelling, system identification and control design, in addition to the topic of this PhD project. That project exists within a wider COER group of 16 researchers and has a range of international academic and industrial collaborators, including Prof. Alain Clement (EC Nantes), Prof. Frederic Dias (UCD), Prof. Alessandro Alstolfi (Imperial College), Prof. Marta Molinas (NTNU), Ocean Power Technology (US), Aquamarine Power (UK) and the Wave Energy Corporation of America (US).

Candidates should be well-qualified academically to bachelors (preferably H1) or masters level. The project will require a mix of skills, including mathematical, modelling, programming and simulation skills, as well as the development of state estimation and forecasting algorithms. Applicants with backgrounds in mechanical, mechatronics and electrical/electronic engineering, applied mathematics or control systems are especially suitable, though other areas such as fluid mechanics, hydrodynamics, etc may also be considered. Candidates must have excellent written and oral communication skills and programming ability.

Further information on COER is available at: <http://www.eeng.nuim.ie/coer/> or contact Prof. John Ringwood ([john.ringwood@eeng.nuim.ie](mailto:john.ringwood@eeng.nuim.ie)) for further information.

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## 6.9. PhD: University of Pittsburgh, USA

Contributed by: Nitin Sharma, [nis62@pitt.edu](mailto:nis62@pitt.edu)

An immediate PhD position is available in the area of control of hybrid walking exoskeletons at the University of Pittsburgh. The project’s goal is to develop a hybrid technology for restoration of walking in persons with mobility disorders and is in collaboration with a clinical faculty at the University of Pittsburgh Medical Center. University of Pittsburgh and its associated medical center are one of the top research centers in the field of biomedical and rehabilitation technology in the USA.

The candidate will work on developing automatic control algorithms that coordinate functional electrical stimulation and a robotic system. The candidates with background in nonlinear control theory and adaptive control are encouraged to apply. Proficiency in MATLAB, modeling of human limb movements, and dynamic

optimization is also preferred. The prospective candidates are encouraged to contact: Dr. Nitin Sharma (nis62@pitt.edu).

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### **6.10. PhD: KTH Royal Institute of Technology, Sweden**

Contributed by: Cristian R. Rojas, [cristian.rojas@ee.kth.se](mailto:cristian.rojas@ee.kth.se)

PhD student in Automatic Control

The Department of Automatic Control at KTH Royal Institute of Technology, Stockholm, Sweden, develops research on the areas of modelling, identification and control of industrial systems as well as applications in communication, autonomous systems, and system biology. The department staff consists of ca. 60 faculty members, researchers and PhD students who contribute to a high professional standard of intensive work and quality results, as well as to a friendly and open environment. The staff has a multicultural background and the working language is English. The department is internationally well established, has many research collaborations with excellent partners worldwide, and is involved in several European and national projects.

Project description

Data-based modelling, or system identification, is an essential but rather expensive component in the process of designing, commissioning and re-tuning of controllers in industrial practice. However, it is well known that an important theory/practice gap exists. This project aims to boost the foundations of system identification, making them suitable for the modelling of complex, real-world industrial processes. A specific focus in this project will be on posing the entire control commissioning process in a decision theoretic framework, and to incorporate several recent developments from statistics, mathematical finance and machine learning to properly account for the risks involved due to uncertainty in the multiple steps of this process.

Qualifications

The successful applicant is expected to hold or to be about to receive an MSc degree in Electrical Engineering, Engineering Physics, Computer Science, Mathematics or equivalent. The successful applicant should have an outstanding academic track record, and well developed analytical and problem solving skills. We are looking for a strongly motivated person, who is able to work independently. Good command of English orally and in writing is required to publish and present results at international conferences and in international journals.

1. For longer documents (e.g. theses), please provide a summary (abstract) and a web link to the full text.
2. Letters of recommendation or contact information for two reference persons

The application link is here:

<https://kth.mynetworkglobal.com/en/what:login/jobID:84717/type:job/where:4/apply:1/>

For more information, please contact Associate Professor Cristian Rojas ([cristian.rojas@ee.kth.se](mailto:cristian.rojas@ee.kth.se)).

The deadline for the application is February 15, 2016.

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### **6.11. PhD: Università del Salento, Italy**

Contributed by: Giuseppe Notarstefano, [giuseppe.notarstefano@unisalento.it](mailto:giuseppe.notarstefano@unisalento.it)

Postgraduate (toward PhD) research positions are available within the ERC Starting Grant project OPT4SMART. Research will be conducted at the Università del Salento (Lecce, Italy), under the supervision of Prof. Giuseppe Notarstefano.

About the position:

We are looking for motivated, talented graduate students from all over the world, who wish to:

- undertake PhD research at the cutting edge of optimization and control in cyber-physical networks;
- contribute to the startup of an excellent, international new research group;
- study in one of the most beautiful Italian cities with a great quality of life.

The candidate will be enrolled for 1 year as a postgraduate with the possibility to be enrolled for a 3 years PhD position according to the application procedure at Università del Salento. We offer a competitive scholarship.

About OPT4SMART (Distributed optimization methods for smart cyber-physical networks):

OPT4SMART is a 5 years research project funded under the EU Horizon 2020 excellence program “ERC Starting Grant”, <http://erc.europa.eu>, supporting investigator-driven frontier research on the basis of scientific excellence. OPT4SMART will investigate a novel distributed, large-scale optimization framework and its application to big-data estimation, learning, decision and control problems in cyber-physical networks.

Who should apply:

The desired candidate holds a Master degree (or equivalent, giving access to doctoral studies) in Engineering (preferably ECE, ME, AE), (Applied) Mathematics or related fields, and has

- an excellent academic record showing excellent analytical skills;
- a strong mathematical background including optimization and preferably systems and control theory;
- strong interest in optimization and at least one of: control theory, estimation, machine learning;
- proficiency in oral and written English.

The above skills and background should clearly appear from the candidate CV, from the bachelor and master records and from the master thesis.

Contact: For information about the positions and the official calls you can send an email to [giuseppe.notarstefano@unisalento.it](mailto:giuseppe.notarstefano@unisalento.it) with subject “OPT4SMART PhD-student last-name”.

See also [http://cor.unisalento.it/notarstefano/opt4smart/PhD-OPT4SMART\\_flyer.pdf](http://cor.unisalento.it/notarstefano/opt4smart/PhD-OPT4SMART_flyer.pdf)

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## **6.12. Post-Doc: University of California in Santa Cruz, USA**

Contributed by: Ricardo Sanfelice, [ricardo@ucsc.edu](mailto:ricardo@ucsc.edu)

A postdoctoral scholar position is available at the Hybrid Systems Laboratory at the Department of Computer Engineering, University of California in Santa Cruz, California.

The research focus of this position is the generation of design tools for estimation, control, and synchronization algorithms. The emphasis of the research is on distributed systems with hybrid dynamics, in particular, due to the use of local algorithms that self-reconfigure to cope with limited computational capabilities or with sporadic availability of information. Expertise in feedback control (nonlinear, MPC, hybrid), hybrid systems, and multiagent/networked systems will be key. The results will have applications to a wide range of hybrid and cyber-physical systems, such as distributed power systems and unmanned vehicle systems.

Candidates with a Ph.D. in engineering or applied math, with a strong theoretical background and required expertise are encouraged to apply by submitting via email to Prof. Ricardo Sanfelice ([ricardo@ucsc.edu](mailto:ricardo@ucsc.edu)) the following: 1) a cover letter, 2) a detailed curriculum vitae, including educational background and a list of publications, 3) two publications representing the candidate’s research work, and 4) contact information for at least two academic references.

Review of applications will start January 4, 2016. The suggested start date for the position is July 1, 2016 and for a duration of one year, renewable depending on performance.

More information about the research at the Hybrid Systems Laboratory at the University of California in Santa Cruz is available at <https://hybrid.soe.ucsc.edu>

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### **6.13. Post-Doc: University of Bristol, U.K.**

Contributed by: Andres Marcos, [andres.marcos@bristol.ac.uk](mailto:andres.marcos@bristol.ac.uk)

A Post-Doctoral position is available at the Aerospace Engineering Department of the University of Bristol (U.K.) to work on development & flight test of aircraft fault diagnosis and tolerant control schemes.

The position is part of a new European Horizon 2020 project entitled: “Validation of Integrated Safety-Enhanced Intelligent Flight Control (VISION)” that will start in January 2016 for three years. The consortium is composed by academic and industrial teams, 6 from Europe and 5 from Japan. The objective of VISION is to develop and validate smart technologies for aircraft Guidance, Navigation and Control (GNC) such as: [1] vision-based systems, and [2] advanced detection and resilient methods. VISION aims at capitalizing on the know-how and experience acquired by Japan and Europe to make a significant improvement on the aircraft designs’ Technology Readiness Level.

The focus of the work at Bristol is on the development, design and flight test of a system-wide aircraft Fault Monitoring and Tolerant Control (FMTC) approach based on standard sensing units and potentially, also vision-based monitoring systems. The Post-Doctoral tasks will be to first develop the theoretical framework of a model-based H-infinity/LPV FMTC-GNC system, and then to apply and validate it in JAXA’s MuPAL-alpha emulator and testing aircraft. The type of abnormalities considered include sensor and aileron actuator faults but also saturation-like phenomena from internal or external conditions. The project will be carried out at the University of Bristol but will entail month-long yearly visits to JAXA in Tokyo during the application and validation phases.

The work will be under the supervision of Dr. Marcos and it requires a PhD in automatic control, signal processing or other relevant field of work, as well as advanced knowledge of robust control techniques H-infinity/LPV. Flight testing experience is also preferred. The position is offered initially on a fixed term contract for two year with a starting salary per annum of £31,342 - £35,256 depending on qualifications.

\*\*The position is open to all nationalities\*\*.

The starting date is March 2016 or as soon thereafter. Interviews are expected to be carried out from late January 2016 and until position is filled.

Enquiries can be made to Dr. Andrés Marcos: [andres.marcos@bristol.ac.uk](mailto:andres.marcos@bristol.ac.uk). Please add to the email subject: VISION PostDoc position.

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### **6.14. Post-Doc: CentraleSupélec, Campus de Rennes, France**

Contributed by: Bourdais, [romain.bourdais@centralesupelec.fr](mailto:romain.bourdais@centralesupelec.fr)

Post-Doc at CentraleSupélec, Campus de Rennes

The research group ASH, in the engineering “Grande Ecole” CentraleSupélec, Campus de Rennes, France, is currently offering 1 Postdoc position (1-year). <http://www.rennes.supelec.fr/ren/rd/ash/>

Its research deals with modeling and control using approaches that associate sequential decision making and continuous control in order to fulfill performance and safety requirements. Its is more particularly concerned with control of switching systems and hierarchical and coordinated control of complex and uncertain systems.

This position is available immediately for one year, and relates to advanced control technics for autonomous communicating systems. More details can be found here: [www.rennes.supelec.fr/ren/perso/rbourdai/cosco.pdf](http://www.rennes.supelec.fr/ren/perso/rbourdai/cosco.pdf)

The research will be conducted under the supervision of Romain Bourdais. Interested candidates having a solid mathematical background and PhD degree on control science can apply by sending an email at: [romain.bourdais@centralesupelec.fr](mailto:romain.bourdais@centralesupelec.fr), including CV, motivation letter and one or two selected publications.

The application deadline is the 15th of February 2016.

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### **6.15. Post-Doc: New York University Abu Dhabi (NYUAD), UAE**

Contributed by: Saif Jabari, [sej7@nyu.edu](mailto:sej7@nyu.edu)

Post-Doctoral Associate/Research Scientist Positions in Traffic Network Analysis

The Traffic Flow Theory and Analytics Group at New York University Abu Dhabi (NYUAD) is inviting applications for a multi-year fully funded Post-Doctoral Associate position. Highly qualified candidates may also be considered for a Research Scientist position.

The terms of the position are highly attractive: competitive salary, flexible working environment, paid annual home-leave travel, generous housing and relocation benefits, and educational subsidies for children.

Qualifications sought for the position include:

- A Ph.D. in engineering, statistics, applied mathematics, computer science, or related field.
- Hands-on experience with at least one of the following computer programming tools: (i) Matlab, (ii) Python, (iii) Java, (iv) C/C++/C#.
- Demonstrable knowledge in one or more of the following areas: (i) convex optimization and network flows, (ii) optimal control and dynamic programming, (iii) numerical methods for solving systems of differential equations, (iv) computational fluid dynamics (CFD), and (v) statistical learning on large dataset.

Highly desirable desirable qualifications include:

- experience with traffic simulation tools (micro/meso/macro),
- experience with transportation network modeling and computation (e.g., DTA),
- experience with numerical methods for solving systems of conservation laws (non-linear hyperbolic PDEs),
- experience with development of visualization tools and techniques, namely: (i) tools geared towards illustrating relationships in large datasets and/or (ii) tools geared towards animating outputs from numerical differential equation solvers.

To apply email Dr. Saif Jabari at [sej7@nyu.edu](mailto:sej7@nyu.edu). Please include an up-to-date curriculum vitae with full publication list, cover letter stating your research interests, one or two representative publications, and contact information for two references.

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### **6.16. Post-Doc: ETH Zürich, Switzerland**

Contributed by: Jonas Buchli, [buchlij@ethz.ch](mailto:buchlij@ethz.ch)

Post-Doc position at the Agile and Dexterous Robotics Lab at ETH Zürich  
Robust & Optimal Control for In situ Digital Fabrication

BACKGROUND:

At the ADRL (<http://www.adrl.ethz.ch>) we work on realizing the vision of In situ Fabrication. Our goal

is to take Robotic Mobile Manipulation to the construction site to enable completely novel processes in Architecture. The work is placed within the NCCR Digital Fabrication <http://www.dfab.ch/>.

A first In-situ Fabricator (IF) has been developed using standard off-the-shelf technology (<http://goo.gl/pcCIGP>). To develop the next generation IF, we aim at improving the state of the art in sensing, control and hardware concepts and implementing these with researchers in robotics, architecture, control theory, and civil/materials Engineering and industrial partners.

#### RESEARCH PROJECT BRIEF:

The successful candidate will address the problem of online, optimal and robust control for the next generation In situ Fabricator. The next generation In situ Fabricator will be a versatile, high performance mobile robot built for the requirements for Digital Fabrication in Architecture and Construction.

Due to high dimensional dynamics, changing payloads and morphology and a high demand in performance, the In situ Fabricator fundamentally changes traditional notions and methods of controller design. This project aims at working out the fundamental methods to robustly, safely and optimally control such machines and testing these methods in 1:1 scale applications in Digital Fabrication in Architecture and Construction.

#### DATES:

- Starting Date: Ideal start date is February 2016. However, earlier or later dates can be negotiated.
- Evaluation of candidates starts on receipt of applications but will continue until position is filled (see <http://www.adrl.ethz.ch> for updates).

#### REQUIREMENTS:

- PhD in Control Theory or closely related field
- Aptitude for interdisciplinary and experimental work(!)
- Outstanding Team & Communication skills
- Excellent academic track record in topics related to the project
- Very good English skills, written and spoken
- Excellent analytical skills & Critical thinking
- Driven, independent personality
- Persistence!

The position requires a very good understanding of control aspects of multi-articulated robots as well as robust and optimal control.

The following experience is beneficial:

- Robotics
- Automatic controller generation
- Code generation
- Rigid body dynamics
- Motion planning and control
- Programming in C++
- Control and/or relevant robotics background
- Unix/Linux knowledge
- Working with real hardware/robots

Post-Docs are expected, in addition to their research, to participate in teaching, supervision of bachelor's and master's projects, supervision of PhD students, grant preparation and the general activities of the Lab.

#### HOW TO APPLY:

Please send your CV, a letter of motivation (incl. statement of research interests) and 3 reference letters

to Prof. Dr. Jonas Buchli [jbuchlij \(at\) ethz \(dot\) ch](mailto:jbuchlij@ethz.ch), quoting [PostDoc Application S\_15.2] in the subject. Please send all documents in PDF or plain text format only. Include a link to your PhD thesis and 3 of your most relevant papers.

For questions please contact Jonas Buchli [jbuchlij \(at\) ethz \(dot\) ch](mailto:jbuchlij@ethz.ch).

- Information about the Agile and Dexterous Robotics lab can be found at <http://www.adrl.ethz.ch/>
- ADRL is located at the Institute of Robotics and Intelligent Systems: <http://www.iris.ethz.ch/> and the Dept. of Mechanical Engineering: <http://www.mavt.ethz.ch/>
- Information about ETH can be found at <http://www.ethz.ch/>

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### **6.17. Research Assistant: Technical University of Dortmund, Germany**

Contributed by: Evamaria Gruchattka, [pdm@tu-dortmund.de](mailto:pdm@tu-dortmund.de)

Research Assistant (Early-Stage Researcher) at Technical University of Dortmund, in energy-aware process operation - PRONTO EID

This position (ESR-J) is offered by the PRONTO EID-ITN (European Industrial Doctorate - Initial Training Network). The successful candidate will join the TU Dortmund University in Germany. The task of the post will be energy-aware operation taking account of stress on equipment.

The objective of PRONTO (PROcess NeTwork Optimization) is efficient and sustainable operation of Europe's process industries taking machinery condition and process performance into account.

EID is a funding scheme in the Marie Skłodowska-Curie Actions under Horizon 2020. In EID, each Early Stage Researcher is enrolled in a doctoral (PhD) programme and spends at least 50

The PRONTO EID has eleven partners from industry and academia across Europe. The research program for this post will be carried out as part of PhD studies in the Process Dynamics and Operations (DYN) in the Department of Biochemical and Chemical Engineering at TU Dortmund University under the guidance of Prof. Dr. Sebastian Engell. The person appointed will be sent to INEOS in Cologne, Germany for eighteen months to carry out significant parts of the research. There will also be a short secondment to the Norwegian University of Science and Technology in Trondheim, Norway, to study optimization methods.

The research project will concern to consider the stresses on the equipment when a flexible demand-side response is realized in energy-intense industrial production plants in adaptation to the availability of electrical power from renewables.

#### Benefits

This program offers a three year full-time position as researcher with a salary and allowances according to EU regulations for Marie Skłodowska-Curie ITN Early Stage Researchers. ESRs in an EID-ITN also undertake a comprehensive personalised development programme with targeted training measures and participate in a range of network events with the consortium partners.

#### How to apply

Applications including letter of motivation, CV, copy of relevant certificates and names & contact details of two referees should be addressed per e-mail in a single pdf file to: [pdm@tu-dortmund.de](mailto:pdm@tu-dortmund.de)

The job vacancy reference is "PRONTO-ESR-J"

The deadline for application is March 15, 2016.

Candidates should have an internationally recognized degree at the Masters level (or equivalent) in Process, Electrical or Control Engineering or closely related fields. In addition, the candidate is expected to be well

acquainted with dynamic optimization and/or scheduling. Experience with the modelling and optimization of chemical plants is an advantage.

To be eligible, any candidate must be an Early Stage Researcher. They must not have a PhD and must have fewer than 4 years' research experience. At the time of the selection, applicants must not have resided or carried out their main activity (work or studies) in Germany for more than 12 months in the 3 years immediately prior to the starting date. These eligibility requirements for Marie Skłodowska-Curie ESRs are non-negotiable and ineligible candidates will not be considered.

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#### **6.18. Lecturer: The University of Sheffield, U.K.**

Contributed by: Rebecca Fieldsend, [r.fieldsend@sheffield.ac.uk](mailto:r.fieldsend@sheffield.ac.uk)

Lecturer in Aerospace Systems - The University of Sheffield

The Department of Automatic Control and Systems Engineering at the University of Sheffield seeks to appoint an ambitious research-active Lecturer to undertake research that is demonstrably relevant to the aerospace sector and is aligned with the department's research themes, for example complexity, intelligence and autonomy.

For further information please see: <http://www.jobs.ac.uk/job/AMO889/lecturer-in-aerospace-systems/>

Closing date - 07/01/2016

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#### **6.19. Faculty: Harbin Institute of Technology, China**

Contributed by: Ms. Zhao, [scc.hitsz@gmail.com](mailto:scc.hitsz@gmail.com)

Faculty Positions in Systems and Control

Organization/Institution: Harbin Institute of Technology, Shenzhen Graduate School, Shenzhen, China

Department: School of Mechanical Engineering and Automation

The Division of Control and Mechatronics Engineering at Harbin Institute of Technology, Shenzhen Graduate School (HITSGS) invites applications for several faculty positions at all ranks. We are seeking candidates with excellent credentials in the areas of systems and control, wind energy, power systems and smart grids. Applicants must have a Ph.D. or equivalent in electrical, mechanical and power systems engineering and need to show strong research record and potential. Successful candidates will be received a joint appointment in the Center of Systems and Control. The Division currently has 11 full-time faculty members, and is expected to grow to 20 faculties in the next few years.

Interested candidates can send detailed CV, list of publications, statement of research (no more than 3 pages), teaching interests (no more than 2 pages), and a cover letter including contact information of three references to:

Ms. Zhao

School of Mechanical Engineering and Automation

HIT Campus Shenzhen University Town

Xili, Shenzhen

Guangdong

P. R. China 518055

or email the documents to [scc.hitsz@gmail.com](mailto:scc.hitsz@gmail.com)

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## 6.20. Faculty: Texas A&M University, USA

Contributed by: Margaret Lomas Carpenter, [marge@tamu.edu](mailto:marge@tamu.edu)

Assistant, Associate or Full Professor - Electronic Systems Engineering Technology

The Department of Engineering Technology and Industrial Distribution (ETID) at Texas A&M University invites applications for a tenure track faculty position at the assistant professor, associate professor, or full professor level with expertise in electronic systems engineering technology. The successful applicant will teach undergraduate students; advise/mentor graduate students; develop an independent, externally funded research program; participate in department activities; and serve the profession. Strong written and verbal communication skills are required. Academic and research programs can be found at <https://engineering.tamu.edu/etid>.

Applicants must have an earned doctorate in an appropriate engineering or a closely related background conducive to the development of an applied and/or educational research program by being able to work closely with industry and/or government agencies. A combination of academic and industrial experience is highly desired. Candidates with recent and relevant hands-on and industry experience in embedded systems, cyber physical systems, wireless communications, and/or product innovation and development are encouraged to apply.

To apply, go to <http://www.tamengineeringjobs.com>. Full consideration will be given to applications received by December 15, 2015. After that date, applications may be considered until position is filled. Appointment begins fall 2016.

Members of Texas A&M Engineering are all Affirmative Action/Equal Employment Opportunity Employers. It is the policy of these members in all aspects of operations each person shall be considered solely on the basis of qualifications, without regard to race, color, sex, religion, national origin, age, disabilities or veteran status.

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## 6.21. Faculty: University of Cincinnati, USA

Contributed by: Manish Kumar, [manish.kumar@uc.edu](mailto:manish.kumar@uc.edu)

Assistant Professor position:

The Departments of Psychology and Biological Science in the McMicken College of Arts & Sciences and the College of Engineering and Applied Science at the University of Cincinnati are jointly seeking applications for an interdisciplinary, tenure-track Assistant Professor position. We seek a candidate whose research program complements our existing strengths in the dynamics of sensorimotor control, cognitive systems, and coordination of multiple human and/or artificial agents. A successful candidate will have expertise in complex dynamical systems, such as dynamical or computational modeling, network theory, nonlinear time series and signal processing methods, or advanced computational methods for large, complex data sets. We seek candidates who apply those or related methods to research in topical areas such as dynamical neuroscience, neuromechanics, cyber-human systems, robotics and co-robotics, integrated neural prosthetics, cyber-enhancement of sensorimotor or cognitive performance, brain-machine interfaces, or neurologically embedded biosensors.

We are interested in candidates whose training or publication record evidences the ability to bridge disciplinary boundaries and collaborate with faculty affiliated with the UC CAP Center (from home departments including Psychology, Electrical Engineering & Computing Systems, Mechanical Engineering, Philosophy, and Biological Sciences). Current CAP Center faculty expertise and interests include cognitive and

perceptual-motor development, embodied cognition, complex systems, dynamical and computational modeling, movement coordination, human and animal sensory processes including visual and haptic perception, social perception-action-cognition, dynamical neuroscience, biomorphic design, and cyber-human systems. A Ph.D. in a substantive area that aligns with the research topics described above is a minimum requirement for the position. A successful candidate's training or professional experience must also indicate a strong potential or demonstrated ability to compete successfully for external funding. The candidate will be expected to conduct research, teach at the graduate and undergraduate levels, and make service contributions to the mission of the CAP Center and department or departments of appointment. We are especially interested in candidates who can contribute, through their research, teaching, and service, to the diversity and excellence of the academic community and we hope to attract applicants who have experience in promoting the success of students from diverse backgrounds.

The University of Cincinnati values diverse perspectives and we strongly encourage women, racial/ethnic/gender minorities, persons with disabilities, and veterans to apply. UC is responsive to the needs of dual career couples and is dedicated to work-life integration. The University of Cincinnati is an equal opportunity/affirmative action employer. Interested and qualified candidates must apply online at <https://jobs.uc.edu> and search for Requisition Number 9242. In addition to our online application, candidates must also attach a cover letter, CV, research statement, and teaching statement as a single PDF file and arrange for three confidential letters of recommendation to be emailed to the search committee chair at [michael.riley@uc.edu](mailto:michael.riley@uc.edu). We will begin reviewing applications on December 20, 2015, and continue until the position is filled.

The University of Cincinnati is an Affirmative Action/Equal Opportunity Employer/M/F/Vet/Disabled.

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