

E-LETTER on Systems, Control, and Signal Processing

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1. IEEE CSS Headlines

1.1. IEEE Control Systems Society Video Clip Contest: Open for Submissions

Contributed by: Magnus Egerstedt, magnus@gatechedu

The 2017 IEEE Control Systems Society Video Clip Contest is now open for business!

Submissions are now accepted for the 3rd IEEE CSS Video Clip Contest (see <http://www.ieeecss.org/video-contest>). The purpose of this competition is to promote control theory and automatic control to a broader audience through compelling short video clips. The videos could for example focus on a particular topic or on the field in general, with the only constraint being that the video promotes the field in a visually compelling and effective manner.

The schedule for the video clip contest is:

April 15 - Open for submission

July 1 - Deadline for submitting videos

July 15 - Winners are announced

Instructions for submitting the videos and eligibility information is available at the Video Clip Contest website:

<http://www.ieeecss.org/video-contest>.

All videos are judged by a jury consisting of IEEE CSS researchers, and the best three videos will receive prizes for contributing to the contest: The 1st, 2nd place, and 3rd places are awarded \$1000, \$500, and \$250, respectively. Moreover, the 1st place winner is invited to participate in the 2017 IEEE Conference on Control Technology and Applications (<http://ccta2017.ieeecss.org>) on Kohala Coast, Hawaii. The winner, or the Team Leader of the winning team, will be awarded one free conference registration for the CCTA 2017 as well as reimbursement for reasonable travel expenses - to be coordinated with the Video Clip Contest Chair in advance. The best video clips will be presented to the public during an award ceremony at the CCTA 2017.

Looking forward to seeing your video clips!

Magnus Egerstedt (Contest Chair)

Angela Schoellig (Jury Chair)

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1.2. IEEE Control Systems Society Technically Cosponsored Conferences

Contributed by: Luca Zaccarian, CSS AE Conferences, zaccarian@laas.fr

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

- XXVI International Conference on Information, Communication and Automation Technologies (ICAT 2017). Sarajevo, Bosnia and Herzegovina. Oct 26 - Oct 28, 2017. <http://icat.etf.unsa.ba/>
- 21st International Conference on System Theory, Control and Computing (ICSTCC 2017). Sinaia, Romania. Oct 19 - 21, 2017. <http://www.icstcc2017.ac.tuiasi.ro/>
- 6th International Conference on Systems and Control (ICSC 2017). Batna, Algeria. May 7 - May 9, 2017. <http://lias.labo.univ-poitiers.fr/icsc/icsc2017/>
- 2017 International Conference on Unmanned Aircraft Systems (ICUAS'17). Miami (FL), United States. Jun 13 - Jun 16, 2017. <http://www.uasconferences.com/>

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

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1.3. IEEE Control Systems Society Publications Content Digest

Contributed by: Elizabeth Kovacs, ekovacs2@nd.edu

CSS Publications Content Digest The IEEE Control Systems Society Publications Content Digest is a novel and convenient guide that helps readers keep track of the latest published articles. The CSS Publications Content Digest, available at <http://ieeecss.org/publications-content-digest> provides lists of current tables of contents of the periodicals sponsored by the Control Systems Society.

Each issue offers readers a rapid means to survey and access the latest peer-reviewed papers of the IEEE Control Systems Society. We also include links to the Society's sponsored Conferences to give readers a preview of upcoming meetings.

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1.4. IEEE Transactions on Automatic Control

Contributed by: Elizabeth Kovacs, ekovacs2@nd.edu

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2. Summer Schools

2.1. Summer School on “Approximation of Large-Scale Dynamic Models”

Contributed by: Antoneta Iuliana BRATCU, antoneta.bratcu@gipsa-lab.fr

Summer School on “APPROXIMATION OF LARGE-SCALE DYNAMIC MODELS” - registration is now open

Location and Date: Grenoble (France) - September 11 to 15, 2017

Scientific Chair: Charles POUSSOT-VASSAL (ONERA, Toulouse)

Website: <http://www.gipsa-lab.fr/summerschool/auto2017/>

Pre-registration link:

<https://www.azur-colloque.fr/DR11/inscription/preinscription/132>

For French participants:

<https://www.azur-colloque.fr/DR11/inscription/preinscription/132/fr>

Early registrations are encouraged (the number of participants is limited to 50).

Pre-registration dead-line is June 30th 2017.

Registration dead-line is July 13th 2017.

This Summer School aims at presenting the main mathematical tools and model approximation algorithms, in order to bridge the gap between complexity and representativeness required in control design, analysis,

simulation and optimisation. To this end, domain experts will be present to share their expertise and cutting-edge research results. The Summer School is mainly intended to PhD students, researchers and scholars interested in applying approximation of large-scale dynamic models, being meanwhile open to industrial participants. Basic knowledge in automatic control and mathematics will be useful.

Speakers:

Thanos ANTOULAS (Rice University, Houston, Texas, USA)

Sara GRUNDEL (Max Planck Institute, Magdeburg, Germany)

Serkan GUGERCIN (Virginia Tech, Blacksburg, USA)

Christian HIMPE (Münster University, Münster, Germany)

Martine OLIVI (INRIA Sophia Antipolis, France)

Charles POUSSOT-VASSAL (ONERA, Toulouse, France)

Pierre VUILLEMIN (ONERA, Toulouse, France)

For further information, please contact Antoneta Iuliana BRATCU(antoneta.bratcu@gipsa-lab.fr)

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2.2. DISC Summer School on “A Systems and Control Perspective on Privacy, Safety, and Security in Large-Scale Cyber-Physical Systems”

Contributed by: Martha Otte, m.w.otte@tudelft.nl

From July 3-6, 2017 the DISC Summer School “A Systems and Control Perspective on Privacy, Safety, and Security in Large-Scale Cyber-Physical Systems”

will take place at NH Atlantic, the Hague (Kijkduin), The Netherlands.

The increasing adoption of cyber-physical systems (CPS) and internet-of-things (IoT) introduces new control problems beyond the traditional tasks of stabilization and optimization. Some of the control challenges are related to the operation of future, highly interconnected CPS in a safety- or mission-critical environment, and to the protection of security and privacy where sensor and actuator data, and other control parameters are communicated in a networked CPS. Recent denial-of-service attacks to critical infrastructure and several accidents involving autonomous cars are some of the instances where new theoretical developments in the systems and control field are needed.

In this summer school program, we will present recent developments towards this endeavor and particular attention will be given to:

- differential privacy concept in a control and networked systems context
- analysis and design of resilient and secure control systems
- safety control of CPS

Keynote lectures will be given by: -Fabio Pasqualetti, University of California, USA

-Jerome Le Ny, Polytechnique Montreal, Canada

-Rafael Wisniewski, Aalborg University, Denmark

-Yiannis Papadopoulos, University of Hull, United Kingdom

-Henrik Sandberg, KTH Royal Institute of Technology, Sweden

-Manuel Mazo, Delft University of Technology, NL

-Peyman Mohajerin Esfahani, Delft University of Technology, NL

-Claudio de Persis, University of Groningen, NL

-Rene Pluis, Cisco Systems International BV

For more information about the program and registration please visit

<http://disc.tudelft.nl/education/summer-school/summer-school-2017/>

3. Books

3.1. Control of Multiple Robots Using Vision Sensors

Contributed by: Yasmin Brookes, yasmin.brookes@springer.com

Control of Multiple Robots Using Vision Sensors

by Miguel Aranda, Gonzalo López-Nicolás, Carlos Sagiús

ISBN: 978-3-319-57827-9

May 2017, Springer

Hardcover, 187 pages, \$99.00/euro 86,99

<http://www.springer.com/gb/book/9783319578279>

This monograph introduces novel methods for the control and navigation of mobile robots using multiple-1-d-view models obtained from omni-directional cameras. This approach overcomes field-of-view and robustness limitations, simultaneously enhancing accuracy and simplifying application on real platforms. The authors also address coordinated motion tasks for multiple robots, exploring different system architectures, particularly the use of multiple aerial cameras in driving robot formations on the ground. Again, this has benefits of simplicity, scalability and flexibility. Coverage includes details of:

- a method for visual robot homing based on a memory of omni-directional images;
- a novel vision-based pose stabilization methodology for non-holonomic ground robots based on sinusoidal-varying control inputs;
- an algorithm to recover a generic motion between two 1-d views and which does not require a third view;
- a novel multi-robot setup where multiple camera-carrying unmanned aerial vehicles are used to observe and control a formation of ground mobile robots; and
- three coordinate-free methods for decentralized mobile robot formation stabilization.

The performance of the different methods is evaluated both in simulation and experimentally with real robotic platforms and vision sensors.

Control of Multiple Robots Using Vision Sensors will serve both academic researchers studying visual control of single and multiple robots and robotics engineers seeking to design control systems based on visual sensors.

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3.2. Real-time Monitoring and Operational Control of Drinking-Water Systems

Contributed by: Yasmin Brookes, yasmin.brookes@springer.com

Real-time Monitoring and Operational Control of Drinking-Water Systems

by V. Puig, C. Ocampo-Martínez, R. Pérez, G. Cembrano, J. Quevedo, T. Escobet (Eds.)

ISBN: 978-3-319-50750-7

June 2017, Springer

Hardcover, 428 pages, \$179.00/euro 149,99

<http://www.springer.com/gb/book/9783319507507>

This book presents a set of approaches for the real-time monitoring and control of drinking-water networks based on advanced information and communication technologies. It shows the reader how to achieve significant improvements in efficiency in terms of water use, energy consumption, water loss minimization, and water quality guarantees.

The methods and approaches presented are illustrated and have been applied using real-life pilot demonstrations based on the drinking-water network in Barcelona, Spain. The proposed approaches and tools cover:

- decision-making support for real-time optimal control of water transport networks, explaining how stochastic model predictive control algorithms that take explicit account of uncertainties associated with energy prices and real demand allow the main flow and pressure actuators—pumping stations and pressure regulation valves—and intermediate storage tanks to be operated to meet demand using the most sustainable types of source and with minimum electricity costs;
- decision-making support for monitoring water balance and distribution network quality in real time, implementing fault detection and diagnosis techniques and using information from hundreds of flow, pressure, and water-quality sensors together with hydraulic and quality-parameter-evolution models to detect and locate leaks in the network, possible breaches in water quality, and failures in sensors and/or actuators; and
- consumer-demand prediction, based on smart metering techniques, producing detailed analyses and forecasts of consumption patterns, providing a customer communications service, and suggesting economic measures intended to promote more efficient use of water at the household level.

Researchers and engineers working with drinking-water networks will find this a vital support in overcoming the problems associated with increased population, environmental sensitivities and regulation, aging infrastructures, energy requirements, and limited water sources.

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3.3. Uncertain Rule-Based Fuzzy Systems Introduction and New Directions, 2nd Edition

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Uncertain Rule-Based Fuzzy Systems Introduction and New Directions, 2nd Edition

by Prof. Jerry M. Mendel

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Chapter 2: Type-1 Fuzzy Systems

Chapter 3: Type-1 Fuzzy Systems: Design Methods and Applications

Chapter 4: Sources of Uncertainty

Chapter 5: Type-2 Fuzzy Sets

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Chapter 7: Type-Reduction

Chapter 8: Interval Type-2 Fuzzy Systems

Chapter 9: Interval Type-2 Fuzzy Systems: Design Methods and Applications

Chapter 10: General Type-2 Fuzzy Systems

- Presents fully updated material on new breakthroughs in human-inspired rule-based techniques for handling real-world uncertainties

- Allows those already familiar with type-1 fuzzy sets and systems to rapidly come up to speed to type-2 fuzzy sets and systems

- Features complete classroom material including end-of-chapter exercises, a solutions manual, and three case studies – forecasting of time series to knowledge mining from surveys and PID control

The second edition of this textbook provides a fully updated approach to fuzzy sets and systems that can model uncertainty — i.e., “type-2” fuzzy sets and systems. The author demonstrates how to overcome the limitations of classical fuzzy sets and systems, enabling a wide range of applications from time-series forecasting to knowledge mining to control. In this new edition, a bottom-up approach is presented that begins by introducing classical (type-1) fuzzy sets and systems, and then explains how they can be modified to handle uncertainty. The author covers fuzzy rule-based systems – from type-1 to interval type-2 to general type-2 – in one volume. For hands-on experience, the book provides information on accessing MatLab and Java software to complement the content. The book features a full suite of classroom material.

- Presents fully updated material on new breakthroughs in human-inspired rule-based techniques for handling real-world uncertainties;
- Allows those already familiar with type-1 fuzzy sets and systems to rapidly come up to speed to type-2 fuzzy sets and systems;
- Features complete classroom material including end-of-chapter exercises, a solutions manual, and three case studies – forecasting of time series to knowledge mining from surveys and PID control.

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3.4. Advanced Flight Dynamics with Elements of Flight Control

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4.13. Contents: International Journal of Control, Automation, and Systems

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4.14. CFP: IEEE Transactions on Control Systems Technology

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

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

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

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

Only contributions that include significant results based on analysis of real data or experimental validation will be included. Papers must contain high-quality original contributions and be prepared in accordance with the IEEE Transactions on Control Systems Technology standards. Prospective authors should state in their cover letter and in the notes section of the submission site that their manuscript is intended for the

special issue on “system identification and control in biomedical applications.” Submitted manuscripts must not have been previously published or be under review for possible publication elsewhere.

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Notification of final decision: June 1, 2018

Publication Date: January 2019

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

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

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

Guest Editors:

Guillaume Mercere, Universitede Poitiers, France (LEAD)

Bayu Jayawardhana, University of Groningen, The Netherlands

Alexander Medvedev, Uppsala University, Sweden

Daniel E. Rivera, Arizona State University, Tempe, Arizona, USA

Caterina Scoglio, Kansas State University, Manhattan, Kansas, USA

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5. Conferences

5.1. International Symposium on Computer Performance, Modeling, Measurements and Evaluation

Contributed by: Yingdong Lu, yingdong@us.ibm.com

CALL FOR PAPERS

IFIP WG 7.3 PERFORMANCE 2017

35TH INTERNATIONAL SYMPOSIUM ON COMPUTER PERFORMANCE, MODELING, MEASUREMENTS AND EVALUATION

<HTTP://PERFORMANCE17.CS.COLUMBIA.EDU/>

NOVEMBER 13-17, 2017

COLUMBIA UNIVERSITY

NEW YORK, USA

The IFIP PERFORMANCE 2017 conference solicits research papers on the design of algorithms, mathematical modeling, simulation and measurement techniques for computer systems or communication networks. Topics of interest include the following.

Methodologically-oriented design and evaluation studies of:

- Network architectures, protocols and algorithms.
- Wireless, mobile, ad-hoc, sensor and cellular networks.
- Data centers, cloud computing and virtualization.
- Computer architectures, memory systems and storage systems.
- Energy-efficient computing and networking.
- Security systems, Internet servers, multimedia systems and web services.

- Social networks, smart grid and sensing infrastructure.
- Operating systems, file systems and databases.

Methodologies, evaluation techniques, and algorithms for:

- Capacity planning, resource allocation, routing, scheduling and Quality of Service.
- System measurement and monitoring.
- Stochastic analysis, statistical analysis and simulation.
- Large scale data collection, management and processing.

PAPER SUBMISSION

Papers should not exceed 12 pages double-column and single-spaced including figures, tables, and references in standard ACM format. In addition, a 2-page appendix is permitted, where the appendix does not count towards the original 12 pages. Papers must be submitted electronically in printable pdf form. Templates for the standard ACM format can be found at [this link](#). Both strict and alternate styles are acceptable for submission. No changes to margins, spacing, or font sizes are allowed from those specified by the style files. Papers violating the formatting guidelines will be returned without review.

The papers, if accepted, will be presented in the conference and published in a special issue of the ACM Performance Evaluation Review (PER). The style file can be found [here](#).

Warning: It is ACM policy not to allow double submissions, where the same paper is submitted to more than one conference/journal concurrently. Any double submissions detected will be immediately rejected from all conferences/journals involved.

REVIEW PROCESS

All submissions will be reviewed using a DOUBLE-BLIND REVIEW process: the identity of authors and referees will not be revealed to each other. To ensure blind reviewing, authors' names and affiliations should not appear in the paper; bibliographic references should be made in such a way as to preserve author anonymity. Papers will be selected on the basis of their originality, technical standards, relevance and clarity. Submissions must be made electronically, details will be provided in the conference website.

IMPORTANT DATES

Abstract submission: June 19, 2017

Full paper submission: June 26, 2017

Notification to authors: August 28, 2017

Final manuscript due: September 25, 2017

ORGANIZING COMMITTEE

General Chairs (Performance17@lists.cs.columbia.edu):

Yingdong Lu (IBM Research, USA)

Dan Rubenstein (Columbia University, USA)

Program Committee Co-Chairs:

Frank Kelly (Cambridge University, UK)

Dow Towsley (University of Massachusetts, USA)

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5.2. Asian Control Conference

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

THE 2017 ASIAN CONTROL CONFERENCE – ASCC 2017

Gold Coast Australia, 17 – 20 December 2017; <https://www.ascc2017.com/>

The Asian Control Conference will be held immediately after CDC 2017.

If you will be attending CDC 2017 till 15 December you can then make your way from Melbourne to Gold Coast on Sunday, 17 December and enjoy the ASCC Welcome Reception there. The ASCC 2017 Proceedings will be published in Xplore.

The City of Gold Coast is a celebrated holiday experience set on one of Australia's most spectacular natural stages. From pure, adrenalin-packed fun to natural indulgence, the contrasts of Australia's Gold Coast unite to deliver every holiday experience you could desire in one friendly place. A high quality accommodation at a special discount rate has been negotiated for the conference participants.

IMPORTANT DATES

Regular Papers (drafts) 10 July 17

Invited Session Proposals 10 July 17

Workshop Proposals 10 July 17

Author notifications 22 September 17

Final Papers 01 October 17

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5.3. Australian & New Zealand Control Conference

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

THE 2017 AUSTRALIAN & NEW ZEALAND CONTROL CONFERENCE - ANZCC 2017,
Gold Coast, 17-20 December 2017, <http://anzcc.org.au/ANZCC2017/>

ANZCC 2017 will be held simultaneously with ASCC 2017, at the same venue, the award winning Gold Coast Convention & Exhibition Centre.

The ANZCC 2017 details can be obtained from <http://anzcc.org.au/ANZCC20>

Specially designed and attractive registration package for those wishing to attend both events has been arranged.

Apart from traditional paper types, ANZCC 2017 will also be accepting PRESENTATION-ONLY papers. Presentation only papers will not be included in the Conference Proceedings. However, they will be a part of the Conference Program (if accepted) and their abstracts will be included in the Book of Abstracts which will be distributed to the conference participants.

IMPORTANT DATES

Draft papers: 17 July 17

Invited session proposals: 17 July 17

Workshops proposals: 17 July 17

Author notification: 20 September 17

Final papers: 01 October 17

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5.4. International Conference on Control, Automation and Systems

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

2017 17th International Conference on Control, Automation and Systems (ICCAS 2017)

October 18(WED)-21(SAT), 2017

Ramada Plaza, Jeju Island, Korea

<http://2017.iccas.org>

2ND CALL FOR PAPERS:

<http://icross.org/data/download/ICCAS2017/ICCAS2017.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

Proposal for Invited/Organized Session (Mini-symposium)

- June 10, 2017: Submission Deadline

Regular Papers (3 - 6 pages) & Invited/Organized Session Papers (1 - 6 pages)

- June 15, 2017: Submission Deadline

- August 1, 2017: Notification of Acceptance

- August 31, 2017: Submission of Final Camera-ready Papers

Research Poster Papers (1 - 2 pages)

- August 22, 2017: Submission Deadline

- August 31, 2017: Notification of Acceptance

- September 7, 2017: Submission of Final Camera-ready Papers

PAPER SUBMISSION: The conference invites three types of submission: "Regular Paper", "Research Poster Paper", and "Invited(Organized) Session/Mini-symposium Paper". To submit papers, go "Online Paper Submission" on the website: <http://online.2017.iccas.org>

PAPER SUBMISSION GUIDELINE: http://2017.iccas.org/?page_id=21

Indexed in: IEEE Xplore, EI compendex, and SCOPUS

PLENARY SPEAKERS

- Richard D. Braatz (Massachusetts Inst. of Tech., USA)

- Reza Moheimani (Univ. of Texas at Dallas, USA)

- Antonella Ferrara (Univ. of Pavia, Italy)

- Huijun Gao (Harbin Inst. of Tech., China)

- Atsuo Takanishi (Waseda Univ., Japan)

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

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

Technically Co-Sponsored by IEEE IES, IEEE CSS, IEEE RAS, SICE, ACA, CAA, CACS, ECTI, CAAI, and ISA

General Chair: Dong-il "Dan" Cho (Seoul Nat'l Univ., Korea / ICROS President)

Organizing Chair: Doyoung Jeon (Sogang Univ., Korea)

Program Chair: Hyosung Ahn (GIST, Korea)

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5.5. Workshop on Networks and Control

Contributed by: Keith Glover, kg@eng.cam.ac.uk

WORKSHOP ON NETWORKS AND CONTROL, Wednesday 5 July 2017

Gonville and Caius College, University of Cambridge, UK.

A workshop to mark the contributions of Malcolm Smith to the Control field on the occasion of his 60th birthday.

Invited speakers (confirmed):

M.Z.Q. Chen, P. Dewilde, T. Georgiou, A.R. Glover, S. Hara, T.H. Hughes, J.Z. Jiang, A. Rantzer, M. Vidyasagar, G. Vinnicombe, Y. Yamamoto.

Chair: K. Glover

Website: <http://www-control.eng.cam.ac.uk/Main/Workshop9>

REGISTRATION NOW OPEN, DEADLINE: June 12, 2017

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5.6. Workshop on Brain Dynamics and Neurocontrol Engineering

Contributed by: ShiNung Ching, shinung@wustl.edu

2017 Workshop on Brain Dynamics and Neurocontrol Engineering, June 25-27, 2017

** Travel awards are still available for students, postdocs and junior faculty. **

We are pleased to invite participants to the 2017 Workshop on Brain Dynamics and Neurocontrol Engineering at Washington University in St. Louis (St. Louis, MO, USA), to be held this summer (June 26-27).

Spurred by the development of both new technologies and new scientific initiatives, interest is coalescing around the use of dynamical systems and control theory to study the workings of the human brain. Neuroscience affords several research challenges and opportunities for the dynamics and control community, due to the immense complexity of the system at hand, the dynamics of which span many spatial and temporal scales. Understanding how these dynamics mediate brain function is a pivotal neuroscience question that is well-aligned with methodological approaches innate to systems and control engineering. The goal of this workshop is to provide a focused forum for the discussion of research synergy between experts from the dynamics, control and neuroscience communities.

For full information, including speaker list, award and registration details, please visit:

<http://sites.wustl.edu/brain>

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5.7. IFAC World Congress Workshop on “Process Data Analytics”

Contributed by: Sirish L. Shah, sirish.shah@ualberta.ca

2017 IFAC World Congress workshop on:

Process Data Analytics

Speakers: Tongwen Chen, Biao Huang, Sirish L. Shah, Nina Thornhill and Jiandong Wang

For more details and registration visit link at:

<https://www.ifac2017.org/workshops-and-tutorials>

Time: Sunday, 9th July 2017; 9:00-17:30

Workshop outline

Process data analytic methods rely on the notion of sensor fusion whereby data from many sensors and alarm tags are combined with process information, such as physical connectivity of process units, to give a holistic picture of health of an integrated plant. The fusion of information from such disparate sources of data is the key step in devising methodologies for a smart strategy for process data analytics

In the context of the application of analytics in the process industry, the objective in this workshop is to introduce participants to tools, techniques and a framework for seamless integration of information from process and alarm databases complemented with process connectivity information. The discovery of information from such diverse and complex data sources can be subsequently used for process and performance

monitoring including alarm rationalization, root cause diagnosis of process faults, hazard and operability (Hazop) analysis, safe and optimal process operation. Such multivariate process data analytics involves information extraction from routine process data, that is typically non-categorical (as in numerical process data from sensors), plus categorical (or non-numerical or qualitative and binary) data from Alarm and Event (A&E) logs combined with process connectivity or topology information that can be inferred from the data through causality analysis or as obtained from piping and instrument diagrams of a process. The later refers to the capture of material flow streams in process units as well information flow-paths in the process due to control loops.

Target audience: The intended audience for this workshop would be industrial practitioners of control including vendors working in the area of on-line data logging and archiving, graduate students with interests in statistical learning and data science and academics.

Workshop Program

The following topics will be discussed in this workshop. Each topic will be accompanied by one or more industrial case study to convey the utilitarian value of the learning, discovery and diagnosis from process data.

- Overview of the broad analytics area with emphasis on its use in the process industry.
- Basic definitions and introduction to supervised and unsupervised learning: simple regression, classification and clustering.
- Data visualization methods; examination and analysis of data in a multivariate framework (in the temporal as well as the spectral domains).
- Data quality assessment: Outlier detection; filtering and data segmentation.
- Elements of statistical inference and learning including
- Bayesian methods.
- Multivariate methods for data analysis: SVD, PCA, PLS, SVR.
- Case studies on nearest neighbour methods for multivariate detection and diagnosis of transient disturbances.
- Alarm data analysis: Detection and removal of nuisance alarms; root-cause analysis of alarms and alarm floods.
- Data-based causality analysis for identification of process topology.
- Future areas to explore in the use of statistical learning, data science and analytics for improved process operation.

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6. Positions

6.1. PhD: Université Laval, Canada

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

PhD: Université Laval, Canada

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

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

the projects are:

Project #1 - Coating of the tablets: development of an in-line vision sensor providing film-coating properties (coating level, distribution across tablets, esthetical defects, etc.).

- Fractional factorial design
- Multivariate Image Analysis
- Partial Least Squares regression
- Validation of the machine vision sensor

Project #2 – Novel continuous drying of the granules (before they are compressed into tablets): safe and robust in-line minimization of the drying time and/or energy consumption while insuring a desired final humidity of the particles and avoiding their overheating.

- First-principles modelling and model calibration
- State estimation
- Model predictive control
- Real-time optimization

Project #3 - Freeze-drying of vials: safe and robust in-line minimization of the primary drying time and/or energy consumption while insuring that sublimation is completed and avoiding to exceed the collapse temperature.

- First-principles modelling and model calibration
- State estimation
- Model predictive control
- Real-time optimization
- Heating policies for various vials arrangements

The final stage of the three projects is to implement and validate the most promising approaches on pilot units.

Candidate profile:

- should have completed, or about to complete, a MSc degree in Electrical or Chemical Eng., or related areas,
- strong background in multivariate statistics and/or first-principles modelling and/or systems and control,
- solid programming skills in Matlab,
- ability to work in multi-disciplinary teams,
- excellent communication skills (oral and written) in English - a plus if knowledge of French (courses are given in French).

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

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6.2. PhD: University Grenoble Alpes, France

Contributed by: Hassen FOURATI, hassen.fourati@gipsa-lab.fr

A PhD position is proposed on Advanced Modelling and Control of attitude dynamics for CubeSat, in department of Automatic Control at GIPSA-Lab (University Grenoble Alpes, France).

The link for the position is:

http://necs.inrialpes.fr/media/documents/openings/PhDs/2017-NanoBob_PhD.pdf

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6.3. PhD: VERIMAG, France

Contributed by: Oded Maler, oded.maler@imag.fr

A PhD Position at Verimag, Grenoble, Tempo (Timed and hybrid Systems) Team

We are looking for a PhD candidate (see <http://www-verimag.imag.fr/maler/Looking-for-PhD-Candidates-2017.html> for more details). Note that the candidate will have to compete on few positions and only candidate with an excellent record (notes, preliminary research. recommendation) are encouraged to apply.

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6.4. PhD: University of Groningen, the Netherlands

Contributed by: Bayu Jayawardhana, b.jayawardhana@rug.nl

The centre on Data Science and Systems Complexity (DSSC) at University of Groningen, Netherlands, officially opens the call for applications for 10 PhD positions in the project DSSC COFUND, which is co-financed through the Marie Skłodowska Curie COFUND action under the European Commission's Horizon 2020 Work Programme. MSc graduates in fields relevant to the DSSC such as mathematics, statistics, computer science, artificial intelligence, engineering, physics, bioinformatics, astronomy are invited to apply by 15 July 2017 through our vacancies website:

<http://www.rug.nl/about-us/work-with-us/job-opportunities/overview?details=00347-02S0005KFP>

In their application the candidates will select one or several from the 18 projects available at the DSSC in which they are interested and which cover various topics in the areas Adaptive Models and Big Data, Complex Systems and Engineering, Advanced Instrumentation and Big Data. If selected, the candidates will be matched to one of the projects they opted for in their application. The successful candidates, who are expected to begin their appointment no later than 1 March 2018, will conduct research on 10 of the 18 interdisciplinary projects available at the DSSC.

Candidates must comply with the eligibility criteria required under the Marie Skłodowska Curie COFUND action. They should not have resided or carried out their main activity in the Netherlands for more than 12 months in the three years immediately before the reference date of the DSSC COFUND call deadline (15 July 2017) unless it was as part of a procedure for obtaining refugee status under the Geneva Convention. Moreover, they should qualify as early stage researchers, i.e., be in the first four years of their research careers, and not have been awarded a doctoral degree, by the reference date of the DSSC COFUND call deadline (15 July 2017).

More details about evaluation criteria and application documents are available on

<http://www.rug.nl/about-us/work-with-us/job-opportunities/overview?details=00347-02S0005KFP>

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6.5. PhD: Inria, France

Contributed by: Madalena Chaves, madalena.chaves@inria.fr

PhD thesis position at Inria:

Mathematical analysis, control design and coupling for models of biological oscillators

Mammalian cells have evolved highly sophisticated intracellular communication pathways to enable their development and growth, under multiple environmental stresses and stimulus. Two major cyclic processes are at the basis of cell development: the cell cycle and the circadian clock, both of which have been separately studied from many diverse points of view. In the context of project ICycle, our goal is to understand the communication pathways between these two primary cellular modules, using both mathematical and

simulation tools, control theory and synthetic biology techniques. From a mechanistic point of view, the interaction between cell cycle and circadian clock can be represented as a control theoretic problem: a “plant” or the system to be controlled, an “output” or a set of measurements of the system, an “input” which is an entry point into the system, allowing for regulation, and a “controller” function. However, many points are still unclear from experimental evidence, such as the outputs and entry points of regulation for each oscillator, the relationship between the frequencies of each cyclic module, possible controllers, etc. The main topic of this thesis is the design of control theoretical strategies for regulating and coupling two biological oscillators, control the strength of their interconnection, and the mutual adjustment of their frequencies and phases. The methods and techniques developed in this thesis will be applied to design and implement feasible control strategies to construct synthetic biology circuits reproducing the main features of the two oscillators, in a collaboration with F. Delaunay.

To learn more about the project and related PhD positions please check:

<https://project.inria.fr/icycle/phd-offers/>

Background: A degree in applied mathematics (or similar), dynamical systems, control theory.

Applications accepted until June 12th.

Please send an email to madalena.chaves@inria.fr, with CV and names of two references.

The PhD thesis will be supervised by Madalena Chaves at Inria Sophia Antipolis (France).

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6.6. PhD: University of Groningen, the Netherlands

Contributed by: Kanat Camlibel, m.k.camlibel@rug.nl

PhD: University of Groningen, the Netherlands

The Data Science and Systems Complexity COFUND Doctoral Programme (DSSC COFUND) at the University of Groningen offers a number of early stage researcher (ESR) positions co-funded through the Marie Skłodowska Curie COFUND action under the European Commission’s Horizon 2020 Work Programme. The DSSC aims to train highly skilled graduates who will use state of the art data methodology to understand the behaviour of complex systems and who can handle data and complexity problems for society at large.

Four of the projects are directly related to control of complex systems:

- (a) Distributed methods to handle smart power microgrids. Keywords: Microgrids, Distributed Control Algorithms, Optimization, Nonlinear Systems, Complex Oscillatory Networks. Fields of expertise: Control Theory, Optimization, Dynamical Systems, Power Engineering, Network Science. Supervisory team: Prof. dr. Arjan van der Schaft, Prof. dr. Claudio De Persis Prof. dr. Kanat Camlibel
- (b) Distributed control methods under communication constraints with applications to sensor networks in a smart industry setting. Keywords: Sensor Networks, Nonlinear consensus, Hybrid Systems, Self-triggered Algorithms, Coordination Control. Fields of expertise: Control Theory, Dynamical Systems, Signal Processing, Computer Science, Network Science. Supervisory team: Prof. dr. Claudio De Persis, Dr. Pietro Tesi, Prof. dr. Kanat Camlibel
- (c) Cyber security with applications to both smart energy systems and smart industry. Keywords: Cyber-physical Systems, Networked Control Systems, Hybrid Systems, Power Networks, Smart Industries. Fields of expertise: Control Theory, Dynamical Systems, Cybersecurity, Computer Science, Network Science. Supervisory team: Prof. dr. Claudio De Persis, Dr. Pietro Tesi, Dr. Bart Besselink
- (d) Tailor-made model reduction methods for integrated energy systems. Keywords: Networks of dynamical systems, structure preserving model reduction, smart energy systems, model reduction for networks, graph

simplification Fields of expertise involved: Systems and control engineering, Feedback control theory, Mathematical modelling, Model reduction, Graph theory. Supervisory team: Prof. dr. Kanat Camlibel, Prof. dr. Jacquelen Scherpen, Dr. Bart Besselink

Eligibility criteria:

Applicants should:

- * be in possession of a master's degree or its equivalent in one of the fields relevant to the DSSC (e.g. mathematics, statistics, computer science, artificial intelligence, engineering, physics, bioinformatics, astronomy)
- * not have resided or carried out their main activity in The Netherlands for more than 12 months in the three years immediately before the reference date of the DSSC COFUND call deadline (15 July 2017) unless it was as part of a procedure for obtaining refugee status under the Geneva Convention
- * qualify as early stage researchers, i.e., be in the first four years of their research careers, and not have been awarded a doctoral degree, by the reference date of the DSSC COFUND call deadline (15 July 2017).

Evaluation criteria: We are searching for applicants who excel academically and professionally, are creative and independent, and have communication and leadership skills. Evaluation will focus on the candidates':

- * educational and professional background
- * compatibility of research interests with the DSSC (fit with the research areas; motivation to conduct a PhD project at the DSSC; career plans)
- * complementary skills (English proficiency and communication skills; creativity, independence, leadership).

Conditions of employment:

The terms of employment comply with the terms of the Collective Labour Agreement for Dutch Universities (CAO-NU). The PhD positions offered are for four years (48 months), at full-time employment. PhDs will receive a full-time appointment of 1 year with the perspective of extension for another 3 years. The extension depends on the outcome of the PhDs' evaluation after 9 months from the beginning of their appointment. The evaluation assesses the possibility that the PhD student will successfully complete a thesis within the following 3 years.

Successful applicants are expected to begin their appointment no later than 1 March 2018.

All DSSC PhDs are required to complete a PhD thesis by the end of the employment period. The appointment requires that the PhD employee will devote up to 10% of the time to teaching.

Application procedure:

You may apply for this position until 14 July 23h59 / before 15 July 2017, local time, by means of the application form that can be found on

<http://www.rug.nl/about-us/work-with-us/job-opportunities/overview?details=00347-02S0005KFP>.

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6.7. PhD: University of Groningen - University of Twente, the Netherlands

Contributed by: Bayu Jayawardhana, b.jayawardhana@rug.nl

PhD advertisement of STW Smart Industry 2016 project on

"Integrating models and real-time data for zero-defect manufacturing control systems"

Project description:

High-precision manufacturing pushes the limits of what is possible with conventional manufacturing systems. The development of the new generation of high-precision manufacturing systems relies on detailed understanding of the process disturbances which cause variation in the end-product. This project aims at

developing models for control of manufacturing processes which can be used for interpreting small variations in the process due to product-to-product disturbances. Such accurate and mature models can only be developed through integration of knowledge from high-fidelity physics-based models with knowledge obtained from large streams of sensor data. Integration of models and sensor data is key for the development of novel data analytic tools providing crucial causal information to the product-to-product variations which can subsequently be used by our novel data-driven control systems to pre-empt and to remove such variations in real-time.

The research consortium comprises of two universities (Univ. Groningen and Univ. Twente) and seven small-medium and large companies. In total, the project has four vacancies (two PhD students and two postdocs) with the following two main research activities: (R1). the development of model-based data analytics tools for inferring / obtaining accurate and mature models which are applicable for control of high-precision manufacturing systems; and (R2). the development of new provably-correct control design mechanisms towards a self-learning control architecture based on the integration of process models and real-time material, process and product information.

Position description:

In this advert, we will hire one PhD student who will focus on research activity (R2). In particular, he/she will develop novel integrated data-driven & model-based control algorithm that enables the integration of models and real-time process data for enabling zero-defect manufacturing systems. The PhD appointment is for four years. The PhD candidate has to complete the graduate courses offered by the Dutch Institute for Systems and Control (DISC, <http://disc.tudelft.nl>).

Qualifications:

You have:

- Masters degree in Electrical & Electronics Engineering, or Mechanical Engineering, or Mechatronics, or Computer Science, or other equivalent degree programmes from top universities;
- Strong academic credentials, written and spoken English proficiency;
- Strong knowledge in systems and control, mechatronics and mathematics.

About the organization:

Since its foundation in 1614, the University of Groningen has enjoyed an international reputation as a dynamic and innovative center of higher education offering high-quality teaching and research. Study and career paths in a wide variety of disciplines encourage currently more than 30,000 students and researchers to develop their individual talents. Belonging to the best research universities in Europe, the top 100 universities in the world and joining forces with prestigious partner universities and networks, the University of Groningen is truly an international place of knowledge.

Within the Faculty of Mathematics and Natural Sciences (FMNS), the Engineering and Technology institute Groningen (ENTEG) conducts engineering science research and covers a broad area of mechanical engineering, control engineering, materials engineering, and (bio)-chemical engineering. The research unit Discrete Technology and Production Automation (DTPA) is focused on the dynamical modeling, analysis, mechatronics and control of complex electro-mechanical systems. The application areas include smart energy systems, mechatronic systems, robotic systems, as well as, multi-agent autonomous systems.

Information:

Interested candidates please send your inquiries together with your detailed CV and a 1-page letter of motivation or research statement to: b.jayawardhana@rug.nl and p.tesi@rug.nl (with f.g.fokkens@rug.nl in cc).

Please specify the following text in the subject: Data-driven control design - PhD application.

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6.8. PhD: University of Grenoble, France

Contributed by: Paolo Frasca, paolo.frasca@gipsa-lab.fr

A phd position on “Modeling and Control of Cyber-Social Dynamics” under the supervision of A. Kibangou and P. Frasca is available at the University of Grenoble, beginning October 2017. Further information is available at http://necs.inrialpes.fr/media/documents/openings/PhDs/2017-Cybersocial_Dynamics_PhD.pdf

Interested candidates should contact us by *June 5* (paolo.frasca@gipsa-lab.fr, alain.kibangou@gipsa-lab.fr)

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6.9. PhD: WASP, Sweden

Contributed by: Bo Wahlberg, bo@kth.se

PhD: WASP announces 22 PhD student positions

Wallenberg Autonomous Systems and Software Program (WASP) is Sweden’s largest individual research program ever, and provides a platform for academic research and education, fostering interaction with Sweden’s leading technology companies. The program addresses research on autonomous systems acting in collaboration with humans, adapting to their environment through sensors, information and knowledge, and forming intelligent systems-of-systems. WASP’s key value is research excellence in autonomous systems and software for the benefit of Swedish industry.

The graduate school within WASP is dedicated to provide the skills needed to analyze, develop, and contribute to the interdisciplinary area of autonomous systems and software. Through an ambitious program with research visits, partner universities, and visiting lecturers, the graduate school actively supports forming a strong multi-disciplinary and international professional network between PhD-students, researchers and industry.

The graduate school provides added value on top of the existing PhD programs at the partner universities Chalmers, KTH Royal Institute of Technology, Linköping University, Lund University and Umeå University, providing unique opportunities for students who are dedicated to achieving international research excellence with industrial relevance.

We are now offering up to 22 PhD positions of which several relate to control systems.

Information about specific projects and on how to apply can be found at

<http://wasp-sweden.org/wasp-announces-22-phd-student-positions/>

Last date for application: 2017-06-15

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6.10. PhD: LAAS Lab, France

Contributed by: Aneel Tanwani, aneel.tanwani@laas.fr

We are seeking a PhD candidate within the team Methods and Algorithms in Control (<https://www.laas.fr/public/en/mac>) at LAAS lab in Toulouse, France. The topic of this PhD will be focused on studying stability and robustness notions for switched dynamical systems with particular emphasis on developing numerical techniques, and its applications in modern control systems. The thesis will be supervised by Aneel Tanwani and Luca Zaccarian. Serious candidates with strong background in control theory and a good knowledge of applied mathematics are encouraged.

To apply for this position, students must contact at least one of the supervisors by email before 9th June 2017. Short-listed candidates will be contacted to provide further information, and the successful candidate will be informed of the final decision by 30th June 2017. The thesis will start in September 2017 and is expected to last for three years. The monthly stipend for the entire duration is roughly 1500 euros net. Further information and details are available at <http://homepages.laas.fr/atanwani/edsys17.pdf>

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6.11. PhD: University of New South Wales, Australia

Contributed by: Daoyi Dong, d.dong@unsw.edu.au

Scientia PhD Scholarships at UNSW

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

- Work on high quality research projects with the high quality supervisory teams in world class environments
- AUD\$40,000 per annum stipend for four years
- Tuition fees covered for the full 4 year period
- Coaching and mentoring will form a critical part of your highly personalised leadership development plan
- Up to AUD\$10,000 each year to build your career and support your international research collaborations

More application information could be found at:

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

<http://www.2025.unsw.edu.au/apply/scientia-phd-scholarships/distributed-estimation-and-control-quantum-networks>

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

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6.12. PhD: University of Bordeaux, France

Contributed by: Tudor-Bogdan Airimitoiaie, tudor-bogdan.airimitoiaie@ims-bordeaux.fr

PhD position at the IMS laboratory, University of Bordeaux, France

Supervisors: Pierre Melchior (Associate professor), Franck Cazaurang (Professor), Tudor-Bogdan Airimitoiaie (Associate professor)

Thesis title: Development of methods for the linearization of flat integer or fractional systems: application to path planning and fault detection of thermal systems

Start date: September 2017

Duration: 3 years

Closing date for applications: July 2nd 2017

Funding: 3 years financing by the University of Bordeaux

Description:

Flatness is a relatively new concept that can be used to invert the dynamic equations governing the functioning of certain systems. As such, for the class of flat systems it is easy to design path tracking and

fault detection algorithms. The non-integer derivation operator is well adapted for the modelling of thermal diffusivity phenomena in materials. The objective of this thesis is to develop tools for the linearization of flat nonlinear integer or non-integer systems and their application for path planning and system diagnosis. This involves performing formal calculations on the principles of flatness and establishing the analytical expressions of the flat outputs for fractional nonlinear systems. The different definitions of the non-integral derivative (Riemann-Liouville, Caputo, Grünwald) will be used. Finally, application to a thermal test bench available at the IMS laboratory is planned for validation of the proposed methods.

Candidate profile:

We are looking for a candidate with an MSc degree in Systems and Control or Applied Mathematics. Good knowledge of formal calculus, strong programming skills in Maple or Matlab MuPAD and a very good academic record are necessary. A background in differential geometry or fractional systems would be highly appreciated.

To express interest:

Please send the following documents to tudor-bogdan.airimitoiaie@ims-bordeaux.fr and pierre.melchior@ims-bordeaux.fr and franck.cazaurang@ims-bordeaux.fr

- motivation letter
- detailed CV
- bachelor and master transcripts (including list of courses with corresponding grades)
- name and email of two references

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6.13. PhD/PostDoc: New York University Abu Dhabi, UAE

Contributed by: Nikolaos Freris, nf47@nyu.edu

RESEARCH OPPORTUNITIES IN CYBERPHYSICAL SYSTEMS

Positions available: Ph.D. Students, Postdoctoral Fellows, Research Assistants

The Cyberphysical Systems Lab at New York University Abu Dhabi is hiring researchers at all levels in Electrical Engineering, Computer Science, Applied Mathematics, or relevant fields.

About: The focus of the Cyberphysical Systems Lab (CPSLab) is to conduct interdisciplinary research across a wide range of topics and applications related to cyberphysical systems, such as: a) distributed algorithms for estimation, optimization and control, b) big data: data mining/machine learning algorithms, c) wireless sensor networks, d) system theory: control & optimization, e) signal processing: sparse sampling and online algorithms, as well as applications in signal processing, transportation, cybersecurity, networking, robotics, and biomedical modeling.

Requirements: Research Assistant and Ph.D. applicants must hold (or be close to completing) an MS degree, and Postdoctoral Fellows a Ph.D., in Electrical Engineering, Computer Science, or Applied Mathematics with significant research experience in at least one of the aforementioned areas. Ph.D. applicants need to also apply directly to NYU for admission by Dec. 15. A proven publication record, solid mathematical background, excellent communication skills, and the ability to work in multi-disciplinary teams are essential. Applicants must submit a CV, research statement, cover letter with a brief research plan, along with the names and contact information for three recommenders in a single PDF file to Prof. Nikolaos Freris (nf47@nyu.edu).

Start date & Salary: The start date is flexible. A very competitive salary and benefits package (including relocation, housing, insurance, transportation and conference travel support) are provided – note: UAE do not levy any income tax.

For more information, please visit: <https://wp.nyu.edu/cpslab>

About NYUAD: New York University has established itself as a Global Network University, a multi-site, organically connected network encompassing key global cities and idea capitals. The network has three foundational degree-granting campuses: New York, Abu Dhabi, and Shanghai complemented by a network of 12 research and study-away sites across five continents. Faculty and students circulate within the network in pursuit of common research interests and the promotion of cross-cultural and interdisciplinary endeavors, both local and global. Entering its sixth year, NYU Abu Dhabi has recruited a cohort of faculty who are at once distinguished in both research and teaching. Our students are drawn from around the world and surpass all traditional recruitment benchmarks, both US and global. NYU Abu Dhabi's highly selective liberal arts enterprise is enhanced by an institute for advanced research, sponsoring cutting-edge projects across the Arts, Humanities, Social Sciences, Sciences, and Engineering. NYUAD is housed at a newly built campus in the vibrant city of Abu Dhabi, the capital of UAE.

NYUAD is an Equal Opportunity/Affirmative Action Employer

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6.14. PostDoc: Shanghai Jiao Tong University, China

Contributed by: Weidong Zhang, wdzhang@sjtu.edu.cn

Postdoctoral position in Shanghai Jiao Tong University, China (Optimization & Control)

The Optimization & Control Engineering Research Center of Shanghai (in the Department of Automation, Shanghai Jiao Tong University, China) offers 3 postdoc positions in control engineering as soon as possible thereafter. We are interested in candidates in the broad areas of advanced control theory, multi-agents formation, machine learning, pattern recognition, industrial networked control systems, etc.

Requirements and qualifications:

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

Main tasks:

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

Salary and others:

- RMB 120-200k/year (approximately, 18-30kUSD)
- It is a 2-year position and can be extended to 5 years

Required documents

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

For further information, please contact Prof. Dr. Weidong Zhang, Email: wdzhang@sjtu.edu.cn, tel: +86-21-34204019. Address: Dongchuan Road 800, Shanghai Jiaotong University, Shanghai 200240, China.

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6.15. PostDoc: UIUC, USA

Contributed by: Naira Hovakimyan, nhovakim@illinois.edu

A postdoctoral position is available in Advanced Controls Research Lab of UIUC. The ideal candidate must have a doctorate in mathematics with emphasis on statistical learning. The scope of the projects involves learning for robotic systems that operate in challenging environments. For consideration, please email CV and 3 references to Naira Hovakimyan, at nhovakim@illinois.edu.

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6.16. PostDoc: Centre for Energy Systems Integration, UK

Contributed by: Ken McKinnon, k.mckinnon@ed.ac.uk

Applications are invited for the post of Postdoctoral Research Associate in the multi-scale optimization of energy systems. The post is available for an immediate start for 36 months. The precise start date is flexible.

The post holder will be part of The Centre for Energy Systems Integration (CESI), a new £20M EPSRC consortium project involving Newcastle, Edinburgh, Durham, Heriot-Watt and Sussex Universities. The aim of this project is to understand the complex relationship between energy supply, demand and infrastructure and how this will evolve in the future.

Further information can be found on the Centre's website:

<http://www.ncl.ac.uk/cesi/>

Within CESI, Edinburgh is responsible for developing modular multi-scale stochastic planning and operational models and solution methods. Operational and planning models operate over different time scales, and local area energy networks need to operate in an integrated way in regional, national and international scale models. A single monolithic model at high time and spatial resolution is computationally intractable, so our focus will be on developing decomposition approaches that calibrate and select sub models at the appropriate spatial and time scales.

The starting salary will be in the range £32,004 - £38,183, depending on experience.

The closing date for receipt of applications, including reference letters, is 12th June 2017.

For further particulars and how to apply see

https://www.vacancies.ed.ac.uk/pls/corehrrecruit/erq_jobspec_version.4.jobspec?p_id=039891

Informal enquiries are encouraged; please contact Professor Ken McKinnon initially by e-mail:

k.mckinnon@ed.ac.uk.

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6.17. PostDoc: Ghent University Global Campus, South Korea

Contributed by: Shodhan Rao, Shodhan.Rao@ghent.ac.kr

PostDoc Position in Ghent University Global Campus, Incheon, South Korea

Project Description: The advertised position is a part of a project titled "Development of Smart Polymorphic Continuous Automatic Packaging System" which is funded by Korea Evaluation Institute of Industrial Technology (KEIT). The three partner organizations involved in the project are ACE Machinery, Korea Institute of Science and Technology (KIST) – Europe and Ghent University Global Campus (GUGC). In general, the project aims to develop a smart automated packaging system that is capable of adapting to changes in object shapes, sizes, production scale, rate, layout design and throughput. At Ghent University

Global Campus, we seek a researcher who would eventually be able to design an intelligent control system for the smart packaging system being designed at ACE machinery, that takes as input the production demand and then accordingly synchronizes the performance of the different modules of the packaging system. As such, the researcher is expected to work in close collaboration with partners from ACE machinery involved in this project, understand their specific requirements and eventually design an electronic control system for the smart packaging machines.

Further the candidate is expected to conduct research on the development and implementation of an iterative learning control algorithm in order to improve the performance of the electronic control system designed in the first phase of the project. The candidate is also expected to contribute on the one hand towards disseminating results in the form of conference presentations, journal publications and patent applications and on the other hand towards certain project administrative tasks that include annual report writing and internal accounting of the expenses made towards the project. The duration of the project is roughly two and a half years subject to successful annual progress.

Profile of the candidate: We are looking for candidates with the following qualifications and skills.

- A PhD degree in Electronics and/or Electrical Engineering with specialization in Control or Robotics.
- A strong command and fluency in English.
- Good oral and written communication skills in English.
- Excellent academic track record.
- A strong motivation to perform research in the area of industrial control systems.
- Strong analytical/mathematical skills.
- An experience in the design of industrial control systems is desirable.
- Willingness to learn Korean language.

The remuneration for the job will be commensurate with Korean standards for a PostDoc position. In addition, free accommodation within the campus is also foreseen. We provide a stimulating research environment within the Biotech Data Science Center of Ghent University Global Campus (GUGC), which is the first campus of Ghent University outside Belgium. This campus is situated in Songdo International City, Incheon, South Korea. GUGC integrates educational and research facilities in a single building. Ghent University has the ambition to organize a first-rate, truly European education in Asia and to develop excellent research in the fields of Molecular biotechnology, Environmental and Food technology.

Interested candidates should send their applications before June 30th, 2017 by email to Shodhan.Rao@ghent.ac.kr with a CV, copies of transcripts and degrees and a motivation letter (please merge all the documents in one file). The candidate will receive an e-mail confirming receipt of the application.

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6.18. PostDoc: CNRS – CentraleSupélec – Univ. Paris-Sud – Univ. Paris-Saclay, France

Contributed by: Antoin Girard, antoine.girard@l2s.centralesupelec.fr

Postdoctoral Position - Towards programmable cyber-physical systems: a symbolic control approach

Supervisors: Antoine (Antoine@l2s.centralesupelec.fr)

Location: Laboratoire des Signaux et Systèmes - L2S, CNRS – CentraleSupélec – Univ. Paris-Sud – Univ. Paris-Saclay, Gif-sur-Yvette, France

Duration: One year, starting September 2017, with possibility for one additional year

One postdoctoral position is opened within the PROCSYS project, funded by an ERC Consolidator Grant.

Context and Objectives:

Cyber-physical systems (CPS) consist of computational elements monitoring and controlling physical en-

ties. The main objective of the PROCSYS project is to propose a general framework for the design of programmable CPS that will allow engineers to develop advanced functionalities using a high-level language for specifying the behaviours of a CPS while abstracting details of the dynamics. Controllers enforcing the specified behaviours will be generated from a high-level program using an automated model-based synthesis tool. Correctness of the controllers will be guaranteed by following the correct by construction synthesis paradigm through the use of symbolic control techniques: the continuous physical dynamics is abstracted by a symbolic model, which is a discrete dynamical system; an interface consisting of low-level controllers is designed such that the physical system and the symbolic model behaves identically; a high-level symbolic controller is then synthesized automatically from the high-level program and the symbolic model.

Work description:

We will develop a high-level language, based on the formalism of hybrid automata, which will enable to specify rich behaviours while enabling the development of efficient controller synthesis algorithms. The project will also tackle two bottlenecks in the area of symbolic control. Firstly, scalability issues will be addressed by the computation of more compact symbolic models and by controller synthesis algorithms that require only partial exploration of the symbolic models. Secondly, robustness will be ensured at all levels of control by developing novel algorithms for the synthesis of robust interfaces and of symbolic controllers.

Background of the candidate:

The candidate must hold a PhD in control theory or computer science with a strong mathematical background. A prior experience in the area of hybrid systems is recommended. Programming skills are also needed. Applications must include a cover letter, a detailed CV, the preprints of the two most significant publications, and two references who may be asked to provide letters of recommendation.

All documents should be sent in a single pdf file to the following email addresses: Antoine@l2s.centralesupelec.fr

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6.19. PostDoc: Huazhong University of Science & Technology, China

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

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

1. For Postdoc, we offer

- A competitive salary (at least Chinese RMB 200,000 per year plus housing allowance, negotiable);
- Possibilities for the Postdoc to spend time at world-leading universities (such as UC Berkeley and Caltech) to take specialized courses and work with collaborators there;
- Experimental platform (Vicon+Crazyflies, GPU cluster, UR3 robot+Kinect, Hardware in the loop Power simulator)
- Full contract for 2 years with the possibility of renewal up to 5 years contingent on performance;
- Possibilities for the Postdoc to stay at HUST as a lecturer or an associate professor afterwards.

2. For visiting researchers, we offer

- A highly competitive salary depending on the qualification (per month);
- Travel cost and housing
- Experimental platform (Vicon+Crazyflies, GPU cluster, UR3 robot+Kinect, Hardware in the loop Power simulator)

3. Your Profile

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

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

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6.20. PostDoc: University of Exeter, UK

Contributed by: Christopher Edwards, c.edwards@exeter.ac.uk

Postdoctoral Research Fellowship in Modelling and Control

Location: University of Exeter

Department: College of Engineering Mathematics and Physical Sciences

Reporting To: Prof C. Edwards and Prof M. Belmont

The full time post is available from 1 July 2017 for 3 years.

Exeter University, UK is a Russell Group university boasting a vibrant academic community with over 21,000 students. Ranked in the top 1% of universities in the world, 98% of our research is rated as being of international quality and focuses on some of the most fundamental issues facing the world today. We encourage proactive engagement with industry, business and community partners to enhance the impact of research and education and improve the employability of our students.

The post: The College wishes to recruit a Senior Research Fellow to lead a project on Control of Launch and Recovery in Enhanced Sea-States. The goal is to extend the range of sea-states in which existing wave limited maritime operations can be safely carried out. Important examples of these operations are the launch and recovery from a mother-ship of small craft, manned and unmanned air vehicles and submersibles. The proposed work is closely coupled to two already funded EPSRC projects under the Launch and Recovery Co-Creation Initiative. This EPSRC funded post is available from 1 July 2017 for 3 years. The successful applicant will be responsible for delivering new fundamental operations and control research and providing the basis for the creation of a real-time decision support system for vessel operators responsible for Launch and Recovery at sea.

About you: The successful applicant will possess a PhD or equivalent qualification/experience in a related field of study and will have recognised expertise in the areas of system modelling and control and possess in-depth understanding of this specialism to enable the development of new knowledge and understanding within the field. In addition, the successful applicant will provide academic leadership to research teams, lead and develop internal and external networks and develop links with external contacts in order to foster collaboration and generate income. Applicants will possess proven expertise in the areas of systems modelling and control and highly developed skills in Matlab & Simulink. A wide range of modelling activities will need to be undertaken during the project encompassing classical Lagrangian approaches for the winch/cable/vessel elements and surrogate modelling techniques to predict the mothership response to the sea environment. The subsequent development of nonlinear observers for disturbance estimation and their integration as part of the launch and recovery control system is another key facet of the work to be undertaken.

For further enquiries contact: Prof C Edwards c.edwards@exeter.ac.uk

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6.21. PostDoc: KTH, Sweden

Contributed by: Mikael Johansson, mikaelj@kth.se

The School of Electrical Engineering at KTH, Stockholm, Sweden invites applications for a postdoctoral position in the area of large-scale optimization, decision-making, and control.

Applicants should have a Ph.D. in a relevant area, a vision and ambition for their own research, and a proven track record of scientific accomplishments and/or publications in leading international journals.

The position is created with the support from a five-year project on basic research for “Engineering the Interconnected Society” from the Knut and Alice Wallenberg Foundation, and offers many opportunities for collaborative work with students, postdocs, and faculty at the School of Electrical Engineering and the ACCESS Linneaus Center.

The position is available for one year, with the possibility of extension for another year. We follow postdoctoral best practices (<http://cra.org/resources/best-practice-memos/computer-science-postdocs-best-practices/>) to support the successful candidate in her or his career.

Applications should contain a CV, a motivational letter summarizing past achievements and current research interests, and contact information for one-two references. The applications should be addressed to Mikael Johansson, mikaelj@kth.se.

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6.22. PostDoc: Technical University of Munich, Germany

Contributed by: Martin Buss, mb@tum.de

Research Opportunities Week

April 16 – 20, 2018

Take this unique opportunity to experience the Technical University of Munich (TUM) and its research environment first-hand. TUM invites you to Munich for a fully-funded one-week visit. Afterwards, all candidates interested in pursuing a postdoc at TUM will be eligible to apply for a one-year TUM University Foundation Fellowship. Are you a young researcher looking to boost your career in Munich? Send in your application for one of the 50 Postdoc Mobility Travel Grants at the Technical University of Munich.

Application and further information on TUM’s Research Opportunities Week:

www.tum.de/postdoc

Contact:

TUM ForTe: postdoc@tum.de

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6.23. PostDoc: University of California at Santa Cruz, USA

Contributed by: Ricardo Sanfelice, 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) 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 on July 1, 2017. Though flexible, the suggested start date for the position is September 1, 2017 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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6.24. PostDoc: United States Naval Academy, USA

Contributed by: Daniel Opila, opila@usna.edu

Postdoc: US Naval Academy, Annapolis MD

Cyber-Physical Anomaly Detection in Electric Power Systems

The Resilient Cyber-Physical Systems group at the United States Naval Academy is seeking a candidate for a funded two-year postdoctoral position with the possibility of renewal. The research is sponsored by the Office of Naval Research (ONR) and is subject to availability of funds. This research position involves:

1. Conducting research on detection of anomalies and attacks on small-scale power grids also known as microgrids.
2. Instrumentation and hardware testing on a low voltage, low power research test-bed microgrid.
3. Assisting undergraduate independent research projects.

The appointee will be expected to work closely with USNA faculty, students, multi-university research collaborators, experts from Navy Labs and other DOD entities, and private industry. A variety of active projects span academic, government, and industrial research. The academy is a charter member of the Electric Ship Research and Development Consortium (www.esrdc.com) and heavily involved with various Naval labs and program offices. The supervising faculty have a mix of experience in academia, industry, Navy ship design offices, and as active-duty Naval officers. Applicants must have a Ph.D. in electrical engineering, mechanical engineering, control systems engineering, math, computer science, physics or a closely related area.

Please see the full ad here:

<http://www.usna.edu/HRO/jobinfo/CyberAnomalyPowerPostDoc.php>

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6.25. Faculty: Harbin Institute of Technology, Shenzhen, China

Contributed by: Yunjiang LOU, louyj@hit.edu.cn

Faculty: Dept. of Automation, Harbin Institute of Technology, Shenzhen, China

Assistant Professor, Associate Professor, and Full Professor positions are open for application.

Harbin Institute of Technology, Shenzhen (HITSZ) is pleased to announce openings for faculty positions and is inviting highly qualified applicants to join the Department of Automation in areas related to control system engineering.

About the university

Founded in 1920, Harbin Institute of Technology (HIT) has remained on the top 10 list of the Best Universities in China. HIT enjoys the fame as the leading engineering school in China.

In 2002, HIT and the Shenzhen Municipal Government created HIT Shenzhen Graduate School (HITSZ) in the University Town of Shenzhen. Together with Graduate Schools of Tsinghua and Peking University, HITSZ is an indispensable part of the Shenzhen-Hong Kong research and innovation base. We strive to maintain the academic excellence of HIT, and we are dedicated to top quality, innovation and internationalization.

HITSZ is a publicly funded institute located in the center of China's Silicon Valley: The Shenzhen High Tech Park. New faculty members will have the opportunity to participate in building the department and moving it forward in exciting new directions. Ample opportunities also exist for collaborating with the vast manufacturing, IT and other high-tech industries in the region.

Who should apply?

Strong applicants with a PhD degree in control, systems, computer vision, robotics, manufacturing, mechatronics, big data and machine learning, and other related areas will be considered (the medium of instruction is English). The appointments will be made at the level of assistant professor, associate professor, full professor (applications for visiting appointments/postdoctors will also be considered).

Salary and Benefits

HITSZ offers performance-based fast promotion scheme, competitive salaries, medical benefits, and accommodation allowance.

What is required in an application pack?

- A covering letter
- A full academic CV
- Personal Statement (including statement of teaching and research)
- Transcript of grades for B.Sc., M.Sc., and Ph.D. degrees
- Details of three references

Application deadline is December 31, 2017; however, review of applications will begin immediately so applicants are encouraged to apply early. Interested candidates should send their application pack for consideration to Ms. Hong Yuan (yuanhong@hit.edu.cn). All inquiries should be addressed to Ms. Hong Yuan (yuanhong@hit.edu.cn).

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6.26. Faculty: Zhejiang University of Technology, China

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

Faculty Position: Zhejiang University of Technology , Hangzhou, China

<http://www.auto.zjut.edu.cn/WebSite/Job/JobList.aspx>

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

Zhejiang University of Technology (ZJUT), sitting by the beautiful West Lake, Hangzhou, is a Zhejiang Province and the Ministry of Education co-supported, provincially governed key university, who owns one of the only 14 Collaborative Creation Centers in the first initiative of the state "2011 Program". ZJUT has its beautiful campus covering more than 3000 mu, which accommodates 24 Colleges, more than 37,000 full-time students and more than 3,300 staffs. ZJUT is proudly to have 2 self-owned and 2 sharing Fellows of the Chinese Academy of Engineering, as well as more than 1400 faculties with senior professional titles. ZJUT

has State Key Disciplines, State Engineering Research Centers, State University Science Parks, Centers for Postdocs, as well as the power of awarding Doctors, Masters, MBAs and recruiting foreign students and those from Hong Kong, Macao and Taiwan.

The Control Science and Engineering Discipline within the College of Information Engineering was one of the Priority-among-Priorities Disciplines (selected by Zhejiang Provincial Government in 2009), and is now one of the Zhejiang First-Class (Class A) Disciplines in the first initiative of the Program in 2015. The Discipline now has the Doctoral Program at the first-level discipline, the Center for Postdocs, and the Zhejiang Collaborated Key Laboratory of Embedded Systems. The College of Information Engineering where the Discipline is in has 5 undergraduate programs: Automation, Electrical Engineering and Its Automation, Electronic Information Engineering, Communication Engineering, and Electronic Science and Technology. The Discipline is now recruiting faculties in the following areas at the levels of State and Zhejiang Provincial “1000 Plan” high-level talents, Zhejiang “Qianjiang Scholars”, ZJUT “Yunhe Specially-Appointed Professors”, “ZJUT Professors”, outstanding PhDs and postdocs, etc.

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

A. Selection criteria

High-level talents (Changjiang Scholars, 1000 Plan Scholars, Qianjiang Scholars, etc.) You have major achievements and influence in your research area that have already been recognized by national and international researchers, or have great potentials of future development; You also meet the criteria of corresponding talents programs.

ZJUT Professors /Associate Professors You have a PhD degree obtained from a recognized university or research institutes with at least one year of oversea research experience in a well-known foreign institute; You have research achievements recognized by national and international researchers; Your application also passes the review process at the university level (ZJUT).

Outstanding PhDs/Postdocs You have a PhD degree obtained from a recognized university or research institute; You have high-quality research outputs and the professional skills required by a university lecturer, and great potentials of your future career.

B. Salary and welfare

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

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

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

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

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

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

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

C. Required documents

(1) One self-recommendation letter covering your study and professional records, your teaching and research statements, your achievements, your work plan as well as your possible requirements from us.

(2) A list of your research funds, awards, and publications in the recent five years.

D. Contact us

Dr. Qiu,

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6.27. Automation Engineer: Sunnyvale, CA, USA

Contributed by: Erik Timmermans, et@personifysearch.com

Automation Engineer, Controls

Location: Sunnyvale, CA

The Company: A world leader in automated molecular diagnostics.

Job Summary:

Work in conjunction with Automation Engineering team to design and develop automated assembly equipment for the high volume production of diagnostic disposables. Candidates should have hands on experience in design and development of PLC based control systems for use in factory automation.

Responsibilities:

- Configure, program, test and troubleshoot PLC based control systems and associated components.
- Configure, program, test and troubleshoot User Interface (UI) software for PLC based control systems.
- Configuration of data collection system and MES integration on RSBizware platform
- Electrical design, testing, and commissioning of control systems, control panels, and associated equipment.

- Documentation of PLC architecture and unit testing results.
- Management of bug tracking and feature requests.
- Support, update, and troubleshoot existing systems in production.
- Specify system components and suppliers.
- Participate in design reviews.
- Support for systems installation and commissioning.

Required Knowledge, Skills, and Abilities

- BS in Engineering or equivalent combination of education and experience to perform at this level
- Minimum 5 years direct experience
- PLC program design and development Allen-Bradley RSView, ControlLogix, factory talk transaction manager and associated components required
- Minimum 5 years direct experience
- Industrial automation industry experience preferred
- Medical manufacturing experience preferred
- Hands on experience with electrical troubleshooting in a high-volume automated manufacturing environment required

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