E-Letter on Systems, Control, & Signal Processing
Issue 388, December 2020

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Welcome to Issue 388 of the CSS E-letter available here.

– To submit new articles, visit article submissions on the E-Letter website.
– To **subscribe**, send an empty email to eletter-css-join@lists.it.utsa.edu and you will be automatically subscribed to the CSS E-Letter.
– To **unsubscribe**, please send a blank email to eletter-css-leave@lists.it.utsa.edu and you will be automatically unsubscribed.

The next E-Letter will be mailed out at the beginning of January 2021.

Contents

1   IEEE CSS Headlines

1.1. Become a CSS Member
        Contributed by: Ahmad Taha, ahmad.taha@utsa.edu

Become a CSS Member by visiting the following link https://bit.ly/2ZBWCCs.

1.2. Follow the CSS Social Media Accounts
        Contributed by: Ahmad Taha and Ankush Chakrabarty ahmad.taha@utsa.edu, chakrabarty@merl.com

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Like us on Facebook https://facebook.com/CSSIEEE

1.3. CSS Technically Cosponsored Events
        Contributed by: Luca Zaccarian, CSS AE Conferences, zaccarian@laas.fr

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

- 2020 IEEE 17th India Council International Conference (INDICON 2020). New Delhi, India. December 11-13, 2020. http://www.indicon2020.in/

- 29th Mediterranean Conference on Control and Automation (MED 2021). Brindisi, Italy. June 22-25, 2021. http://www.med2021.poliba.it/

- 25th International Conference on Methods and Models in Automation and Robotics (MMAR 2020). Miedzyzdroje, Poland. August 23-26, 2021. http://www.mmar.edu.pl

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

1.4. CSS Publications Content Digest
Contributed by: Kaiwen Chen, kaiwen.chen16@imperial.ac.uk

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.

Back to the contents

1.5. Deadline Extension: TCNS Special Issue on Dynamics in Social Networks
Contributed by: Alex Olshevsky, alexols@bu.edu

Deadline Extension: Special Issue of TCNS on Dynamics and Behaviors in Social Networks

The aim of this special issue is to consolidate this trend, by giving a broad overview of the state of the art of the field, gathering together various samples of on-going research in the field, and presenting relevant research opportunities on dynamics and behaviors in social networks in which the control community could play a key role. In particular, we would like to also invite contributions by joint teams (e.g., from control systems and social sciences or economics) describing in control terms some challenges faced by the social scientists in their understanding of the opinion dynamics phenomena, or recent unexplained observations.

We expect to receive papers dealing with concepts such as dynamical modeling, stability, robustness, influence of network topology on the dynamics, but also parametric identification, and perhaps even the use of feedback. The Special Issue is focused mostly on papers with methodological contribution, but interdisciplinary papers containing also experimental research will also be considered.

- Submissions open: June 15, 2020
- Submissions deadline: Dec 20, 2020 (Deadline Extension)
- Completion of first round review: January 2021
- Acceptance: June 2021
- Final submission due: August 2021
- Tentative publication date: September 2021

Information on the submission process and manuscript format can be found at:
https://cemse.kaust.edu.sa/tcns/information-authors

Guest Editors
- Claudio Altafini, Department of Electrical Engineering Linkoping University, SE-58183 Linkoping, Sweden; claudio.altafini@liu.se
- Giacomo Como, Department of Mathematical Sciences Politecnico Di Torino, Torino, Italy; giacomo.como@polito.it

• Julien M. Hendrickx, Department of Mathematical Engineering, ICTEAM Institute, UCLouvain, Louvain-la-Neuve, Belgium; julien.hendrickx@uclouvain.be

• Alex Olshevsky, Department of Electrical and Computer Engineering Boston University, Boston, MA, USA; alexols@bu.edu

• Alireza Tahbaz-Salehi, Kellogg School of Management Northwestern University, Evanston, IL, USA; alirezat@kellogg.northwestern.edu

1.6. Women in Control event at the CDC 2020
Contributed by: Afef Fekih, afef.fekih@louisiana.edu

Webinar: Overcoming Hidden Biases that hinder our success
Speaker: Dr. Shawn Andrews
Date: December 15, 2020, 17:30-18:30 (UTC)
Zoom access: https://zoom.us/j/98430572740?pwd=NXd5SWVRUnhlOVM3UnMwbjYxaytRdz09

Abstract: By now, most of us know that unconscious biases affect the workplace. These hidden, reflexive preferences shape our world views and can profoundly affect how welcoming and open a workplace is to different people and ideas. These predispositions shape the decisions we make by affecting the way we interpret information and how we interact with others—significantly impacting a whole host of organizational processes from recruitment to retention.

At the same time, we are experiencing significant shifts in global demographic trends which impact age, race, ethnicity, gender, religion, and LGBTQ employees. There is no doubt that our workplace is becoming more diverse, which increases the potential for more biases.

Customized bias scenarios (based on your audience) and real-world cases will be discussed. Several individual and organizational strategies to minimize bias will be provided. During this interactive presentation, you will learn how to:
- Identify the different types, causes and impact of bias at work
- Explore the impact of global demographic trends on diversity and bias
- Utilize case studies and stories to communicate potential biases
- Apply individual and organizational strategies to minimize bias

Biography: www.drshawnandrews.com

Dr. Shawn Andrews is a keynote speaker, organizational consultant, business school professor, and author of the best-selling book, The Power of Perception: Leadership, Emotional Intelligence, and the Gender Divide (2018 Morgan James Publishing). She is a Forbes contributor, quoted in the Chicago Tribune, interviewed on dozens of podcast and radio shows, including NPR, and is a Women's Media Center SheSource expert. With over two decades of corporate experience in the biopharmaceutical industry, she has helped thousands of leaders improve and develop using presentations, workshops, coaching, and psychological instruments. She serves as professor at both UC Irvine Paul Merage School of Business and Pepperdine Graziadio Business School, teaching courses on Women and Leadership, Organizational Behavior, Diversity in Organizations, and Leadership and Ethics. Her specific areas of focus include Organizational Leader-

ship, Learning & Development, Talent Management, Diversity & Inclusion, and Unconscious Bias. Shawn is founder and CEO of Andrews Research International.

2 Miscellaneous

2.1. In Memoriam: Professor Duan Li
Contributed by: Tsan-Ming Choi, jason.choi@polyu.edu.hk

Professor Duan Li, Chair Professor of Operations Research at the City University of Hong Kong (CityU) passed away on November 16, 2020.

Professor Li served as Associate Provost (from Dec 2017 to Dec 2019) at CityU. He led the task force to establish CityU's School of Data Science in July 2018 and served as Acting Dean from July, 2018 to January, 2020. Before he joined CityU in December, 2017, he was on the faculty of the Chinese University of Hong Kong (CUHK) from 1994 to 2017, where he was Patrick Huen Wing Ming Professor of Systems Engineering and Engineering Management, and served as Department Chair from 2003 to 2012 and the Director of the Center for Financial Engineering from 2014 to 2017. He was also the founding Director of the Master of Science Programme in Financial Engineering at CUHK (Shenzhen).

Professor Li graduated from Fudan University, received his M.E. degree in automatic control from Shanghai Jiaotong University, and received his Ph.D. degree in systems engineering from Case Western Reserve University. From 1987 to 1994, he was a faculty member in the Department of Systems Engineering at the University of Virginia, where he also served as the Associate Director of the Center for Risk Management of Engineering Systems.

Professor Li was a renowned expert in optimization, financial engineering, operations research, systems engineering, and optimal control. He pioneered the multi-period dynamic mean-variance portfolio selection studies, and made seminal contributions to non-convex optimization and dual control. Professor Li published over 200 journal papers, and was the co-author of Nonlinear Integer Programming (Springer, 2006).

Through his long career, Professor Li influenced generations of students and scholars. A humble, kind and generous person, he was widely admired and well liked by his friends, colleagues and students. In 2017, his former students and associates edited a Springer Handbook on Optimization and Control for Systems in the Big-Data Era and a special issue in Risk Analysis to honor his academic achievements.

More tributes to Professor Li can be found at the following websites:
http://www.se.cuhk.edu.hk/obituary-for-prof-li-duan/
https://www.sdsc.cityu.edu.hk/news-events/news

2.2. International Graduate School on Control
Contributed by: Antoine Girard, antoine.girard@l2s.centralesupelec.fr

2021 International Graduate School on Control (EECI-IGSC-2021)

The EECI-IGSC-2021 will be proposing 22 independent courses to be held between February and July 2021.

The detailed program with course summaries can be found on the EECI website:
http://www.eeci-igsc.eu/igsc-program-2021/

The registrations will open December 2, 2020. The deadline for early registration to the modules M01 to M09 is 12 January 2021 and to the modules M10 to M22 is 28 March 2021.

3   Journals

3.1. CFP: Nonlinear Analysis: Hybrid Systems
Contributed by Kai Cai:, kai.cai@eng.osaka-cu.ac.jp

CFP: Nonlinear Analysis: Hybrid Systems
Special Issue: "Security, Privacy and Safety of Cyber-Physical Systems"
Guest Editors: Kai Cai, Osaka City University (kai.cai@eng.osaka-cu.ac.jp)
Maria Prandini, Politecnico di Milano (prandini@elet.polimi.it)
Xiang Yin, Shanghai Jiao Tong University (yinxiang@sjtu.edu.cn)
Majid Zamani, University of Colorado Boulder (Majid.Zamani@colorado.edu)

Cyber-physical systems are engineered systems that are built from and depend upon the synergy of computational and physical components. They are pervasive in today's technological society. Cyber-physical systems usually involve complex interactions of continuous dynamics with discrete logic, referred to as "hybrid" behavior. The development of controller design and verification algorithms for such complex systems are crucial and challenging tasks, due in particular to the theoretical difficulties of analyzing hybrid behavior and to the computational challenges associated with the synthesis of hybrid controllers.

Ever-increasing demands for safety, privacy, security and certification of cyber-physical systems put stringent constraints on their analysis and design, and necessitate the use of formal model-based approaches. In recent years, we have witnessed a substantial increase in the use of formal techniques for the verification and design of privacy-sensitive, safety-critical cyber-physical systems.

The main objective of this special issue to gather recently developed novel approaches devoted to analysis and enforcement of security, privacy and safety of cyber-physical systems using formal techniques. We seek submissions including but not limited to the following topics:
– Security and privacy analysis of cyber-physical systems, including opacity, differential privacy, noninterference and other related notions
– Fault diagnosis, intrusion detection, and attack mitigation of cyber-physical systems
– Supervisory control for safety of discrete-event systems
–Formal methods and reactive synthesis for safety of cyber-physical systems
– Data-driven verification and synthesis of cyber-physical systems
– Distributed approaches for large scale cyber-physical systems and hybrid systems
– Algorithms and tools for verification and synthesis of safety-critical systems
– Applications in security and/or safety of manufacturing systems, transportation systems, energy systems, robotic networks, telecommunications, and computer networks.

Submission Information:
• Deadline: December 31, 2020
• Website: https://www.editorialmanager.com/NAHS/default.asp
• Article type (identifier of this special issue): VSI: Security

3.2. CFP: Control Engineering Practice
Contributed by: Johannes Schiffer, schiffer@b-tu.de

Call For Papers: Control Engineering Practice - Special Issue on Smart Technologies for Net-zero Emissions Energy Systems

The future global economy will be greatly shaped by the transformed energy landscape and a net-zero transition in energy-intensive processes and systems. While significant progress has already been made towards renewable and clean electric power generation and electrification of heating and on-road light vehicles, an increasing number of additional sectors are facing major challenges in electrification and de-carbonisation. These include e.g., high-energy manufacturing and heavy-duty transportation. At the same time, large uncertainties and variabilities in both energy supply and energy demand are becoming a norm, with climate change and unexpected natural and public health disasters and risks further aggravating the existing challenges. These developments call for both technological innovations in different sectors and the coordinated integration of the whole energy chain from top to tail. As an enabling technology, control engineering can play a paramount role in successfully establishing the forthcoming green energy era by accelerating sectoral decarbonisation and creating synergy effects across decarbonisation pathways for different systems.

This special issue aims to showcase the latest developments of smart technologies in modelling, control and optimization of hybrid energy systems across different sectors, with a focus on their synergy to deliver the net-zero emission target. Practical contributions towards control engineering and applications are invited on topics that include, but are not limited to:
• Advanced modelling, scheduling, operation and control techniques for
• accelerating the use of renewable energy in manufacturing;
• supporting renewable power integration with on-road transport electrification infrastructure;
• electrification and energy storage in maritime shipping;
• integration of renewable power generation and energy storage with railway electrification;
• Interpretable artificial intelligence and immersive virtual reality to improve the resilience and responsiveness of manufacturing processes for a net zero transition;
• New sensing and IoT techniques for integration of smart energy systems with intelligent manufacturing;
• Planning, operation and control of district heating and cooling combined with renewable energy sources;
• Power electronic control in renewable power generation and their integration with transport electrification;
• Case studies and emerging industrial applications to promote net-zero transitions.

We encourage submissions containing experimental results. In the absence of experiments, practical simulation examples would be required.

Control Engineering Practice is a premier journal that publishes papers with direct applications of profound control theory and its supporting tools in all possible areas of automation. Through this special issue, we hope to attract more academic researchers and industrial practitioners to work and shape this new, fascinating and vital area.

Timeline: Submission 31 December 2020; Acceptance 31 May 2021

For further information, please see
https://www.journals.elsevier.com/control-engineering-practice/call-for-papers/special-issue-on-smart-technologies

Guest Editors:
- Kang Li, University of Leeds, UK, eenkl@leeds.ac.uk
- Jianzhong Wu, Cardiff University, UK, wuj5@cardiff.ac.uk
- Johannes Schiffer, Brandenburg University of Technology, Germany, schiffer@b-tu.de
- Xinbo Ruan, Nanjing University of Aeronautics and Astronautics, China, ruanxb@nuaa.edu.cn
- Jin Ma, North China Electric Power University, China, hdmajing@163.com

3.3. International Journal of Control
Contributed by: Bing Chu, b.chu@soton.ac.uk

International Journal of Control
Volume 93, Issue 12, 2020
http://www.tandfonline.com/toc/tcon20/current

Papers:

- Trajectory tracking control based on a virtual closed-loop system for autonomous underwater vehicles, Xing Liu, Mingjun Zhang & Zeyu Chen, pages: 2789-2803
- Stackelberg game-based decentralised supply chain coordination considering both futures and spot markets, Suli Zou , Zhongjing Ma , Peng Wang & Xiangdong Liu, pages: 2804-2813
- Recomposable restricted finite state machines: definition and solution approaches, Jinwoo Seok & Anouck Girard, pages: 2814-2823
- Finite-time synchronisation and passivity of coupled memristive neural networks, Yan-Li Huang , Shui-Han Qiu & Shun-Yan Ren, pages: 2824-2837
- Robust adaptive control for switched nonlinearly parameterised systems with dynamic uncertainties, Li-jun Long, pages: 2838-2847
- Consensus of hybrid multi-agent systems with heterogeneous dynamics, Qi Zhao , Yuanshi Zheng & Yunru Zhu, pages: 2848-2858
- Disturbance observer-based elegant anti-disturbance saturation control for a class of stochastic systems, Lewei Dong , Xinjiang Wei , Xin Hu , Huifeng Zhang & Jian Han, pages: 2859-2871
- A robust adaptive control design for the rotor speed control of variable speed wind turbines, Baris Bidikli, pages: 2872-2885
- Robust stability and boundedness of stochastic differential equations with delay driven by G-Brownian motion, Yong Ren , Rathinasamy Sakthivel & Guozheng Sun, pages: 2886-2895
- An easy design for interval observers, Luc Meyer , Dalil Ichalal & Vincent Vigneron, pages: 2896-2907
- Robust analysis of discrete time noises for stochastic systems and application in neural networks, Lichao Feng , Jinde Cao & Lei Liu, pages: 2908-2921
- Output feedback stabilisation of parallel coupled string equations with matched boundary disturbance, Tianfu Ma & Feng-Fei Jin, pages: 2922-2930

- Continuous finite-time regulation of Euler-Lagrange systems via energy shaping, Emmanuel Cruz-Zavala , Emmanuel Nuño & Jaime A. Moreno, pages: 2931-2940
- Predefined-time stabilisation of a class of nonholonomic systems, Juan Diego Sánchez-Torres , Michael Defoort & Aldo Jonathan Muñoz-Vázquez, pages: 2941-2948
- Sampled-data observer design for delayed output-injection state-affine systems, Fabien Cuny , Rachid Lajouad , Fouad Giri , Tarek Ahmed-Ali & Vincent Van Assche, pages: 2949-2959
- Structurally variable control of Lurie systems, L. T. Gruyitch , Z. M. Bučevac , R. Ž. Jovanović & Z. B. Ribar, pages: 2960-2972
- Cluster output regulation of heterogeneous multi-agent systems, Kairui Chen , Junwei Wang , Xianxian Zeng , Yun Zhang & Frank L. Lewis, pages: 2973-2981
- Optimal reinsurance and investment problem with default risk and bounded memory, Chao Deng , Wenlong Bian & Baiyi Wu, pages: 2982-2994
- On the equivalence between the unbiased minimum-variance estimation and the infinity augmented Kalman filter, Bo Ding , Tianping Zhang & Huajing Fang, pages: 2995-3002
- On global trajectory tracking control of robot manipulators in cylindrical phase space, Aleksandr Andreev & Olga Peregudova, pages: 3003-3015
- Stability of square-mean almost automorphic mild solutions to impulsive stochastic differential equations driven by G-Brownian motion, Lanying Hu , Yong Ren & R. Sakthivel, pages: 3016-3025
- Stability and convergence properties of forced infinite-dimensional discrete-time Lur'e systems, Max E. Gilmore , Chris Guiver & Hartmut Logemann, pages: 3026-3049

Back to the contents

3.4. IET Control Theory & Applications
Contributed by: Jessica Jones, jessicajones@theiet.org

IET Control Theory & Applications
Volume 14, November 2020
https://digital-library.theiet.org/content/journals/iet-cta/14/17

Research Articles:

- Gang Xu ; Yuanqing Xia ; Di-Hua Zhai ; Dailiang Ma, Adaptive prescribed performance terminal sliding mode attitude control for quadrotor under input saturation, DOI: 10.1049/iet-cta.2019.0488
- Jie Yuan ; Jie Han ; Lin Chai ; Shumin Fei ; Yang Quan Chen, First-order plus time-delay systems under the effects of actuator rate limit, DOI: 10.1049/iet-cta.2019.1110
- Jiyong Lu ; Weizhen Wang ; Li Li ; Yanping Guo, Distributed fusion estimation for non-linear networked systems with random access protocol and cyber attacks, DOI: 10.1049/iet-cta.2020.0040
- Yakun Zhu ; Haoran Li ; Hongjun Duan, Consensus of multi-agent system based on novel avoidance function and unequal avoidance strategy, DOI: 10.1049/iet-cta.2019.1275
- Dinh Cong Huong and Nguyen Huu Sau, L-Infinity gain analysis for discrete-time positive singular systems with unbounded time-varying delays , DOI: 10.1049/iet-cta.2019.0933
- Lili Wei ; Mou Chen ; Tao Li, Dynamic event-triggered cooperative formation control for UAVs subject to time-varying disturbances, DOI: 10.1049/iet-cta.2020.0342
- Huan Xu ; Fengying Ma ; Feng Ding ; Ling Xu ; Ahmed Alsaedi ; Tasawar Hayat, Data filtering-based recursive identification for an exponential autoregressive moving average model by using the multi-innovation

theory, DOI: 10.1049/iet-cta.2020.0673

- Elisa Capello ; Takayuki Wada ; Elisabetta Punta ; Yasumasa Fujisaki, Trade-off between power extraction maximisation and fatigue reduction in wind farms via second-order sliding mode control and min–max optimisation, DOI: 10.1049/iet-cta.2019.1088

- Y. Batmani and S. Khodakaramzadeh, Non-linear estimation and observer-based output feedback control, DOI: 10.1049/iet-cta.2019.1234

- Yangyang Zhang ; Xiaohui Yang ; Peng Wei ; Peter Xiaoping Liu, Fractional-order adaptive non-singular fast terminal sliding mode control with time delay estimation for robotic manipulators, DOI: 10.1049/iet-cta.2019.1302

- Guodong Zhao ; Haitao Li ; Ting Hou, Input–output dynamical stability analysis for cyber-physical systems via logical networks, DOI: 10.1049/iet-cta.2020.0197

- Yajing Yu ; Wencheng Zou ; Jian Guo ; Zhengrong Xiang, Distributed consensus tracking control of second-order non-linear multi-agent systems with unmodelled dynamics, DOI: 10.1049/iet-cta.2020.0438

- Ping Gong, Exponential bipartite consensus of fractional-order non-linear multi-agent systems in switching directed signed networks, DOI: 10.1049/iet-cta.2019.1241

- Shekoofeh Jafari Fesharaki ; Marzieh Kamali ; Farid Sheikholeslam ; Heidar Ali Talebi, Robust model predictive control with sliding mode for constrained non-linear systems, DOI: 10.1049/iet-cta.2019.1357

- Fabio Barbieri and Oswaldo L. V. Costa, Mean-field formulation for the infinite-horizon mean–variance control of discrete-time linear systems with multiplicative noises, DOI: 10.1049/iet-cta.2020.0442

- Hao Ma ; Xiao Zhang ; Qinyao Liu ; Feng Ding ; Xue-Bo Jin ; Ahmed Alsaedi ; Tasawar Hayat, Partially-coupled gradient-based iterative algorithms for multivariable output-error-like systems with autoregressive moving average noises, DOI: 10.1049/iet-cta.2019.1027

- Simone Fiori ; Italo Cervigni ; Mattia Ippoliti ; Claudio Menotta, Extension of a PID control theory to Lie groups applied to synchronising satellites and drones, DOI: 10.1049/iet-cta.2020.0226

- Liu Liu, Robust stability analysis for feedback systems with simultaneous uncertainties via IQCs, DOI: 10.1049/iet-cta.2019.0303

- Xiaodong He and Zhiyong Geng, Globally convergent leaderless formation control for unicycle-type mobile robots, DOI: 10.1049/iet-cta.2019.1354

- Chunyan Wang ; Huan Li ; Mengqi Zhang, Asynchronously switching control for a class of switched neutral systems: a novel discontinuous Lyapunov function approach, DOI: 10.1049/iet-cta.2020.0346

Brief Papers:

- Cong Wang ; Cheng-Lin Liu ; Shuai Liu, Robust fixed-time connectivity-preserving consensus for second-order multi-agent systems with external disturbances, DOI: 10.1049/iet-cta.2019.1487

- Seok-Kyoon Kim and Choon Ki Ahn, Sensorless non-linear position-stabilising control for magnetic levitation systems, DOI: 10.1049/iet-cta.2020.0295

- Jing Wang ; Yansheng Liu ; Haitao Li, Impulsive control design for output tracking of probabilistic Boolean control networks, DOI: 10.1049/iet-cta.2020.0347

- Bo Ding and Tianping Zhang, Equivalence of recursive three-step filter and infinity augmented Kalman filter for linear discrete-time stochastic systems with direct feedthrough, DOI: 10.1049/iet-cta.2019.1387

- Manisha Bhandari ; Deepak Fulwani ; B. Bandopadhyay ; Rajeev Gupta, Reduced-order event-triggered controller for a singularly perturbed system: An active suspension case, DOI: 10.1049/iet-cta.2019.0864

3.5. Asian Journal of Control
Contributed by: Li-Chen Fu, lichen@ntu.edu.tw

Asian Journal of Control
Vol. 22, No. 6 November, 2020
https://onlinelibrary.wiley.com/toc/19346093/2020/22/6

Special Section Papers:

1. Paper Title: Editorial for Special Section "CACS18: Modelling and Control for Practical Systems"
Author: Shing-Tai Pan
2. Paper Title: Using Self-Clustering Algorithm and Type-2 Fuzzy Controller for Multi-robot Deployment and Navigation in Dynamic Environments
Authors: Cheng-Jian Lin, Jyun-Yu Jhang, Chin-Ling Lee and Kuu-young Young
3. Paper Title: Mixed Performance Analysis of Continuous Switched Systems With Time-Varying Random Delay
Authors: Chang-Hua Lien, K.W. Yu and Hao-Chin Chang
4. Paper Title: Virtual Feed Drive System of Machine Tools Development and Applications on Diagnosis and Servo-tuning
Authors: Ching-Hung Lee and Ko-Fei Lee
5. Paper Title: An Observer-Based Exponential Synchronization Scheme for Chaotic Systems: Using Advanced Encryption Standard as Auxiliary
Author: Feng-Hsiag Hsiao
6. Paper Title: Fuzzy-HMM Modeling for Emotion Detection Using Electrocardiogram Signals
Authors: Shing-Tai Pan and Wei-Ching Li

Regular Papers:

1. Paper Title: Leader-Following Consensus of Heterogenous Fractional-Order Multi-Agent Systems Under Input Delays
Authors: Wei Hu, Guoguang Wen, Ahmed Rahmani, Jing Bai and Yongguang Yu
2. Paper Title: Stabilization of A Stock-Loan Valuation Pde Process Using Differential Flatness Theory
Authors: Gerasimos G. Rigatos, Pierluigi Siano, Vicenzo Loia and Taniya Ghos
3. Paper Title: Robust and Guaranteed Output-Feedback Force Control of Piezoelectric Actuator Under Temperature Variation and Input Constraints
Authors: Micky Rakotondrabe, Mounir Hammoiuche and Philippe Lutz
4. Paper Title: Robust Tracking Control of an Aircraft with Critical Actuator Jam Failures
Authors: Bor-Chin Chang, Po-Chun Chan, Mevlut Bayram, Harry Kwatny and Christine Belcastro
5. Paper Title: Robust Mittag-Leffler Stabilisation of Fractional-Order Systems
Authors: Aldo Jonathan Muñoz Vázquez, Vicente Parra-Vega, Anand Sanchez and Fernando Martinez Reyes
6. Paper Title: Manipulability Analysis of a Snake Robot Without a Lateral Constraint for Head Position Control
Authors: Ryo Ariizumi and Motoyasu Tanaka
7. Paper Title: Backward Stochastic Differential Equations with Non-Lipchitz Time Delayed Generators

Authors: Auguste Aman and Harouna Coulibaly

8. Paper Title: Adaptive High Order Sliding Mode Controller-Observer for Mimo Uncertain Nonlinear System

Authors: Rim Hendel, Farid Khaber and Najib Essounbouli

9. Paper Title: Development of Itˆo-Type Controller for Vehicle Active Suspension Under Mismatched Uncertainty and Multiplicative Perturbations

Authors: Hamed Kebriaei and Alireza Ramezani

10. Paper Title: Enhancing Dynamic Operation Optimization Feasibility for Constrained Model 11. Predictive Control Systems

Authors: Shaoyuan Li, Xiaowen Qi and Yi Zheng

11. Paper Title: Regulation of Game Result for N-Person Random Evolutionary Boolean Games

Authors: Haitao Li, Xueying Ding and Alsaadi Fuad

12. Paper Title: Adaptive Dynamic Surface Control of Switched Mimo Nonlinear Systems with Input Saturation and Its Application to Nsvs

Authors: Lijun Long, Bohong Ye and Jun Zhao

13. Paper Title: Robust Consensus of Fractional-Order Singular Uncertain Multi-Agent Systems

Authors: Huan Pan, Xinghuo Yu, Guohua Yang and Li Xue

14. Paper Title: Distributed Input Observer-Based Consensus for The Leader-Following Multi-Agent Systems

Authors: Wanli Guo and Min Zou

15. Paper Title: Parametric Control to Linear Time-Varying Systems Based On Dynamic Compensator and Multi-Objective Optimization

Authors: Da-Ke Gu, Da-Wei Zhang and Guang-Ren Duan

16. Paper Title: Distributed Optimization for Economic Power Dispatch with Event-Triggered Communication

Authors: Xiasheng Shi, Ronghao Zheng, Zhiyun Lin and Gangfeng Yan

17. Paper Title: Sampled-Data Output Feedback Stabilization for A Class of P-Norm Switched Stochastic Nonlinear Systems

Authors: Yan Jiang, Junyong Zhai and Hui Ye

18. Paper Title: Almost Periodic Motion Planning and Control for Double Rotary Pendulum with Experimental Validation

Authors: Zeguo Wang, Leonid B. Freidovich and Honghua Zhang

19. Paper Title: Social Optimal Mean Field Control Problem for Population Growth Model

Authors: Yujuan Huang, Wenguang Yu and Haodong Liu

20. Paper Title: Control for Networked Control Systems with Packet Dropout and Delay

Authors: Xiao Liang, Lei Yang, Xiao Lu, Haixia Wang and Zhiguo Zhang

21. Paper Title: New Results On the Robust Stability of Control Systems with A Generalized Disturbance Observer

Authors: Zhuoyun Nie, Qingguo Wang, Jinhua She, Ruijuan Liu and Dongsheng Guo

22. Paper Title: Adaptive Energy Management Strategy for Hybrid Batteries/Supercapacitors Electrical Vehicle Based On Model Prediction Control

Authors: Fazhan Tao, Zhumu Fu and Zhenhui Li

23. Paper Title: Finite-Time Reliable Dissipative Control of Neutral-Type of Switched Artificial Neural Networks with Non-Linear Fault Inputs and Randomly Occurring Uncertainties

Authors: Jinde Cao, Saravanakumar T, V.J. Nirmala, R. Raja and Guoping Lu

24. Paper Title: A Networked Hierarchical Control Scheme for Wide-Area Systems: A Power System Application
Authors: Ehsan Bijami, Morteza Khayyer and Malihe Maghfoori Farsangi
25. Paper Title: Robust Dissipative Control for Semilinear Markovian Jump Distributed Parameter Systems with Time-Varying Delay and Incomplete Transition Probabilities
Authors: Xiaona Song, Mi Wang, Shuai Song, Junwei Lu and Jingtao Man

Brief Papers:

1. Paper Title: Synchronization of Non-Linear Systems with Disturbances Subjected to Dead-Zone and Saturation Characteristics in Control Input Using Dmvt Approach
Authors: Ajul Dinesh and B. B. Sharma
2. Paper Title: Adaptive Finite-Time Neural Network Control for Redundant Parallel Manipulators
Authors: Shun-Feng Su, Truong Nguyen, Ning Wang and Wei Sun
3. Paper Title: Fault Severity Estimation in a Vehicle Cooling System
Authors: Saeed Seyedtabaii and M. Nemati
4. Paper Title: New Methods to Realize the Cluster Consensus for Multi-agent Networks
Authors: Jinling Liang, Xing Guo and Habib M. Fardoun
5. Paper Title: Robust Distributed Consensus Tracking Control for High-Order Uncertain Nonlinear Mass with Directed Topologies
Authors: Yao Yu, Jian Liu, Qing Wang and Changyin Sun

3.6. International Journal of Control, Automation, and Systems
Contributed by: Keum-Shik Hong, journal@ijcas.com

Papers:

- Deep RL Based Notch Filter Design Method for Complex Industrial Servo Systems, Tae-Ho Oh, Ji-Seok Han, Young-Seok Kim, Dae-Young Yang, Sang-Hoon Lee, and Dong-il "Dan" Cho*, pp.2983-2992
- Fault-tolerant Control Based on Fixed-time Observer for a 3-DOF Helicopter System, Xuebo Yang, Yujia Wang*, Jiae Yang, and Tong Wang, pp.2993-3000
- An Improved Sliding Mode Differentiator Combined with Sliding Mode Filter for Estimating First and Second-order Derivatives of Noisy Signals, Gyuho Byun* and Ryo Kikuuwe, pp.3001-3014
- Trajectory Tracking Control for Nonholonomic Wheeled Mobile Robots with External Disturbances and Parameter Uncertainties, Hui Ye* and Shuai Wang, pp.3015-3022

3.7. Automatica
Contributed by: Kay Tancock, k.tancock@elsevier.com

Automatica
Vol 121
November 2020

Regular Papers:

- Martin Lindfors, Tianshi Chen., Regularized LTI system identification in the presence of outliers: A variational EM approach
- Wenxiao Zhao, George Yin, Er-Wei Bai., Sparse system identification for stochastic systems with general observation sequences
- Antônio H. Ribeiro, Koen Tiels, Jack Umenberger, Thomas B. Schön, Luis A. Aguirre., On the smoothness of nonlinear system identification
- Tong Zhou., Regularity/controllability/observability of an NDS with descriptor form subsystems and generalized LFTs
- Jian Lan, X. Rong Li., Nonlinear estimation based on conversion-sample optimization
- Nilanjan Roy Chowdhury, Juri Belikov, Dmitry Baimel, Yoash Levron., Observer-based detection and identification of sensor attacks in networked CPSs
- Bing-Chang Wang, Huanshui Zhang, Ji-Feng Zhang., Mean field linear–quadratic control: Uniform stabilization and social optimality
- Kévin Colin, Xavier Bombois, Laurent Bako, Federico Morelli., Closed-loop identification of MIMO systems in the Prediction Error framework: Data informativity analysis
- Shunyi Zhao, Biao Huang., Trial-and-error or avoiding a guess? Initialization of the Kalman filter
- Valentina Breschi, Alberto Bemporad, Ilya V. Kolmanovsky., Cooperative constrained parameter estimation by ADMM-RLS
- Rômulo Meira-Góes, Eunsuk Kang, Raymond H. Kwong, Stéphane Lafortune., Synthesis of sensor deception attacks at the supervisory layer of Cyber–Physical Systems
- Victor G. Lopez, Frank L. Lewis, Yan Wan, Mushuang Liu, Katia Estabridis., Stability and robustness analysis of minmax solutions for differential graphical games
- Siqi Pan, James S. Welsh, Rodrigo A. González, Cristian R. Rojas., Efficiency analysis of the Simplified Refined Instrumental Variable method for Continuous-time systems
- Anthony Hastir, Joseph J. Winkin, Denis Dochain., Exponential stability of nonlinear infinite-dimensional systems: Application to nonisothermal axial dispersion tubular reactors

Brief Papers:

- Junjie Jiao, Harry L. Trentelman, M. Kanat Camlibel., A suboptimality approach to distributed H2 control by dynamic output feedback
- Yi Jiang, Jialu Fan, Weinan Gao, Tianyou Chai, Frank L. Lewis., Cooperative adaptive optimal output regulation of nonlinear discrete-time multi-agent systems
- Yu-Long Zhang, Min Zhu, Donghai Li, Jun-Min Wang., Dynamic feedback stabilization of an unstable wave equation

- Kiran Kumari, Bijnan Bandyopadhyay, Johann Reger, Abhisek K. Behera., Event-triggered sliding mode control for a high-order system via reduced-order model based design
- Seyed Shahabaldin Tohidi, Yildiray Yildiz, Ilya Kolmanovsky., Adaptive control allocation for constrained systems
- Yuan-Xin Li., Barrier Lyapunov function-based adaptive asymptotic tracking of nonlinear systems with unknown virtual control coefficients
- Hakkı Ulaş Ünal, Altuğ İftar., On strong stabilizability of MIMO infinite-dimensional systems
- Wenshan Su, Yunpeng Hu, Kebo Li, Lei Chen., Rigidity of similarity-based formation and formation shape stabilization
- Na Li, Guangchen Wang, Zhen Wu., Linear–quadratic optimal control for time-delay stochastic system with recursive utility under full and partial information
- Shu Liang, Xianlin Zeng, Guanpu Chen, Yiguang Hong., Distributed sub-optimal resource allocation via a projected form of singular perturbation
- Fernando H.D. Guaracy, Luís H.C. Ferreira., Loop transfer recovery design for synchronization of homogeneous linear multi-agent systems
- Hao Yu, Zhe Guan, Tongwen Chen, Toru Yamamoto., Design of data-driven PID controllers with adaptive updating rules
- Jiahao Huang, Daniel W.C. Ho, Fangfei Li, Wen Yang, Yang Tang., Secure remote state estimation against linear man-in-the-middle attacks using watermarking
- Uroš V. Kalabić, Ilya V. Kolmanovsky., A constraint-separation principle in model predictive control
- Huai-Ning Wu, Xiu-Mei Zhang., Exponential stabilization for 1-D linear Itô-type state-dependent stochastic parabolic PDE systems via static output feedback
- Tomas Ménard, Syed Ali Ajwad, Emmanuel Moulay, Patrick Coirault, Michael Defoort., Leader-following consensus for multi-agent systems with nonlinear dynamics subject to additive bounded disturbances and asynchronously sampled outputs
- Bhargav Jha, Zheng Chen, Tal Shima., On shortest Dubins path via a circular boundary
- Térence Bayen, Alain Rapaport, Fatima Zahra Tani., Improvement of performances of the chemostat used for continuous biological water treatment with periodic controls
- Jianan Wang, Zhengyang Zhou, Chunyan Wang, Zhengtao Ding., Cascade structure predictive observer design for consensus control with applications to UAVs formation flying
- Fabrizio Padula, Lorenzo Ntogramatzidis., Fixed poles in the disturbance decoupling by dynamic output feedback for systems with direct feedthrough matrices
- Bin Zhou., Finite-time stability analysis and stabilization by bounded linear time-varying feedback
- Zong-Yao Sun, Yanru Peng, Changyun Wen, Chih-Chiang Chen., Fast finite-time adaptive stabilization of high-order uncertain nonlinear system with an asymmetric output constraint
- Martin Goubej, Tomáš Vyhlídal, Miloš Schlegel., Frequency weighted H2 optimization of multi-mode input shaper
- Cristiano Maria Verrelli, Patrizio Tomei., New exponential convergence properties for Bernard–Praly observer and adaptive sensorless control of PMSMs
- Yunlei Zou, Chunjiang Qian, Shuaipeng He., A necessary and sufficient condition for stability of a class of planar nonlinear systems

3.8. Control Engineering Practice
Contributed by: Kay Tancock, k.tancock@elsevier.com

Control Engineering Practice
Vol 105
December 2020

Regular Papers:

- Ping Zhou, Jin Xie, Wenpeng Li, Hong Wang, Tianyou Chai., Robust neural networks with random weights based on generalized M-estimation and PLS for imperfect industrial data modeling
- Weijun Li, Hui Li, Sai Gu, Tao Chen., Process fault diagnosis with model- and knowledge-based approaches: Advances and opportunities
- M. Cervantes-Bobadilla, J. García-Morales, R.F. Escobar-Jiménez, J.A. Hernández-Pérez, V.H Olivares-Peregrino., Experimental implementation of a new control approach using an inverse neural network to on-demand hydrogen production
- Ryan P.C. de Souza, Marcos V. Moreira, Jean-Jacques Lesage., Fault detection of Discrete-Event Systems based on an identified timed model
- S. Kong, M. Bressel, M. Hilairet, R. Roche., Advanced passivity-based, aging-tolerant control for a fuel cell/super-capacitor hybrid system
- Shiqi Li, Shuai Zhang, Yan Fu, Haipeng Wang, Ke Han., Task-based obstacle avoidance for uncertain targets based on semantic object matrix
- Zijing Xu, Shihang Gao, Yuxiao Han, Jingqi Yuan., Modelling and feedback linearization based sliding mode control of diesel engines for waterjet propulsion vessels
- Mehdi Hosseinzadeh, Klaske van Heusden, Mahdi Yousefi, Guy A. Dumont, Emanuele Garone., Safety enforcement in closed-loop anesthesia—A comparison study
- J.C. Mayo-Maldonado, O.F. Ruiz-Martinez, G. Escobar, T.M. Maupong, J.C. Rosas-Caro., Power shaping control of DC–DC converters with constant power loads
- T. Sato, K. Fujita, N. Kawaguchi, T. Takagi, I. Mizumoto., Null-space-based steady-state tracking error compensation of simple adaptive control with parallel feedforward compensator and its application to rotation control

Virtual Special Section on Industrial Cyber-Physical Systems, Industrial Artificial Intelligence and Application; Edited by Jun Zhao, Henry Leung, Ziqiang Lang and Wei Wang.

- Hongqi Zhang, Linqing Wang, Zhongyang Han, Quanli Liu, Wei Wang., A robust data reconciliation method for fast metal balance in copper industry
Virtual Special Section on Marine Vehicles Control
- Dan Zhang, ZeHua Ye, PengCheng Chen, Qing-Guo Wang., Intelligent event-based output feedback control with Q-learning for unmanned marine vehicle systems
- Guibing Zhu, Yong Ma, Songlin Hu., Single-parameter-learning-based finite-time tracking control of underactuated MSVs under input saturation
- Chen Peng, ZhiPeng Li, Minjing Yang, Minrui Fei, Yulong Wang., An audio-based intelligent fault diagnosis method for belt conveyor rollers in sand carrier

3.9. Journal of Process Control
Contributed by: Kay Tancock, k.tancock@elsevier.com

Journal of Process Control
Vol 95
November 2020

Regular Articles:

- Ting Xue, Steven X. Ding, Maiying Zhong, Linlin Li., A distribution independent data-driven design scheme of optimal dynamic fault detection systems, pg.1-9
- Jiale Zheng, Chunhui Zhao., Enhanced canonical variate analysis with slow feature for dynamic process status analytics, pg.10-31
- Qinqin Zhu., Auto-regressive modeling with dynamic weighted canonical correlation analysis, pg.32-44
- Yi Liu, Han-Sheng Chen, Haibin Wu, Yun Dai, Zhengbing Yan., Simplified Granger causality map for data-driven root cause diagnosis of process disturbances, pg.45-54
- J. Harmand, A. Rapaport, D. Dochain., Increasing the dilution rate can globally stabilize two-step biological systems, pg.67-74
- Mohammad Hossein Roohi, Tongwen Chen., Generalized moving variance filters for industrial alarm systems, pg.75-85
- Ali Hakimzadeh, Valiollah Ghaffari., Designing of non-fragile robust model predictive control for constrained uncertain systems and its application in process control, pg.86-97

Special Issue on DYCOPS-CAB 2019:

- Martín Jamilis, Fabricio Garelli, Hernán De Battista, Eveline I.P. Volcke., Combination of cascade and feed-forward constrained control for stable partial nitration with biomass retention, pg. 55-66

3.10. System and Control Letters
Contributed by: Kay Tancock, k.tancock@elsevier.com

System and Control Letters
Vol 145
November 2020

Papers:

- Tobias Malzer, Hubert Rams, Markus Schöberl., On structural invariants in the energy-based in-domain control of infinite-dimensional port-Hamiltonian systems
- G.M. Sklyar, J. Woźniak, M. Firkowski., Exact observability conditions for Hilbert space dynamical systems connected with Riesz basis of divided differences
- Yuh Yamashita, Naoto Adachi, Ryo Nonaka, Koichi Kobayashi., Design of global smooth implicit control Lyapunov function for multiple-integrator system with input constraint

- Luca Benvenuti., An upper bound on the dimension of minimal positive realizations for discrete time systems
- Biao Wang, Jun-e Feng., Detectability of Boolean networks with disturbance inputs
- Haavard Holta, Ole Morten Aamo., Adaptive set-point regulation of linear n+1 hyperbolic systems with uncertain affine boundary condition using collocated sensing and control
- Liyan Wen, Gang Tao, Ge Song., Higher-order tracking properties of nonlinear adaptive control systems
- Haitao Li, Wenhui Dou., On reducible state variables of logical control networks
- Michel De Lara, Pedro Gajardo, Diego Vicencio., Comparison theorem for viability kernels via conic pre-orders
- Andrea Bisoffi, Claudio De Persis, Pietro Tesi., Data-based stabilization of unknown bilinear systems with guaranteed basin of attraction
- Rongjian Liu, Liujuan Mei, Jianquan Lu., K-memory-embedded insertion mechanism for opacity enforcement
- Paul Wijnbergen, Bart Besselink., Existence of decentralized controllers for vehicle platoons: On the role of spacing policies and available measurements
- Ryan Loxton, Qun Lin, Fabrizio Padula, Lorenzo Ntogramatzidis., Minimizing control volatility for nonlinear systems with smooth piecewise-quadratic input signals
- Tingyang Meng, Zongli Lin., Leader-following almost output consensus for linear multi-agent systems with disturbance-affected unstable zero dynamics
- Muhammad Zakwan, Saeed Ahmed., Dwell-time based stability analysis and L2 control of LPV systems with piecewise constant parameters and delay

Special Issue on Recent Advances on Infinite Dimensional Systems - Dedicated to Ruth F. Curtain

- Xiao-Hui Wu, Hongyinping Feng, Bao-Zhu Guo., Output feedback stabilization for 1-D wave equation with variable coefficients and non-collocated observation
- Hartmut Logemann., Some spectral properties of operator-valued positive-real functions
- Azahar Monge, Enrique Zuazua., Sparse source identification of linear diffusion–advection equations by adjoint methods

3.11. IFAC Journal of System and Control
Contributed by: Kay Tancock, k.tancock@elsevier.com

IFAC Journal of System and Control
Vol 14
December 2020

Regular Articles:

- Ryosuke Adachi, Yuh Yamashita, Koichi Kobayashi., Distributed estimation based on weighted data aggregation over delayed sensor networks
- Youssef Berrada, Ismail Boumhidi., New structure of sliding mode control for variable speed wind turbine
- Hongzhong Zhu, Shigeo Yoshida., Disturbance observer-based torsional vibration damper for variable-speed wind turbines

- M.D.S. Aliyu., Approximate iterative solutions of Hamilton–Jacobi equations for nonlinear systems
- David Brunner, Han Woong Yoo, Georg Schitter., Precise phase control of resonant MOEMS mirrors by comb-drive current feedback
- Lennart Blanken, Sjirk Koekebakker, Tom Oomen., Top of FormData-driven feedforward tuning using non-causal rational basis functions: With application to an industrial flatbed printer
- Michael Steck, Thomas Gwosch, Sven Matthiesen., Scaling of Rotational Quantities for Simultaneous Testing of Powertrain Subsystems with Different Scaling on a X- in-the-Loop Test Bench
- M. Dresscher, B. Jayawardhana, B.J. Kooi, J.M.A. Scherpen., Toward observable UHVCVD: Modeling of flow dynamics and AAS partial pressure measurement implementation
- L. Marko, M. Saxinger, A. Steinboeck, W. Kemmetmüller, A. Kugi., Frequency-adaptive cancellation of harmonic disturbances at non-measurable positions of steel strips
- Ahmet Furkan Guc, Zafer Yumrukcal, Onur Ozcan.,Nonlinear identification and optimal feedforward friction compensation for a motion platform
- Steffen Joos, Adrian Trachte, Matthias Bitzer, Knut Graichen., Constrained real-time control of hydromechanical powertrains – methodology and practical application
- S. O. Reza Moheimani., Mechatronics: 2021 and beyond
- Nic Dirkx, Jeroen van de Wijdeven, Tom Oomen., Frequency Response Function identification for multivariable motion control: Optimal experiment design with element-wise constraints
- Kevin Schmidt, Frieder Beirow, Michael Böhm, Thomas Graf, Oliver Sawodny., Towards adaptive highpower lasers: Model-based control and disturbance compensation using moving horizon estimators
- Francesco Aggogeri, Angelo Merlo, Nicola Pellegrini., Modeling the thermo-mechanical deformations of machine tool structures in CFRP material adopting data- driven prediction schemes
- Xin Dong, Chinedum E. Okwudire., Influence of design parameters on the effectiveness of friction isolators in mitigating pre-motion friction in mechanical bearings
- Masahiro Mae, Wataru Ohnishi, Hiroshi Fujimoto., MIMO multirate feedforward controller design with selection of input multiplicities and intersample behavior analysis

3.12. Journal of the Franklin Institute
Contributed by: Kay Tancock, k.tancock@elsevier.com

Journal of the Franklin Institute
Vol 357, Issue 17
November 2020

Control Systems:

- Jianan Wang, Dandan Wang, Chunyan Wang, Fang Deng., Robust formation control for unmanned helicopters with collision avoidance, pg.11997-12018
- Yakun Zhao, Fan Zhang, Panfeng Huang., Capture dynamics and control of tethered space net robot for space debris capturing in unideal capture case, pg.12019- 12036
- Junchao Ren, Yufeng Tian, Qingling Zhang., Stability analysis and controller synthesis of continuous-time nonhomogeneous Markovian jump systems with state and input delays, pg.12037-12061
- Dhouha Kharrat, Hamdi Gassara, Ahmed El Hajjaji, Mohamed Chaabane., Adaptive observer-based H-Infinity FTC for T-S fuzzy systems. Application to cart motion model, pg.12062-12084

- Peng Yu, Yuechao Ma., Observer-based control for singular Markov jump systems with actuator saturation and time-varying transition rates, pg.12085-12108
- Yi Qu, Haopeng Xu, Cheng Song, Yuan Fan., Coverage control for mobile sensor networks with time-varying communication delays on a closed curve, pg.12109-12124
- Ali Karami Ghanavati, Mohammad Hassan Asemani., Observer-based consensus control of multi-agent linear parameter varying systems, pg. 12125-12142
- Okechi Onuoha, Hilton Tnunay, Chunyan Wang, Zhengtao Ding., Fully distributed affine formation control of general linear systems with uncertainty, pg. 12143-12162
- Yan Lei, Yan-Wu Wang, Wu Yang, Zhi-Wei Liu., Distributed control of heterogeneous multi-agent systems with unknown control directions via event/self-triggered communication, pg. 12163-12179
- Wengang Ao, Jiangshuai Huang, Fangzheng Xue., Adaptive leaderless consensus control of a class of strict-feedback nonlinear multi-agent systems with unknown control directions: A non-Nussbaum function based approach, pg.12180-12196
- Mutaz M. Hamdan, Magdi S. Mahmoud, Yuanqing Xia., Coordination control strategies for multivehicle systems, pg.12197-12222
- Jie Wang, Xiao Ma, Hongchao Li, Bailing Tian., Self-triggered sliding mode control for distributed formation of multiple quadrotors, pg. 12223-12240
- Xiao-Zheng Jin, Tao He, Xiao-Ming Wu, Hai Wang, Jing Chi., Robust adaptive neural network-based compensation control of a class of quadrotor aircrafts, pg. 12241- 12263
- Ladan Sadeghikhorami, Mohsen Zamani, Zhiyong Chen, Ali Akbar Safavi., A secure control mechanism for network environments, pg. 12264-12280
- Do Xuan Phu, Van Mien., Robust control for vibration control systems with dead-zone band and time delay under severe disturbance using adaptive fuzzy neural network, pg. 12281-12307
- Hongwei Ren, Peng Shi, Feiqi Deng, Yunjian Peng., Fixed-time synchronization of delayed complex dynamical systems with stochastic perturbation via impulsive pinning control, pg.12308-12325
- R. Sakthivel, T. Satheesh, S. Harshavarthini, Dhafer J. Almakhles., Design of resilient reliable control for uncertain periodic piecewise systems with time-varying delay and disturbances, pg. 12326-12345
- Lizhao Yan, Fei Xu, Jian Liu, Kok Lay Teo, Mingyong Lai., Stabilization of supply networks with a varying manager-reaction time delay, pg. 12346-12363
- Zijian Luo, Wenjun Xiong, Jinde Cao, Chi Huang., Event-triggered state tracking for two-dimensional neural networks with impulsive learning control schemes, pg. 12364-12379
- Shaohua Yang, Gang Tao, Bin Jiang, Ziyang Zhen., Practical output tracking control for nonlinearly parameterized longitudinal dynamics of air vehicles, pg. 12380- 12413
- Huifang Min, Na Duan, Shengyuan Xu, Shumin Fei., Barrier Lyapunov function-based tracking control for stochastic nonlinear systems with full-state constraints and input saturation, pg. 12414-12432
- Kun Ma, Guangming Zhuang, Wei Sun, Yanqian Wang, Junwei Lu., Improved non-fragile feedback control for stochastic jump system based on observer and quantized measurement, pg. 12433-12453
- Dongdong Qin, Andong Liu, Dan Zhang, Hongjie Ni., Formation control of mobile robot systems incorporating primal-dual neural network and distributed predictive approach, pg.12454-12472
- Li Zhang, Gen Qi Xu, Hao Chen., Uniform stabilization of 1-d wave equation with anti-damping and delayed control, pg.12473-12494
- Shahram Aghaei, Abolghasem Daeichian, Vicenç Puig., Hierarchical decentralized reference governor using dynamic constraint tightening for constrained cascade systems, pg.12495-12517
- O. Jaramillo, B. Castillo–Toledo, S. Di Gennaro., Impulsive observer–based stabilization for a class of Lipschitz nonlinear systems with time–varying uncertainties, pg.12518-12537

- Kai-Ning Wu, Yun-Zhu Wang, Zhen Wang., Spatial sampled-data control for stochastic reaction-diffusion systems, pg.12538-12554
- Hanfeng Li, Qingrong Liu, Lingyu Kong, Xianfu Zhang., Design of adaptive tracking controller using barrier functions for nonlinear systems with input saturation, pg.12555-12570
- Baozhu Du, Shengyuan Xu, Zhan Shu, Ying Chen., On positively invariant polyhedrons for continuous-time positive linear systems, pg.12571-12587
- Xiaoli Su, Shaolun Sun, Sen Zhang, Yixin Yin, Wendong Xiao., Improved multi-layer online sequential extreme learning machine and its application for hot metal silicon content, pg.12588-12608
- Xiaohua Gao, Jingang Zhai, Enmin Feng., Multi-objective optimization of a nonlinear switched time-delay system in microbial fed-batch process, pg.12609-12639
- Xin-Chun Jia, Shuangshuang Gao, Xiu You, Bin Li., Output consensus of heterogeneous multi-agent systems with a multi-sensor multi-rate sampling mechanism, pg.12640-12669
- Hui Wang, Huiling Xu, Xiaokai Zhai, Xuefeng Chen, Zhiping Lin., Asymptotic stability analysis and model reduction for spatially interconnected time-delay systems,pg. 12670-12699
- Kai Luo, Bin Hu, Zhi-Hong Guan, Ding-Xue Zhang, Ding-Xin He., Distributed coordination of multi-agent systems for neutralizing unknown threats based on a mixed coverage-tracking metric,pg. 12700-12723
- Qingyu Su, Zhongxin Fan, Yue Long, Jian Li., Attack detection and secure state estimation for cyber-physical systems with finite-frequency observers, pg.12724-12741
- Liguang Wan, Zhenxing Liu., Multiple $O(t - \alpha)$ stability for fractional-order neural networks with time-varying delays, pg.12742-12766
- Jun-Yi Li, Bin Zhang, Renquan Lu, Yong Xu, Hong-Xia Rao., Synchronization for Markovian coupled neural networks with partial mode observation: The finite-time case, pg.12767-12786
- Tongxin Yan, Changfeng Ma., The BCR algorithms for solving the reflexive or anti-reflexive solutions of generalized coupled Sylvester matrix equations, pg.12787- 12807
- Qingpeng Liang, Yanzhi Wu, Jiangping Hu, Yiyi Zhao., Bipartite output synchronization of heterogeneous time-varying multi-agent systems via edge-based adaptive protocols, pg.12808-12824
- Shuyang Luo, Xiang Xu, Lu Liu, Gang Feng., Output consensus of heterogeneous linear multi-agent systems with communication, input and output time-delays, pg.12825-12839
- Peipei Zhou, Jinyao Shi, Shuiming Cai., Pinning synchronization of directed networks with delayed complex-valued dynamical nodes and mixed coupling via intermittent control, pg. 12840-12869

Signal Processing and Communication:

- Jiankun Sun, Jun Yang, Shihua Li, Xiangyu Wang, Guipu Li., Event-triggered output consensus disturbance rejection algorithm for multi-agent systems with time- varying disturbances, pg.12870-12885
- Cheng Qian, Changchun Hua, Liuliu Zhang, Zhenhua Bai., Adaptive neural torsional vibration suppression of the rolling mill main drive system subject to state and input constraints with sensor errors, pg. 12886-12903
- Amirali Sadeqi, Shapour Moradi, Kourosh Heidari Shirazi., Nonlinear subspace system identification based on output-only measurements, pg.12904-12937
- Jonghoek Kim, Sungyun Choi., Robust and efficient WLS-based dynamic state estimation considering transformer core saturation, pg.12938-12959
- Tian Tian, Fei-Yun Wu, Kunde Yang., Block-sparsity regularized maximum correntropy criterion for structured-sparse system identification, pg.12960-12985

- Dongqing Wang, Qiuhua Fan, Yan Ma., An interactive maximum likelihood estimation method for multivariable Hammerstein systems, pg.12986-13005
- Tianwei Zhang, Sufang Han, Jianwen Zhou., Dynamic behaviours for semi-discrete stochastic Cohen-Grossberg neural networks with time delays, pg.13006-13040
- Bowen Hou, Jiongqi Wang, Zhangming He, Yongrui Qin, Dong Li., Novel interacting multiple model filter for uncertain target tracking systems based on weighted Kullback–Leibler divergence, pg.13041-13084
- Cristian Monea., A review of NQR signal processing and analysis techniques, pg.13085-13124
- Rongchang Li, Ying Yang., Fault detection for T-S fuzzy singular systems via integral sliding modes, pg.13125-13143
- Lipeng Ji, Jingen Ni., Sparsity-aware normalized subband adaptive filters with jointly optimized parameters, pg.13144-13157
- Mingang Hua, Cunkang Bian, Feiqi Deng, Juntao Fei, Yunjian Peng Quantized peak-to-peak filtering for continuous-time nonhomogeneous Markov jump systems with structured uncertainty, pg.13158-13188
- Hongyu Gao, Fei Han, Bo Jiang, Hongli Dong, Gongfa Li., Recursive filtering for time-varying systems under duty cycle scheduling based on collaborative prediction, pg.13189-13204
- Tran Manh Hoang, Ba Cao Nguyen, Nguyen Nhu Thang, Minh Tran, Phuong T. Tran., Performance and optimal analysis of time-switching energy harvesting protocol for MIMO full-duplex decode-and-forward wireless relay networks with various transmitter and receiver diversity techniques, pg.13205-13230
- Shiyu Dong, Hong Zhu, Yuping Zhang, Shouming Zhong, Kaibo Shi., Design of H-Infinity state estimator for delayed static neural networks under hybrid-triggered control and imperfect measurement strategy, pg.13231-13257

3.13. European Journal of Control
Contributed by: Kay Tancock, k.tancock@elsevier.com

European Journal of Control
Vol 56, November 2020

Papers:

- M.A. Sid., Adaptive event based fault detection, pg.1-9
- Chiyu Zhang, Inseok Hwang., Multi-target identity management with decentralized optimal sensor scheduling, pg.10-37
- Taniel S. Franklin, Tito L.M. Santos., Robust filtered Smith predictor for processes with time-varying delay: A simplified stability approach, pg.38-50
- Luc Meyer, Dalil Ichalal, Vincent Vigneron., An unknown input extended Kalman filter for nonlinear stochastic systems, pg.51-61
- Andrea Minari, Aurelio Piazzi, Alessandro Costalunga., Polynomial interpolation for inversion-based control, pg.62-72
- Deesh Dileep, Jijju Thomas, Laurentiu Hetel, Nathan van de Wouw, Wim Michiels., Design of L2 stable fixed-order decentralised controllers in a network of sampled- data systems with time-delays, pg.73-85
- Julia V. Tsyganova, Maria V. Kulikova, Andrey V. Tsyganov., A general approach for designing the MWGS-based information-form Kalman filtering methods, pg.86-97

4   Conferences and Workshops

4.1. IFAC Symposium on Fault Detection, Supervision and Safety, Cyprus
Contributed by: Silvio Simani, silvio.simani@unife.it

SAFEPROCESS 2021 Call for Papers

Dear Colleagues,

It is our pleasure to invite you to submit your papers to the 11th IFAC Symposium on Fault Detection, Supervision and Safety for Technical Processes (SAFEPROCESS 2021 – https://safeprocess2021.eu), which will take place in Pafos, Cyprus between 8-11 June 2021. As you know, SAFEPROCESS is organized every three years and it is the main international gathering of experts in the theory and application of fault diagnosis and fault tolerant control. In SAFEPROCESS 2021, we would also like to host research contributions in the emerging area of cyber-physical security.

SAFEPROCESS 2021 will be held as a hybrid conference allowing registrants the choice to participate physically or to connect remotely. Hopefully, the pandemic situation will be much better in June 2021 and international travel will be restored. However, due to the significant uncertainty worldwide at this time, SAFEPROCESS 2021 provides apriori the option of online participation, which will allow everybody to participate even if their home country has travel restrictions. Online participation will have reduced registration fees.

We invite you to submit contributed/invited papers and invited session proposals, as well as preconference tutorial/workshop proposals. All papers, invited session proposals and tutorial/workshop proposals must be submitted electronically through the PaperCept Conference Management System.

Submission deadlines:
• 16 November 2020: Submission deadline for contributed/invited papers and invited session proposals.
• 18 December 2020: Submission deadline for tutorial/workshop proposals.

We look forward to welcoming you to the beautiful island of Cyprus for an exciting SAFEPROCESS 2021!!

Silvio Simani
IFAC SafeProcess Publicity Chair

4.2. International Conference Nonlinear Model Predictive Control, Slovakia
Contributed by: Martin Klaučo, martin.klauco@stuba.sk

On behalf of the organizing committee, we are pleased to invite you to submit papers and proposals for invited sessions to the 7th IFAC International Conference on Nonlinear Model Predictive Control, which will take place in Bratislava, Slovakia, July 11th-14th, 2021.

However, in view of the current COVID-19 pandemic, the conference will be organized in a pure virtual format. We aim at setting high standards for virtual events with a combination of prerecorded presentations followed by live discussions, panel sessions, workshops, exhibitions, and social events. A reduced registration fee will be defined and published soon on the conference website.

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

NMPC 2021 aims at bringing together researchers interested and working in the field of MPC, from both academia and industry. This allows us to reflect and establish the current state-of-the-art and focus on the future development of the MPC field towards relevant directions.

Major conference topics are:
• New frontiers in nonlinear model predictive control
• Stability and recursive feasibility of nonlinear model predictive control
• Predictive control and IoT
• Application of model predictive control in Industry 4.0
• Nonlinear model predictive control on embedded platforms
• Machine learning-enabled MPC
• Model predictive control for complex systems
• Model predictive control for systems with distributed parameters
• Model predictive control in the automotive domain
• Model predictive control for aeronautic applications
• Model predictive control of mechatronic systems
• Heating, ventilation, air conditioning (HVAC) control
• Model predictive control in medicine applications
• Model predictive control in biotechnology
• Model predictive control in process control

The list of confirmed plenary speakers includes (in alphabetical order):

• Mazen Alamir, University of Grenoble, France
• Moritz Diehl, University of Freiburg, Germany
• Alexander Domahidi, Embotech AG, Switzerland
• John Bagterp Jørgensen, Technical University of Denmark, Denmark
• Andreas Kugi, TU Wien, Austria
• Ruth Misener, Imperial College London, United Kingdom
• Melanie Zeilinger, ETH Zurich, Switzerland

The conference is sponsored by the Technical Committee 2.4 Optimal Control and co-sponsored by Technical Committee 2.3. Non-Linear Control Systems.

Bratislava is the capital city of Slovakia. Located in the heart of Europe, it can not only boast interesting history but it also is the center of the most dynamically developing region of central Europe at present. The

modern metropolis is opened to Europe and to the world as proved by the increasing number of foreign visitors of most diverse countries. Palaces, modern shopping and trade centers, admirable arts of the Slovak cooks and brewers, friendly people, and various international cultural or sports events, exhibitions, and business opportunities are the reasons why it is worth of visit.

For detailed information about the 7th IFAC-NMPC, visit www.nmpc2021.org

Deadlines:
Invited session proposals 15 JANUARY 2021
Regular & invited papers, workshop proposals 5 FEBRUARY 2021
Abstracts contributions 25 FEBRUARY 2021

We hope to welcome you at NMPC 2021.
Best regards,
NOC Chairs
Michal Kvasnica, Martin Klaučo, Jaroslav Pekar
IPC Chairs
Gabriele Pannocchia, Tor Arne Johansen, Stefano Di Cairano

4.3. World Congress: Mathematical Problems in Engineering, Czech Republic
Contributed by: Seenith Sivasundaram, seenithi@gmail.com

World Congress: Mathematical Problems in Engineering, Aerospace, and Sciences
When: Date: June 22-25, 2021
Where: Location: Czech Technical University in Prague, Prague, Czech Republic
Website: http://www.icnpaa.com
http://www.icnpaa.com/index.php/icnpaa/ICNPAA2020

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

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

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

CTU: Czech Technical University in Prague, Prague, Czech Republic

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

4.4. International Conference on Unmanned Aircraft Systems, Greece
Contributed by: Youmin Zhang, Youmin.Zhang@concordia.ca

Call-for-Papers: 2021 International Conference on Unmanned Aircraft Systems (ICUAS'21), Athens, Greece, June 15-18, 2021
www.uasconferences.com/2021_icuas/

On behalf of the Organizing Committee and the ICUAS Association, it is our pleasure to invite you to contribute to and participate in the 2021 International Conference on Unmanned Aircraft Systems, ICUAS'21, which will be held, again, in Athens, Greece. The conference venue is the luxurious Divani Caravel Hotel, http://divanicaravelhotel.com. This decision was reached by 'popular demand' as most registered participants in ICUAS'20 were not able to travel to Greece due to COVID-19. Athens is a metropolitan/cosmopolitan city, the capital of Greece, the birthplace of Democracy, and the home to the world-renowned Acropolis and Parthenon – a city where visitors can walk safely and enjoy the rich, almost 5,000-year-old history it has to offer.

The major themes of ICUAS '21 are: AI and autonomy for UAS/RPAS, UAS/RPAS design for safety, reliability and resilience, unmanned – manned swarms, aerial manipulation, and technology standards, all contributing to building high-confidence systems. National and international organizations, agencies, industry and authorities work towards defining roadmaps of UAS/RPAS expectations, technical requirements and standards that are prerequisite to their full utilization. The next generation of UAS/RPAS will be used for a wide spectrum of civilian and public domain applications. Challenges to be overcome include the topics of interest listed below. Innovative solutions to these challenges will pave the way towards full integration of UAS/RPAS with manned aviation and into the national airspace.

ICUAS '21 aims to bring together different groups of qualified representatives worldwide, funding agencies, industry and academia, to discuss the current state of unmanned aviation advances, and the roadmap to their full utilization in civilian and public domains. Special emphasis will be given to research opportunities, and to 'what comes next' in terms of the essential technologies that need to be utilized to advance the state-of-the-art.

Conference topics include (but not limited to):
- Airspace Control - Integration - See/Sense-Detect-and-Avoid Systems
- Airspace Management - Interoperability - Security
- Airworthiness - Levels of Safety - Sensor Fusion
- Autonomy- Manned/Unmanned Aviation - Smart Sensors
- Biologically Inspired UAS - Micro- and Mini- UAS - Standardization
- Certification - Networked UAS - Technology Challenges
- Control Architectures - Payloads- Training
- Energy Efficient UAS - Path Planning and Navigation - UAS Applications
- Environmental Issues - Regulations - UAS Communications
- Fail-Safe Systems - Reliability of UAS - UAS Testbeds
- Frequency Management - Risk Analysis - UAS Transportation Management (UTM)

Through keynote addresses, round table discussions and presentations, it is expected that the outcome of the Conference will be a clear understanding of what industry, civilian, national/international authorities need, and what are the crucial next steps that need to be completed before UAS/RPAS are utilized in everyday life applications.

IMPORTANT DATES (Please check the latest information at http://www.uasconferences.com)
February 15, 2021: Full Papers/ Invited Papers/Tutorial Proposals Due
April 15, 2021: Acceptance/Rejection Notification
May 10, 2021: Upload Final, Camera Ready Papers; Early Registration Deadline

PAPER SUBMISSION
Paper format should follow IEEE guidelines, and electronic submission will be handled through PaperCept - details are available on the conference web site. Submitted papers should be classified as Contributed or Invited Session (max. 10 pages), or Poster (max. 6 pages) papers. Accepted, contributed and invited session papers only, will be allowed up to two additional pages for a charge of $100 per additional page. Poster papers should be aimed at novel and cutting-edge ideas with potential, however, not yet fully developed.

Invited Sessions: Proposals must be submitted and uploaded electronically. A Summary Statement describing the motivation and relevance of the proposed session, paper titles and author names must be uploaded electronically by due date. Authors must also submit full versions of invited papers electronically, marked as Invited Session Paper.

Workshops/Tutorials: Proposals for workshops/tutorials should contain title, the list of speakers, and extended summaries (2000 words) of their presentations. Proposals must be sent by e-mail to the Tutorial/ Workshop Chair by due date.

Welcome and look forward to receiving your contributions and attendance to the ICUAS'21! For detailed information please see www.uasconferences.com.

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4.5. IFAC Conference on Identification and Control of Nonlinear Systems, Japan
Contributed by: Hiroshi Ito, hiroshi@ces.kyutech.ac.jp

The 3rd IFAC Conference on Modelling, Identification and Control of Nonlinear Systems (MICNON 2021) will be held in Noda, Chiba in Tokyo metropolitan area, Japan from September 15 to 17, 2021.

Conference Venue : Tokyo University of Science, Noda, Chiba, Japan
Gateways : Narita Airport and Haneda Airport
Deadline for invited session proposal : February 8, 2021
Deadline for paper submission : February 15, 2021
Conference dates : September 15-17, 2021
Pre-conference tutorial workshop : September 14, 2021

The scope of the conference will range from theoretical aspects to practical applications of nonlinear systems theory, including control, analysis, modelling, and identification of nonlinear systems and related fields. Accepted papers that have been presented at an IFAC meeting will be published in the proceedings of the event using the open-access IFAC-PapersOnLine series hosted on ScienceDirect.

Topics (not limited to)
* Modeling and identification of nonlinear systems
* Control of nonlinear systems
* Stability and complex dynamics
* Networked nonlinear systems
* Stochastic control systems
* Control of networks
* Control with limited information
* Nonlinear systems with time delay
* Disturbance rejection
* Switching control
* Adaptive control and signal processing for nonlinear systems and other related topics

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TC 2.3 Non-Linear Control Systems

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TC 1.2 Adaptive and Learning Systems

TC 2.1 Control Design

TC 6.1 Chemical Process Control

TC 8.4 Biosystems and Bioprocesses

TC 9.4 Control Education

4.6. Conference on Computational Methods in Systems Biology, France
Contributed by: Eugenio Cinquemani, eugenio.cinquemani@inria.fr

19th International Conference on Computational Methods in Systems Biology (CMSB 2021) - first call for papers CMSB 2021 - First Call for Papers

The 19th conference on Computational Methods in Systems Biology (CMSB 2021, https://cmsb2021.labri.fr) will take place on September 22-24, either in person in Bordeaux (France), or online, depending on the evolution of the Covid-19 pandemic. CMSB is a well established conference series. It brings together researchers from across biological, mathematical, computational, and physical sciences who are interested in the modelling, simulation, analysis, inference, design, and control of biological systems.

Invited speakers:
• Diego di Bernardo (TIGEM, Italy)
• Laurence Calzone (Institut Curie, France)
• Giulia Giordano (University of Trento, Italy)
• Yang-Yu Liu (Harvard Medical School, US)
• Ion Petre (University of Turku, Finland)

CMSB 2021 solicits contributions on the following or related topics:
- formalisms for modelling biological processes - methods and tools for biological system analysis, modelling and simulation
- frameworks for model verification, validation, analysis, and simulation of biological systems
- high-performance methods for computational systems biology - identification of biological systems
- applications of machine learning

- network modelling, analysis, inference
- automated parameter and model synthesis
- model integration and biological databases
- multi-scale modelling and analysis methods
- design, analysis, and verification methods for synthetic biology
- methods for biomolecular computing and engineered molecular devices
- data-based approaches for systems and synthetic biology
- optimality and control of biological systems
- modelling, analysis and control of microbial communities

More information on the program is available at https://cmsb2021.labri.fr.

The CMSB 2021 proceedings will be published in the Springer LNCS/LNBI series and indexed by ISI Web of Science, Scopus, ACM Digital Library, DBLP, and Google Scholar. A selection of best papers will be invited for extension and submission to a special issue of BMC Bioinformatics at a discounted Author Processing Charge.

IMPORTANT DATES
- April 12, 2021: regular and tool paper submission
- May 31, 2021: highlight talk proposals
- June 7, 2021: acceptance notifications
- June 14, 2021: poster abstract submission
- September 22-24, 2021: conference

Each contribution will be reviewed by at least three members of the program committee, soon available at https://cmsb2021.labri.fr/organization/. Please refer to the conference website for details on the different types of contributions at https://cmsb2021.labri.fr/call-for-contributions/.

Looking forward to receiving your contributions,

The chairs of CMSB 2021, Loïc Paulevé https://loicpauleve.name
and Eugenio Cinquemani https://team.inria.fr/ibis/eugenio-cinquemani

4.7. IFAC Conference on Analysis and Design of Hybrid Systems, Belgium
Contributed by: Guillaume Berger, guillaume.berger@uclouvain.be

ADHS 2021 Second Call for Papers
The 7th IFAC Conference on Analysis and Design of Hybrid Systems
Brussels, Belgium, July 7-9, 2021.
Website: https://sites.uclouvain.be/adhs21/

* Invited Session Proposals due: December 16, 2020
* Paper Submissions due: December 23, 2020

* Author notification: mid-February, 2021

The Organising Committee has the pleasure of inviting you to participate in the 7th IFAC Conference on Analysis and Design of Hybrid Systems (ADHS 21) to be held in Brussels, Belgium, July 7-9, 2021.

ADHS 2021 will take place at the University Foundation, Brussels and is organized by the department of Applied Mathematics of UCLouvain. Virtual attendance will be possible, and the extent of this possibility will be adapted to the situation of the pandemia. The conference happens under the auspices of IFAC and is sponsored by the IFAC Technical Committee on Discrete Event and Hybrid Systems.

Contributions are invited in all areas pertaining to the engineering of hybrid systems including: modelling, specification, verification, analysis, control synthesis, simulation, validation, and implementation. We solicit papers and invited session proposals describing theoretical or applied research in the area. We also welcome papers describing tools, reporting case studies or connecting the cognate fields of control theory and formal verification.

Contributions are encouraged on applications of hybrid methods in various fields, such as automotive, avionics, energy and power, mobile and autonomous robotics, the process and manufacture industry, transportation and infrastructure networks, communication networks and networked control systems, cyber-physical systems, safety-critical systems, systems and synthetic biology.

A poster session will be organized and IFAC Young Author, Best Paper, Best Repeatability and Best Poster Prizes will be awarded.

The Program Chairs are planning to edit a special issue of NAHS: the authors of selected papers will be invited to contribute with significantly revised and extended versions of their manuscripts, containing new results.

Author Guidelines

* Regular papers: Regular papers can have a length of up to 8 pages at submission. Accepted papers are limited to 6 pages in the conference preprints and on-line proceedings.
* Invited session proposals: Invited sessions consist of 4 to 6 papers related to a common theme that fits within the scope of ADHS. An invited session proposal should contain a short description of the common theme as well as the list of papers in the session and their abstracts. The invited session organiser first has to submit the pdf file of the session proposal (without participating papers). The IFAC Conference Manuscript Management System then returns an acknowledgment that contains an alpha-numeric code for the proposed session. Subsequently, the organiser has to notify the contributing authors of their invited session code. The corresponding author of each paper then submits the paper on-line as an invited paper.
* Invited session papers: Invited session papers can have a length of up to 8 pages at submission. Invited session papers go through the same review process as regular papers. Accepted papers are limited to 6 pages in the conference preprints and on-line proceedings. Submission as an invited session paper requires the invited session code, which can be obtained from the session organiser.

Submission Instructions

* The website for submission is: https://ifac.papercept.net/conferences/scripts/start.pl
* All papers submitted to ADHS 21 must be written in English and formatted in the standard IFAC 2-column format, provided on the IFAC Conference Management System website.
* For initial submissions, all regular and invited session papers are limited to eight (8) pages. The submission website will not permit longer papers to be uploaded.
* For the final upload, all accepted and invited papers are limited to six (6) pages.
* For each accepted paper, at least one of the authors should have a full registration in order to have the paper included in the preprints and the post-conference on-line proceedings at IFAC-PapersOnLine.
* Author's kits with style (.cls) files for LaTeX are available from the submission website.
Go to http://ifac.papercept.net and select "Support" for these files and example files, or directly go to the support page. Please do not change the formatting in any way.

Important Dates
- Invited Session Proposals due: December 16, 2020
- Paper Submissions due: December 23, 2020
- Author notification: mid-February, 2021
- Final papers due: TBA
- Early registration: TBA
- Conference: July 7-9, 2021

The reference timezone is Central European Summer Time.

Invited Speakers
* Paulo Tabuada (University of California, Los Angeles, USA)
* Verena Wolf (Saarland University, Germany)
* Claire Tomlin (University of California, Berkeley, USA)

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* Marc Jungers (CNRS - Université de Lorraine)
* Joost-Pieter Katoen (Univ of Twente/RWTH Aachen University)
* Françoise Lamnabhi-Lagarrigue (CNRS-EECI)
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* Mircea Lazar (Eindhoven Univ. of Technology)

* Daniel Liberzon (Univ. of Illinois at Urbana-Champaign)
* Hai Lin (University of Notre Dame)
* Jun Liu (University of Waterloo)
* Paolo Mason (L2S CentraleSupélec, CNRS)
* Manuel Mazo Jr (TU Delft)
* Ian M. Mitchell (University of British Columbia)
* Irinel Constantin Morarescu (Universite de Lorraine)
* George J. Pappas (Univ of Pennsylvania)
* Mihaly Petreczky (CNRS)
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* Xiang Yin (Shanghai Jiao Tong University)
* Luca Zaccarian (LAAS-CNRS and University of Trento)
* Majid Zamani (University of Colorado Boulder)
* Naijun Zhan (Institute of Software, Chinese Academy of Science)
* Paolo Zuliani (Newcastle University)

All publication material submitted for presentation at an IFAC-sponsored meeting (Congress, Symposium, Conference, Workshop) must be original and hence cannot be already published, nor can it be under review elsewhere. The authors take responsibility for the material that has been submitted. IFAC-sponsored conferences will abide by the highest standard of ethical behavior in the review process as explained on the Elsevier webpage (https://www.elsevier.com/authors/journal-authors/policies-and-ethics), and the authors will abide by the IFAC publication ethics guidelines (https://www.ifac-control.org/events/organizers-guide/PublicationEthicsGuidelines.pdf/view).

Accepted papers that have been presented at an IFAC meeting will be published in the proceedings of the event using the open-access IFAC-PapersOnLine series hosted on ScienceDirect (https://sciencedirect.com/).

To this end, the author(s) must grant exclusive publishing rights to IFAC under a Creative Commons license when they submit the final version of the paper.

4.8. IEEE International Conference on Industrial Cyber-Physical Systems, Canada
Contributed by: Ahmad W. Al-Dabbagh, ahmad.aldabbagh@ubc.ca

The 4th IEEE International Conference on Industrial Cyber-Physical Systems (ICPS), May 10 - 13, 2021, Victoria, British Columbia, Canada
http://ieee-icps2021.org
Full Paper Submission: December 22, 2020
Notification of Acceptance: February 15, 2021
Submission of Final Manuscript: March 15, 2021
Early Bird Registration: March 15, 2021

ICPS 2021 is a majority sponsored conference by the IEEE Industrial Electronics Society. ICPS 2021 is to provide a forum to exchange research and innovation results, lessons learned from industrial practices, such as Cyber-Physical Systems, Digital Economy, the Industrial-Internet-of-Things and so on. The ICPS annually gathers together Industry experts, researchers and academics to share ideas, paradigms and experiences surrounding frontier technologies, breakthroughs, innovative solutions, research results, as well as initiatives related to cyber-physical systems and their applications.

4.9. CDC 2020 Workshop: Learning and Security for Multi-agent Systems, Virtual
Contributed by: Song Fang, song.fang@nyu.edu

CDC 2020 Workshop: Learning and Security for Multi-agent Systems, Virtual

This workshop aims at the confluence between security and learning, which become more apparent and essential for multi-agent systems. Learning theory provides a set of useful analytic and decision-making tools for a wide range of applications in multi-agent systems, including vision-based robotics, and data-driven control systems. On the other hand, a growing number of adversarial attacks and malicious behaviors aimed at systems built with machine learning and optimization algorithms calls for new security theories and models for better undestanding and safeguarding such systems.

This workshop will gather experts from the cybersecurity, machine learning, and control communities to highlight recent works that contribute to addressing challenges arising from the intersection between learning and security. This workshop will provide tutorials on adversarial learning problems and learning methods for security to students and early-career researchers and for a wider audience, it will give an overview of the current research activities in applications, especially in networked control systems, cybersecurity, Internet of Things, and cyber-physical systems. Furthermore, new research directions related to security and

learning in multi-agent systems will be discussed for advancing knowledge and technology and expanding the community.

Workshop Organizers: Quanyan Zhu and Hideaki Ishii

Workshop Website: https://sites.google.com/nyu.edu/cdc-learning-security-workshop

5 Positions

5.1. PhD: Eindhoven University of Technology, The Netherlands
Contributed by: Nathan van de Wouw, N.v.d.Wouw@tue.nl

The TU/e offers a Ph.D. position with the DIGITAL TWIN research program. This NWO AES Perspectief programme is a five-year comprehensive research programme on the development of digital twinning methods, financed by the Dutch Research Council (NWO) within the domain of Applied and Engineering Sciences (AES). This collaborative programme involves six universities: University of Groningen, Eindhoven University of Technology, TU Delft, University of Twente, Leiden University and Tilburg University and ten industrial partners and two research institutes.

Project Description: The development of reliable and agile digital twins of high-tech systems and materials is key to enabling shorter time-to-market, zero-defect and flexible manufacturing systems with accurate predictive maintenance. This crucial development is currently hampered by the lack of synergy between model-based engineering and data-driven/artificial intelligence approaches. The DIGITAL TWIN program will develop key-enabling technologies for full digitization of the value chain of high-tech systems and materials by the integration of data-driven learning approaches and model-based engineering methods.

One of the projects (involving three Ph.D. projects) within the DIGITAL TWIN program focusses on Autonomous Process & Control Reconfiguration and Optimization. In this scope, the open Ph.D. position at TU/e is on Extremum seeking control for data-based performance optimization of high-tech systems.

Control strategies for complex high-tech systems (such as precise positioning, thermal management, vibration isolation) are typically designed based on models of the underlying dynamics and/or based on measurement of these dynamics before delivery of the equipment to the customer. However, these designs are typically far from optimal under real-life conditions of machine use such as hard-to-predict and changing disturbance situations, ageing/degradation of machine parts, evolving type of machine usage, and flexible customer specifications. Therefore, the goal of this Ph.D. project is to develop a data-based performance optimization strategy to make control systems agile under changing circumstances. We envision to develop novel extremum seeking control methods that guarantee optimal performance in terms of time-varying system behavior, while dealing with changing circumstances of use, hard constraints related to hardware and customer specifications, and nonlinear system behavior. Another goal of such data-based strategy may be to achieve uniform performance over an entire machine park. These objectives are envisioned to be achieved by exploiting only measured performance and constraint data and limited prior system knowledge. The fact that such an approach allows for large model uncertainties, being in essence a model-free approach, makes such approach also particularly suitable for complex, multi-physics problems in high-tech systems. As such, it can be used to make system-wide, multi-disciplinary design trade-offs in an online fashion.

Within this Ph.D. project a collaboration with the high-tech semiconductor company ASM PT will be fostered. The starting date is flexible but ideally would be ultimately in January 2021.

Requirements: The Ph.D. candidate should have
• an M.Sc. degree in Mechanical Engineering, Electrical Engineering or Systems and Control with a solid

background in dynamical systems and control.

• a strong interest and skills in both 1) developing new fundamental theories for data-based control and 2) applying such novel scientific developments to industrial high-tech applications.

• Excellent communication skills and written/verbal knowledge of the English language.

Interviews with the selected PhD-candidates will take place on-site at TU/e in the Netherlands (if restrictions associated to the Covid-19 situation permit).

Application: Online application via the 'Apply now' button at
https://jobs.tue.nl/en/vacancy/phd-on-automated-databased-performance-optimization-of-control-systems-859900.html

Please provide the following information:
• an extended curriculum vitae,
• an explanation of your interest in the proposed research topic,
• your course program and corresponding grades,
• references,
• all other information that might help us to assess your suitability for one of these positions, and
• a publication list (if applicable).

Information: For more information on the vacancy, consult the website
https://jobs.tue.nl/en/vacancy/phd-on-automated-databased-performance-optimization-of-control-systems-859900.html or contact Prof.dr. Nathan van de Wouw, N.v.d.Wouw@tue.nl

5.2. PhD: Marie Curie PhD Positions, EU
Contributed by: Lorenzo Fagiano, elo-x@imtek.uni-freiburg.de

15 Marie Curie PhD positions - cutting edge research in embedded learning and optimization at top EU universities and companies

15 Marie Curie PhD positions are currently open at top European research universities and companies. These are unique opportunities to start an international career, carry out advanced training and research in the field of learning and optimization for industrial control systems, and grow personally and professionally. Please see the specific PhD projects, supervisors, candidate profiles, and application deadlines at https://elo-x.eu/.

The PhDs will be hosted at Univ. Freiburg (DE), KU Leuven (BE), Politecnico di Milano (IT), EPFL (CH), ETH (CH), Polytechnic Univ. of Bucharest (RO), Siemens Industrial SW solutions (BE), Bosch (DE), ODYS Srl (IT), Atlas Copco (BE), Tool-temp (CH).

The positions pertain to project ELO-X, "Embedded Learning and Optimization for the neXt generation of smart industrial control systems". ELO-X is a Marie Curie Innovative Training Network (ITN) funded by the European Commission Horizon 2020 program. With 15 doctoral researchers working at 6 research universities and 5 international companies from 5 European countries, and further 4 partner organizations

in China, Japan and the US, ELO-X will accelerate research and development in embedded learning and optimization, delivering new methods and applications. ELO-X will train skilled researchers able to further advance research and technology transfer of embedded learning and decision-making solutions to industry, reinforcing the EU technological leadership in strategic industrial fields such as transportation, energy, infrastructures, and manufacturing.

Marie Skłodowska-Curie PhDs are prestigious international positions funded by the European Commission. Remuneration is very generous, in line with Marie Curie PhD Fellowships, and can change based on mobility and family status.

The following eligibility conditions apply to all positions:
- Mobility: candidates must not have resided or carried out their main activity (work, studies, etc...) in the country of the host institution for more than 12 months in the 3 years immediately prior to recruitment under the ELO-X project.
- Qualifications and research experience: candidates must be in the first 4 years of their research career after the master degree was awarded.

For the details of each position and the application procedure, please see https://elo-x.eu/.

5.3. PhD: Technical University of Munich, Germany
Contributed by: Matthias Althoff, althoff@in.tum.de

PhD Position for Set-Based Prediction in Autonomous Driving

The research group Cyber-Physical Systems of Prof. Matthias Althoff at the Technical University of Munich offers a PhD position in the area of safe motion planning of autonomous vehicles. The Technical University of Munich is one of the top research universities in Europe fostering a strong entrepreneurial spirit and international culture.

More information can be found at
https://portal.mytum.de/jobs/wissenschaftler/NewsArticle_20201116_104350

5.4. PhD: University of Kentucky, USA
Contributed by: Xu Jin, xu.jin@uky.edu

Ph.D. Positions in intelligent control (Mechanical Engineering) at the University of Kentucky

Ph.D. openings are available in the Department of Mechanical Engineering at the University of Kentucky, Lexington, KY, in Dr. Xu Jin's group on the topics of intelligent control. We look for excellent students in one or more of the following areas:
1. Adaptive control
2. Iterative learning control
3. Nonlinear systems and control

4. Vision-based control

5. Ground vehicles

6. Quadrotors

7. Robot manipulation systems

8. Multiagent/interconnected/networked/cyber-physical systems

More research details can be found on Dr. Xu Jin's website: https://www.engr.uky.edu/directory/jin-xu and the external links included. The positions include stipend, health care, and tuition support. The offers are valid for two years, and renewable for additional years based on performance of the students. Qualifications: The applicants MUST ALREADY HAVE, or will soon have the GRE and TOEFL test scores (if applicable) meeting the departmental minimum requirement.

How to apply: Applications should be emailed to Dr. Xu Jin at xu.jin@uky.edu as soon as possible. Please include a full CV (including GRE and TOEFL scores if applicable), PDFs of relevant publications, and names of at least three references. Upon initial email discussions, those who are encouraged to apply should then apply to the department as soon as possible, and indicate my name (Dr. Xu Jin) in the application package. Visiting Ph.D. students and scholars are also very welcomed for self-funded research visit for 6-24 months.

* Short note about the department and the city: Mechanical Engineering is the largest department in the College of Engineering with 35 tenured and tenure-track faculty members, over 1,000 undergraduate students, and over 120 graduate students. The department also has state-of-the-art computational facilities, research labs, and classrooms, including UAV, ground robot, and air table satellite testing facilities. The city of Lexington is ranked #3 Best City to Raise a Family, #4 City with Best Tech Career Potential, #8 City with the Lowest Living Cost, #21 Best Places to Live in America, and #31 Most Educated Cities in America. Located in the heart of the Bluegrass Region, Lexington is known as the "Horse Capital of the World".

5.5. PhD: The Pennsylvania State University, USA
Contributed by: Satadru Dey, skd5685@psu.edu

PhD: The Pennsylvania State University

Position Summary: A PhD position is available at Smart City Laboratory in the Department of Mechanical Engineering at The Pennsylvania State University. With rapid growth of urbanization, Smart Cities have been gaining attention worldwide. In this context, the research goal of Smart City Laboratory is to improve energy efficiency, tighten safety and security, and maintain sustainability of these Smart Cities by utilizing control theory, machine learning techniques, and modeling tools. In this position, the student is expected to conduct research on one or more of the following areas related to energy and transportation: (1) Control and diagnostics of batteries, (2) Security and control of Connected and Autonomous Vehicle systems, (3) Modeling and control of transportation networks.

The successful Ph.D. applicant will be awarded a competitive scholarship covering both tuition and living expenses.

Expected Start Date: Fall 2021.

Preferred Experience: (1) Strong background in controls, machine learning, and applied mathematics. (2) Bachelor's or Master's degree with major/specialization in mechanical, electrical, mechatronics, controls, or any other relevant engineering/science discipline. (3) Master's degree is preferred but not required. (4) Strong MATLAB and/or Python programming experience. (5) Previous publication record is preferred but not required.

Application Process: Interested candidates should email Satadru Dey at skd5685@psu.edu with subject line "PhD Position – Smart City", and include following: (1) List of courses taken in controls, machine learning, and applied mathematics. (2) Detailed curriculum vitae. (3) Academic transcripts (unofficial transcript is fine). (4) Copy of previous publications (if any).

5.6. PhD: University of Poitiers, France
Contributed by: Guillaume Mercère, guillaume.mercere@univ-poitiers.fr

PhD: model learning for health monitoring and predictive maintenance

Appointment: this challenging job is based on a fixed-term appointment for a period of three years during which the PhD candidate will be able to gain both academic and industrial experience.

Where: University of Poitiers, SKF Verdon (industrial partner) and Ecole Centrale Lyon, France

Topic: Data-driven health monitoring and predictive maintenance of high speed turbomachinery operated with active magnetic bearing

For more information, please read the following document:
https://www.lias-lab.fr/jobs/2021-as-modellearning.pdf

Candidate requirements: applicants should have a MSc degree in engineering from a good-quality engineering school. They should possess a strong background and interest in mathematics and, ideally, in system identification and advanced control. They should have excellent analytical and problem solving skills and, preferably, well-developed programming skills. Applicants should have a good knowledge of Matlab. The candidate should have excellent oral and written communication skills in English.

Application procedure: if you are interested by this challenging project, please contact X. Bombois (xavier.bombois@ec-lyon.fr) and G. Mercère (guillaume.mercere@univ-poitiers.fr) by email with subject "data-driven health monitoring and predictive maintenance of high speed turbomachinery operated with active magnetic bearing", attaching an academic CV, a cover letter, a pdf of your diplomas and transcript of course work and grades, a recommendation letter from your MSc thesis' supervisor, a certificate of proficiency in English, as well as any other document which can enrich the application.

5.7. PhD: TU Delft, The Netherlands
Contributed by: Anahita Jamshidnejad, a.jamshidnejad@tudelft.nl

Two PhD positions on fuzzy-logic-based stochastic optimization

These 2 PhD projects will focus on the development of novel concepts in optimization and control theory by integrating fuzzy logic and mathematical optimization. The main objective is to generate new approaches with performance guarantees that are tractable for real-time engineering control problems that involve uncertainties. Therefore, next to generating new integrated concepts, theoretical properties (including characterization of the computational complexity) and performance guarantees will be established. The developed methods will subsequently be extended to the case of online optimization for uncertain nonlinear systems.

Although the main focus of these 2 PhD projects is on fundamental research, implementation of the developed approaches will be investigated for socially assistive robots and for autonomous robots that participate in search and rescue in the aftermath of disasters.

What do we ask for? We are looking for a candidate with an MSc degree in systems and control, applied mathematics, electrical engineering, or a related field, with a strong background in optimization theory, systems and control theory, and fuzzy logic, and with a strong background or interest in applications for robotic fields. The candidate is expected to work on the boundary of several research domains. Prior experience with programming and/or with robots is appreciated. A good command of the English language is required.

How to apply? Submit your letter of application along with a detailed curriculum vitae, a motivation letter describing why the proposed research topic interests you, your BSc and MSc transcripts, a list of publications, and the names and contact information of two to three reference persons, and all other information that might be relevant to your application to Dr. Anahita Jamshidnejad (email: a.jamshidnejad@tudelft.nl).

The deadline for applying for the positions is January 20, 2021. However the positions will stay open until suitable candidates have been found.

5.8. PhD: Clemson University, USA
Contributed by: Yue Wang, yue6@clemson.edu

Ph.D. Position at Clemson University-Machine Learning and Control

A Ph.D. position is available in the Mechanical Engineering Department at Clemson University working on the control theory and machine learning.

Candidates with very good knowledge in the following areas are invited to respond.
* Control Theory
* Reinforcement Learning
* Unmanned Aerial Vehicles

* Ground Mobile Robots
* Ubuntu and Debian Linux
* Python
* Robot Operating System (ROS)

To apply for the positions, please submit a single PDF file to Dr. Yue Wang with

1. current curriculum vitae

2. a brief statement with clear descriptions of your relevant experience in the required fields and career goals

3. a minimum of three references with full contact information.

Please name your attachment as "FirstName.LastName.GradeLevel.pdf" Positions are available as early as Spring 2021.

Dr. Yue Wang

Warren H. Owen - Duke Energy Associate Professor of Engineering

Director, Interdisciplinary and Intelligent Research (I2R) Laboratory

Associate Editor, IEEE Robotics and Automation Magazine

Associate Editor, ASME Journal of Autonomous Vehicles and Systems

Technical Editor, IEEE/ASME Transactions on Mechatronics (TMECH)

Department of Mechanical Engineering

237 Fluor Daniel Engineering Innovation Building

864-656-5632

5.9. PhD: Delft University of Technology, The Netherlands
Contributed by: Giulia Giordano, giulia.giordano@unitn.it

PhD Position: Structural analysis and control of complex ecological systems

What: 4-year full-time PhD position
Where: Delft Center for Systems and Control (DCSC), Delft University of Technology (TU Delft), The Netherlands Topic: Structural analysis and control of complex ecological systems (to support intercropping design in arable farming)

Job Description: We are looking for a talented, motivated and outstanding Ph.D. candidate with enthusiasm for interdisciplinary research challenges at the interface of Systems and Control Theory, Optimisation, and Biological and Ecological Modelling.

The successful candidate will be supervised by Giulia Giordano (University of Trento) and Tamas Keviczky (TU Delft), and will conduct theoretical and algorithmic research on the structural analysis and control of nonlinear dynamical networks in biology/ecology, with application to intercropping design in arable farming, within the research project SYNERGIA: SYstem change for New Ecology-based and Resource efficient Growth with high tech In Agriculture.

The project: Do you want to be part of the multidisciplinary SYNERGIA team of researchers from 5 Dutch universities working towards next-generation agricultural production systems that are sustainable, circular and regenerative? The SYNERGIA research project, funded by the Netherlands Organisation for Scientific Research (NWO), contributes to the UN Sustainability Development Goals for the environment (depletion of scarce resources, global warming, acidification, eutrophication, nutrient losses, and biodiversity loss), labour (availability of skilled workers), and society (consumer/societal acceptance of novel technology and production methods). SYNERGIA goes beyond current precision agriculture and is developing the new concept of "Technology-4-Ecology-based farming" (T4E) where biological/ecological principles in farming lead the development of new farming systems, and of the required technological knowledge, principles and tools. Our multi-disciplinary team with biology, ecology, agronomy, technology and social science backgrounds will devise farming technologies to enable and support truly ecology-based farming systems. https://technology4ecology.org/

Requirements: Needed qualifications:
- M.Sc. degree (or close to completion) in Systems and Control, Applied Mathematics, Electrical Engineering or related field
- Strong theoretical background: mathematical and systems-and-control knowledge, expertise in networked dynamical systems and ordinary/partial differential equations
- Very good programming skills
- Excellent written and oral communication skills in English (Dutch not required)
- Ability and interest to conduct interdisciplinary research
- Team player willing to participate in project meetings and discussions across scientific fields

Conditions of employment: The appointment will be for 4 years. The PhD student will participate in the training and research activities of the TU Delft Graduate School and of the Dutch Institute of Systems and Control (DISC). As an employee of TU Delft, the PhD student will receive a competitive salary and benefits in accordance with the Collective Labour Agreement for Dutch Universities (CAO). The TU Delft offers a customisable compensation package, a discount for health insurance and sport memberships.

How to apply: Applications shall be emailed both to Prof. Giulia Giordano (giulia.giordano@unitn.it) and to HR (application-3mE@tudelft.nl) with reference to vacancy number TUD00577.

Please send your application as a single PDF file including the following documents:
- detailed curriculum vitae;
- names and contact information of up to 3 professional referees (e.g., project/thesis supervisors);
- list of courses taken with grades obtained in their BSc and MSc programs (in English);
- list of publications (if any);
- summary of their MSc thesis;
- statement of motivation and research interests (up to 1 page);
- up to 3 selected research-oriented documents (e.g., thesis, conference/journal publications).

The starting date is early 2021 (flexible). The call for applications will remain open until the ideal candidate is found. However, the deadline for full consideration is December 15, 2020.

For more information on the position requirements and expected scientific activities, please contact Prof.

Giulia Giordano (giulia.giordano@unitn.it) on the SYNERGIA program and PhD program at TU Delft, please contact Prof. Tamas Keviczky (t.keviczky@tudelft.nl)

5.10. PhD: KTH, Sweden
Contributed by Dimos Dimarogonas:, dimos@kth.se

PhD positions in multi-robot control systems and human-robot interaction at KTH

Two PhD positions in multi-robot control systems and human-robot interaction are available at KTH. The full description can be found here:
https://www.kth.se/en/om/work-at-kth/lediga-jobb/what:job/jobID:360271/where:4/
and the deadline for applications is December 15, 2020. In case of interest, please refer to the ad for further information and contacts.

5.11. PhD: The University of British Columbia, Canada
Contributed by: Ahmad W. Al-Dabbagh, ahmad.aldabbagh@ubc.ca

PhD: The University of British Columbia, Canada
Start Date: May 2021 or September 2021

Dr. Ahmad W. Al-Dabbagh is recruiting Master's and PhD students to join his group at the Okanagan campus of the University of British Columbia (ranks among the 40 best universities in the world). The students should be self-motivated and eager to perform excellent research in relation to model-based and data-driven approaches for control, monitoring, and automation of large-scale networked systems.

For further details, prospective applicants are encouraged to visit https://olcsr.ok.ubc.ca. For consideration, prospective applicants can email Dr. Al-Dabbagh at ahmad.aldabbagh@ubc.ca and include their CV and transcripts.

5.12. PhD: University of Groningen, The Netherlands
Contributed by: Claudio De Persis, c.de.persis@rug.nl

PhD Position Learning and Control - University of Groningen

A PhD position financed by the Netherlands Organisation for Scientific Research Perspectief programme on Digital Twins is available at the University of Groningen, the Netherlands.

We are looking for strong candidates willing to develop the theoretical foundations and the key-enabling technologies for the integration of data-driven control-oriented learning approaches and model-based engineering methods. The results will be tested on real-world problems proposed by industrial partners.

Interested candidates are invited to send a complete application to c.de.persis@rug.nl, n.monshizadeh@rug.nl and p.tesi@rug.nl, including the following items in a single PDF file:

1. A Curriculum Vitae with contact information of two academic references.
2. A statement of motivation/purpose, listing down relevant research experience (max 1 page).
3. Grade transcripts of obtained degrees/diplomas in English.

Candidates with a masters degree in Applied Math, Control Engineering, Electronic/Electrical Engineering, Computer Science from a top university and research experience in control theory, machine learning, system identification are particularly encouraged to apply.

Please use "SMS-DT Application" as the subject of the email. Applications are accepted on a continuing basis. Only applicants who are shortlisted for an interview will be contacted.

5.13. PhD/Postdoc: Technical University of Kaiserslautern, Germany
Contributed by: Naim Bajcinca, mec-apps@mv.uni-kl.de

Two Ph.D./Postdoc positions at Chair of Mechatronics, Technical University of Kaiserslautern (Germany)
The chair of Mechatronics at the University of Kaiserslautern in Germany has a vacancy for two Ph.D./Postdoc Positions in optimal resource allocation and resilience control of hybrid systems.

Background: The Internet of Things is making its way into all areas of industry. In intelligent automation, however, significant challenges in the area of resilience and dynamic self-organization concerning changing resources still have to be mastered. A formal design methodology for verifiable system architectures in intelligent automation is to be developed in our project. Mixed-Criticality describes a mapping of functions to resources based on their criticality according to the available resource contingents. Changes in these contingents due to failures or attacks and process variations require a reconfiguration of the system. The reconfiguration must be methodologically conceived at the design time such that the selected architecture provably enables the required system properties even under degradation or failure of resources. Control-theoretic methods for robust hybrid and event-based systems are to be used.

Project Description: The successful candidate is expected to devise new optimization-based control (optionally game-theoretic) design methods to guarantee resilience indices of cyber-physical systems. By integrating security aspects into the design methodology, she/he will be responsible for developing a framework for an attack-resistant mixed-criticality system.

Requirements: Applicants should have completed their Control/Electrical Engineering studies with above-average grades and have demonstrated excellent abstract thinking and programming expertise. Experience in optimal control, game theory, or hybrid systems is highly preferable. The completion of a doctoral thesis is expected.

Conditions of Employment: The filling of the position will start on January 1st until April 1st of 2021, and it will run for at least three years. Candidates in the process of obtaining their M.Sc. degree shall be also considered provided that they complete all the degree requirements no later than the agreed starting date.

The employment contract is governed by the provisions of the collective agreement of the federal states (TV-L) and is limited in time.

About TU Kaiserslautern: The University of Kaiserslautern is a research university in Kaiserslautern, Germany founded on July 13, 1970. TU Kaiserslautern is organized into 12 faculties. Approximately 14,869 students are enrolled at the moment. There are numerous institutes around the university, including two Fraunhofer Institutes (IESE and ITWM), the Max Planck Institute for Software Systems (MPI SWS), the German Research Center for Artificial Intelligence (DFKI all of which cooperate closely with the university.

Application and More Information: Applications must include the following elements (as a single PDF file):
- Cover letter with a brief description of why you want to pursue research studies, about what your academic interests are and how they relate to your previous studies and future goals
- CV including your relevant professional experience and knowledge
- Copies of diplomas and grades from previous university studies

Send an email with the required documents to the address: mec-apps@mv.uni-kl.de

5.14. PhD/Postdoc: Technical University of Kaiserslautern, Germany
Contributed by: Naim Bajcinca, mec-apps@mv.uni-kl.de

Two Ph.D./PostDoc positions at the Chair of Mechatronics, Technical University of Kaiserslautern (Germany)
Contributed by: Naim Bajcinca, mec-apps@mv.uni-kl.de

The chair of Mechatronics at the University of Kaiserslautern in Germany has a vacancy for two Ph.D./Postdoc Positions in cooperative control of autonomous vehicles.

Background: The underlying project targets the design of real-time cooperative control of autonomous vehicles in dense traffic situations. The design of driving trajectories for such an emerging multiagent system is to be carried out by predictive control and tested practically on autonomous vehicles, also on the public streets, utilizing a versatile digital computational infrastructure and a set of sensors for environment perception, including ground-penetrating radar. Moreover, the cooperative Car2Car and Car2X behavior based on the corresponding off-the-shelf, as well as 5G communication standards, will be taken into account.

Project Description: The successful candidate will be responsible for the design of a Network-Control-System (NCS) in the framework of Event-Driven Model-Predictive-Control (MPC), where the communication channel shall play a critical role. He/she will be a part of a young interdisciplinary team guided by research cooperation with a large number of established industrial partners. The project is funded by the German Federal Ministry of Transport and Digital Infrastructure (BMVI).

Requirements: Applicants should have completed their studies in Control/Electrical Engineering with excellent average grades and have demonstrated excellent abstract thinking and programming expertise. Experience in control and optimization theory is advantageous. The completion of a doctoral thesis is an expected requirement.

Conditions of Employment: The position will start on January 1st, 2021, and run for at least three years. Candidates in the process of obtaining their M.Sc. degree shall be also considered provided that they complete all the degree requirements no later than the agreed starting date.

The employment contract is governed by the provisions of the collective agreement of the federal states (TV-L) and is limited in time.

About TU Kaiserslautern: The University of Kaiserslautern is a research university in Kaiserslautern, Germany founded on July 13, 1970. TU Kaiserslautern is organized into 12 faculties. Approximately 14,869 students are enrolled at the moment. There are numerous institutes around the university, including two Fraunhofer Institutes (IESE and ITWM), the Max Planck Institute for Software Systems (MPI SWS), the German Research Center for Artificial Intelligence (DFKI all of which cooperate closely with the university.

Application and More Information: Applications must include the following elements (as a single PDF file):
- Cover letter with a brief description of why you want to pursue research studies, about what your academic interests are and how they relate to your previous studies and future goals
- CV including your relevant professional experience and knowledge
- Copies of diplomas and grades from previous university studies

Send an email with the required documents to the address: mec-apps@mv.uni-kl.de

5.15. PhD/Postdoc: Technical University of Kaiserslautern, Germany
Contributed by: Naim Bajcinca, mec-apps@mv.uni-kl.de

One Ph.D./Postdoc position at the Chair of Mechatronics, Technical University of Kaiserslautern (Germany)
Contributed by: Naim Bajcinca, mec-apps@mv.uni-kl.de

The chair of Mechatronics at the University of Kaiserslautern in Germany has a vacancy for one Ph.D./Postdoc position in control and stability of infinite-dimensional systems.

Project Description: The underlying position offers a wide range of theoretical research options, including ISS stability criteria and design of data-driven or/and model-predictive control of dynamical systems described by partial differential equations (PDEs). In particular, stochastic uncertainty and time-delay interferences will be of concern. Optionally, several running projects in the chair offer application challenges in production and energy systems, chemical engineering, and systems biology.

Requirements: Applicants should have completed their studies in Mathematics or Control/Electrical Engineering with excellent average grades and have demonstrated excellent abstract and mathematical thinking. Experience in control and optimization theory is advantageous. The completion of a doctoral thesis is an expected requirement.

Conditions of Employment: The position will start on April 01, 2021, and run for at least three years. Candidates in the process of obtaining their M.Sc. degree shall be also considered provided that they complete

all the degree requirements no later than the agreed starting date.

The employment contract is governed by the provisions of the collective agreement of the federal states (TV-L) and is limited in time.

About TU Kaiserslautern: The University of Kaiserslautern is a research university in Kaiserslautern, Germany founded on July 13, 1970. TU Kaiserslautern is organized into 12 faculties. Approximately 14,869 students are enrolled at the moment. There are numerous institutes around the university, including two Fraunhofer Institutes (IESE and ITWM), the Max Planck Institute for Software Systems (MPI SWS), the German Research Center for Artificial Intelligence (DFKI) all of which cooperate closely with the university.

Application and More Information: Applications must include the following elements (as a single PDF file):
- Cover letter with a brief description of why you want to pursue research studies, about what your academic interests are and how they relate to your previous studies and future goals
- CV including your relevant professional experience and knowledge
- Copies of diplomas and grades from previous university studies

Send an email with the required documents to the address: mec-apps@mv.uni-kl.de

5.16. Postdoc: University of Kentucky, USA
Contributed by: Xu Jin, xu.jin@uky.edu

Postdoc Position in intelligent autonomous vehicle control at the University of Kentucky

One Postdoc position is available in the Department of Mechanical Engineering at the University of Kentucky, Lexington, KY, in Dr. Xu Jin's group on the topics of intelligent autonomous vehicle control. The ideal candidate should already have (or will soon have) a Ph.D. degree in an electrical/mechanical/automation/vehicle engineering program, and should have a strong standing in the following areas:
1. Good English writing, speaking, listening, and reading skills
2. Solid theoretical foundation in adaptive control and/or iterative learning control
3. Solid theoretical foundation in nonlinear and multiagent systems and control
4. Solid practical skills in camera/vision-based analysis and control
5. Experimental skills with ground robots/vehicles (wheeled and/or unicycle-type robots/vehicles, such as Quanser Qbot /QCar)
6. Computer-aided design skills
7. Significant programming skills, both software and hardware

The Postdoc offer is valid for one year, and renewable for another year based on performance. Package will include stipend (salary), benefits, health care coverage, research travel, etc. The starting time can be negotiable, but has to be between April and August, 2021.

More research details regarding Dr. Xu Jin's areas can be found on the website:
https://www.engr.uky.edu/directory/jin-xu and the external links included.

How to apply: Applications should be emailed to Dr. Xu Jin at xu.jin@uky.edu as soon as possible. Please include a full CV, PDFs of relevant publications, transcripts, and names of at least three references. Upon initial email discussions, those who are encouraged to apply will receive further instructions.

* Short note about the department and the city: Mechanical Engineering is the largest department in the College of Engineering with 35 tenured and tenure-track faculty members, over 1,000 undergraduate students, and over 120 graduate students. The department also has state-of-the-art computational facilities, research labs, and classrooms, including UAV, ground robot, and air table satellite testing facilities. The city of Lexington is ranked #3 Best City to Raise a Family, #4 City with Best Tech Career Potential, # 8 City with the Lowest Living Cost, # 21 Best Places to Live in America, and # 31 Most Educated Cities in America. Located in the heart of the Bluegrass Region, Lexington is also known as the "Horse Capital of the World".

5.17. Postdoc: Union College, Schenectady, USA
Contributed by: Luke Dosiek, dosiekl@union.edu

The Department of Electrical, Computer, and Biomedical Engineering at Union College invites applications for a Postdoctoral Research Associate position in the area of microgrid modeling, monitoring, and control. This is a two-year position that begins no later than September 1, 2021, with flexibility to start earlier.

The position investigates the use of real-time measurements to provide online model validation and stability assessment in microgrids. Which measurements are most appropriate? How should these measurements be obtained? What are the signal processing and/or data analytics approaches that should be used? What is the library of models that can be used to assess the proposed methodologies? This position will work closely with Dr. Luke Dosiek on an NSF-funded project that seeks to answer these questions.

A Ph.D. in Electrical Engineering or a closely related field is required. Candidates expecting to complete their doctoral thesis before September 2021 are welcome to apply. The successful candidate will have a strong background in microgrid modeling, monitoring, and control, including hardware-in-the-loop simulation. Candidates with experience in data analytics, system identification, or detection and estimation theory are especially encouraged to apply.

Applicants should submit a cover letter that includes a statement regarding the ability to contribute to a diverse community, an up-to-date CV, a statement of research interests, and names and contact information for three references through our online application available at http://jobs.union.edu. An email will be sent automatically to references requesting a letter of recommendation. Incomplete applications will not be considered.

Review of applications will begin on December 1, 2020 and continue until the position is filled.

5.18. Postdoc: Chalmers University of Technology, Sweden
Contributed by Changfu Zou:, changfu.zou@chalmers.se

Postdoc position in Li-ion fault detection by detailed physical modelling

The position is with the Automatic Control group at Chalmers University of Technology. Aiming for sustainable solutions, this group is involved in many research projects on energy savings using automatic control methods. In general the projects are carried out in collaboration with other research groups, institutes and industry.

The interest and use of battery based electric and plug-in hybrid electric vehicles, are steadily increasing and they are gradually replacing the traditional combustion engine based vehicles due to environmental concern and legislation. The energy stored in vehicle batteries, though, poses an enormous danger as they may enter thermal runaway (TR) and self-ignite with fatal consequences. Without further development we can expect the number of such accidents to increase drastically as the number of electric vehicles increases. This is worrying and has led to legislations that may significantly increase the production costs of electric vehicles if solved by traditional means. In this project, we instead aim to derive the obviously most cost-effective solution to mitigate this, i.e. completely avoid the initiation of TR, using algorithms running continuously, supervising the batteries and acting on level of hazard.

The project is a collaboration project with Volvo Cars, and with Beijing Institute of Technology and Geely Auto Group in China. Accidents with TR in batteries are thankfully uncommon and once an accident occurs, the data collected is usually lost. The availability of relevant data is therefore critical. The plan in this project is to get around this in two ways. The first is to mathematically model the physical causes of the runaway with a very high level of detail in order to be able to simulate pre-TR data. The models may then be used to develop fault detection and diagnosis algorithms to estimate the level of hazard. The second way is to use selected data from a Chinese database to both evaluate and develop the diagnostic methods. The modelling part will require mathematical skills and experience of solving partial differential equations.

Experience of battery cell modelling is meritorious. The position requires sound verbal and written communication skills in English. Swedish is not a requirement but if you have an interest in learning Swedish, Chalmers offers Swedish courses.

Application before November 30 by the link:
https://www.chalmers.se/en/about-chalmers/Working-at-Chalmers/Vacancies/Pages/default.aspx

<div align="right">Back to the contents</div>

5.19. Postdoc: Lund University, Sweden
Contributed by: Anders Rantzer, rantzer@control.lth.se

The department of Automatic Control at Lund University is announcing postdoc positions in several areas, including control of autonomous vehicles, complex networks and socioeconomic systems. See
http://www.lth.se/english/work for more information.

<div align="right">Back to the contents</div>

5.20. Postdoc: University of Toronto, Canada
Contributed by: Margaret Chapman, mchapman@ece.utoronto.ca

Postdoctoral Scholarship in Stochastic Control Theory – University of Toronto

Description: A 1-2 year scholarship focused on conducting research at the intersection of functional analysis, stochastic control theory, and measure theory. The research will focus on developing new tractable numerical methods applied to problems in stochastic and/or risk-sensitive control theory. There will be emphasis on communicating findings to the research community via academic publications. The Postdoctoral Scholar will have the opportunity to mentor graduate or undergraduate student researchers if she/he desires.

Required Qualifications: A PhD degree in Electrical Engineering (Stochastic Control Theory), Mathematics, Applied Mathematics, or equivalent. Deep interest in applying mathematical systems theory rigorously to problems in stochastic control and communicating findings with integrity and clarity.

Location/Salary/Benefits: Electrical and Computer Engineering Department, University of Toronto, Toronto, Canada. Accommodations will be provided due to the COVID-19 pandemic. Relocation funds will be provided. Salary is negotiable. Family/parental leave and other needs will be supported.

Contact: If you are interested in this position, please email Margaret Chapman at mchapman@ece.utoronto.ca.

5.21. Postdoc: University of Manchester, UK
Contributed by: Guido Herrmann, guido.herrmann@manchester.ac.uk

Post-doctoral Research Associate in Robotics and Intelligent Automation at the University of Manchester
Division : Department of Electrical & Electronic Engineering, University of Manchester
Closing date (DD/MM/YYYY): 04/12/2020
Contract Duration : 01 January 2020 until 31 December 2021
Manager: Professor Guido Herrmann, https://www.research.manchester.ac.uk/portal/guido.herrmann.html
Email: guido.herrmann@manchester.ac.uk (for enquiries)
Link for application: https://www.jobs.manchester.ac.uk/displayjob.aspx?isPreview=Yes&jobid=19259

Robotics in industrial environments and for automation of high precision processes is entering a new stage due to the significant development of mechanical, mechatronic and algorithmic intelligence combined with the growing availability of real-time computational resources. New actuation and sensing systems have led to the evolution of robotic arms, e.g. the KUKA LBR iiwa, and its use in real-time human guided / interaction based operation.

We are looking for a highly motivated researcher to join the team of roboticists at Manchester, https://uomrobotics.com/. The researcher will be working on the development and subsequent control of novel robotic systems at high technology readiness level, specifically in the nuclear energy sector, supporting also the recent UKRI funded research project RAIN (ROBOTICS AND AI IN NUCLEAR).

The researcher will be cooperating with roboticists experts across the University of Manchester, with various external universities (e.g. Universities of Bristol, Oxford, and Nottingham) and with robotics specialists from RACE, Oxford (Remote Applications in Challenging Environments). This project has been recently complemented by the National Nuclear User - Hot Robotics (NNUF-HR) Facility (nnuf.ac.uk/hot-robotics)

of which the University of Manchester leads the Cumbria Dalton/REEL-based Project. A significant part of this project will be also to provide underpinning expertise for the NNUF-HR Facility at the Dalton/REEL Facility, Cumbria.

This project will be led by Professor Guido Herrmann, https://www.research.manchester.ac.uk/portal/guido.herrmann.html.

Preferably, the candidate must hold a PhD degree (or about to finish a PhD) in Mechatronics, Robotics or a similar discipline. You must have practical experience in the development and assessment of new actuator and sensor systems, in the system integration of sensors and actuators (hardware and software) for robotics and high-precision devices, in embedded programming for control implementation and relevant implementation systems, in industrial communication, in the development, design and implementation of controllers at high Technology Readiness Level and in handling complex experimental problems.

You must have excellent interpersonal skills, capable of interacting with industry and funding agencies, work effectively in a team, have experience of preparing and delivering presentations, journal papers to the highest standards and have experience of preparing funding bids either in industry or academia.

5.22. Postdoc: University of Luxembourg, Luxembourg
Contributed by: Jorge Goncalves, jorge.goncalves@uni.lu

Postdoctoral positions in (applied) mathematics, physics, or engineering

The Systems Control Group (SCG) seeks two highly skilled Postdoctoral Research Associates. There is flexibility in the general area of systems biomedicine, at the intersection of dynamical systems, machine learning and data. The projects can be fully theoretical, algorithm development or data science, and should be somewhat related to the interests of the group (please see `https://wwwen.uni.lu/lcsb/research/systems_control`).

Your profile: hold a Ph.D. degree in (applied or theoretical) mathematics, theoretical physics, or engineering (with a strong mathematical background). Ideal candidates would have a good understanding of dynamical systems, control theory, or machine learning. Excellent working knowledge of English is required.

We offer:
- Full contract for 1 year with the possibility of renewal up to 5 years contingent on performance and availability of funding.
- A highly interdisciplinary research environment integrating biologists, physicists, mathematicians, and clinical researchers working in the area of systems biology.
- A very competitive salary.

Applications should be made on http://emea3.mrted.ly/2ktjb and contain the following documents:
- A detailed Curriculum vitae;
- A motivation letter that includes a description of how candidates would contribute to the research group, within its existing areas or new directions.

- Please have at least three references email their confidential letters directly to Sofia Pereira (sofia.pereira@uni.lu) within two weeks after submitting the application.

Early application is highly encouraged, as the applications will be processed upon reception.

The University of Luxembourg embraces inclusion and diversity as key values. We are fully committed to removing any discriminatory barrier related to gender, and not only, in recruitment and career progression of our staff.

5.23. Postdoc: University of Agder, Norway
Contributed by: Jing Zhou, jing.zhou@uia.no

Post-Doctoral Research Fellow position: Deep Learning and Networked Control for Multiple Collaborative Robot Systems, at University of Agder, Norway
Application deadline: March 15, 2021

About the position: The Faculty of Engineering and Sciences at the University of Agder (UiA) has a Postdoctoral Research Fellow position available within the fields of Deep Reinforcement Learning, Robotics and Cooperative Control. The position is within the Norwegian Research Council Long-term research project "Collective Efficient Deep Learning and Networked Control for Multiple Collaborative Robot Systems (DEEPCOBOT)". The position is located at Campus Grimstad for a period of two years. The position is scheduled to start in June 2021, but it is negotiable with the Faculty.

The overall goal of the project is to investigate the design of a new generation of decentralized deep learning based controllers for multiple collaborative robots, which interact both between themselves and with human operators in order to collectively learn from each other's experiences and perform cooperatively different complex tasks in large-scale industrial environments.

The project is integrated in two Centers at UiA, the Mechatronics Center and the WISENET Center, where the postdoctoral fellow will benefit intellectually from the interaction with internationally recognized researchers, well-equipped environments and will build on and strengthen the established cooperation in AI, Machine Learning, Robotics, and Control with industry partners including ABB Norway, Mechatronics Innovation Lab (MIL), Omron Electronics Norway, and international partners including University of California San Diego (USA), KTH Royal Institute of Technology (Sweden) and the University of Navarra (Spain). The project will give also the opportunity to pay extended visits to Universities in USA, Sweden and Spain. The robots used in this project are TIAGo robot, UR robot, and ABB Yumi robot.

Required qualifications: To be regarded as an eligible applicant, the candidates must have:
• The candidate must have expertise in the following areas: deep learning/reinforcement learning, advanced control, robotics.
• A PhD in related disciplines. Having a PhD thesis on a topic specifically related to the position is an advantage. It is desirable that the applicant has defended her/his doctoral thesis within the last five years. PhD students are also welcome to apply if their thesis has been submitted before the deadline.
• Written and spoken English proficiency.

• In addition, the candidate is expected to have good programming skills or experience in Python, Matlab, C/C++, Robot Operating System (ROS), and relevant tools (e.g. Tensorflow, Keras, PyTorch, github).

Gross annual remuneration: NOK 545 300-566 700. Higher salary grades may be considered for particularly well-qualified applicants.

Detailed information about the position can be found at the following website
https://www.jobbnorge.no//en/available-jobs/job/196175/post-doctoral-research-fellow-collective-deep-learning-and-networked-control-for-multiple-collaborative-robot-systems

Applications are only accepted at the following online application portal https://www.jobbnorge.no/.

5.24. Postdoc: ETH and National Centre of Competence in Research, Switzerland
Contributed by: Roy Smith, rsmith@control.ee.ethz.ch

Post-doctoral Researcher Position (Modeling, Identification & Feedback Control)

The Automatic Control Laboratory (IfA) has an extensive research record in both the theory and application of control technology . Our research spans a broad range including theory, computation, and applications within many domains including energy, transportation, and robotics. We have three faculty members, (Profs. Dorfler, Lygeros & Smith), 8 postdoctoral researchers and over 30 Ph.D. students. We come from all over the world and the working language is English.

Project Background: The Automatic Control Laboratory is also one of the lead institutes in the newly formed National Centre of Competence in Research (NCCR) in Dependable Ubiquitous Automation. This is a large research consortium supported by the Swiss National Science Foundation and involves 17 faculty members from three Swiss universities. The NCCR is growing and is expected to include approximately 30 Ph.D. and postdoctoral researchers. The research activities are collaborative and range from the theoretical foundations of optimisation, data science, information processing, and automatic control, through to computational tools and experimental testbeds. Research projects will typically involve multiple faculty and researchers. This Postdoctoral research position will be a part of the NCCR.

Project Description: The Postdoctoral Researcher will work with Prof. Roy Smith on topics of common interest within the domain of modeling, system identification and robust feedback control. We have a strong interest in combining data-driven and learning methods with control relevant modeling frameworks. You will also be expected to develop independent research directions of our own to support your future career in academic or industrial research. You will assist Prof. Smith with organisational and oversight responsibilities on NCCR projects. You are also expected to mentor and work with Ph.D. student researchers. For those interested in pursuing an academic career, there will also be opportunities to be involved in teaching and other educational activities. The position is funded for at least 2.5 years.

Your profile: You have (or are about to receive) a Doctoral degree in an engineering or physical sciences discipline from an internationally recognised university. You have published research experience in at least one of the following areas: feedback control systems, system identification, or data science. You have

an analytical approach to your research and this is demonstrated in your publications. You have strong communication skills (both written and verbal) in English. You prefer working in an open, diverse and co-operative environment. You are interested in developing new research areas as well as helping more junior researchers develop their research skills.

To apply: Applications will only be accepted via the ETH Jobsite:
https://www.jobs.ethz.ch/job/view/JOPG_ethz_GsH0x8L7J8IvL71IhL

The position will remain open until filled. If you have additional questions, please contact Prof. Roy Smith.

Back to the contents

5.25. Postdoc: KTH, Sweden
Contributed by Dimos Dimarogonas:, dimos@kth.se

Postdoc in hybrid control of multi-robot systems at KTH

A postdoc position in hybrid control of multi-robot systems is available at KTH. The full description can be found here: https://www.kth.se/en/om/work-at-kth/lediga-jobb/what:job/jobID:366155/where:4/ In case of interest, please contact Prof. Dimos Dimarogonas at dimos@kth.se for further information. The deadline of applications is December 21.

Back to the contents

5.26. Postdoc: KTH and Digital Futures, Sweden
Contributed by: Jana Tumova, tumova@kth.se

Postdoc: Digital Futures postdoc fellows, Stockholm Sweden

Digital Futures is launching the second call for postdoc fellows in technologies for a digital transformation: https://www.digitalfutures.kth.se/research/research-calls-diversity-inclusion/open-call-postdoc-fellows-in-technologies-for-a-digital-transformation/

Digital Futures is a cross-disciplinary research centre that explores and develops digital technologies of great societal importance. It was jointly established this year by KTH Royal Institute of Technology, Stockholm University and RISE Research Institutes of Sweden, based on significant long-term support of a Strategic Research Area by the Swedish Government.

The program offers funded two-year positions to talented early career researchers in the broad area of technology for digital transformations and aims to support them in pursuing their research ideas and developing their future career.

The core research themes in Digital Futures are "Trust", "Learn", and "Cooperate" cutting across four prioritized societal contexts – Smart society, Digitalized industry, Rich and healthy life, and Engineering education. The postdoc fellows' research should fit broadly in that scope.

What we offer:

- Funding to pursue your research ideas and a possibility to conduct research at a leading technical university that creates knowledge and expertise for a sustainable future.
- Network of colleagues and peers with high ambitions in an open, curious, and dynamic environment.
- An international workplace.
- Access to Digital Futures resources, its network of academic and industrial partners, infrastructure and testbeds, events and happenings.
- Mentorship and support in career development and research leadership education.

Application deadline: January 7th, 2021.

This is a recurring call, the next round of applications is expected to open in Spring 2021.

5.27. Postdoc/Faculty: Huazhong University of Science & Technology, China
Contributed by: Ye Yuan, yye@hust.edu.cn

PostDoc/Faculty: Huazhong University of Science & Technology, China

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

The research project is broadly on:
1. System identification and machine learning theory.
2. Application to smart manufacturing and medical AI.

For Postdoc, we offer a competitive salary (USD 35,000 – 50,000 per year) and a full contract for 2 years with the possibility of renewal up to 5 years contingent on performance.

Interested candidates should send their CV (with names of at least two references) and a cover letter (for postdoc candidates) describing their specific interest and how their background fits the qualifications to Prof. Ye Yuan (yye@hust.edu.cn).

5.28. Faculty: Yale University, USA
Contributed by: Susan Hurlburt, susan.hurlburt@yale.edu

Job Posting: Yale University Department of Electrical Engineering - Assistant Professor, Systems Engineering

The Yale University Department of Electrical Engineering invites applications for a tenure-track assistant professorship with an anticipated start date of July 1, 2021. Candidates are sought with research and teaching interests in any area of systems engineering including communications and networking, intelligent and distributed control systems, signal and image processing, and data science. A perspective candidate should have a PhD in electrical engineering or a related field and should submit a curriculum vitae and research plan through Interfolio at https://apply.interfolio.com/79672.

In addition, each candidate should make arrangements for three individuals outside of Yale to submit letters of recommendation. For full consideration, please ensure that all requested material is submitted no later than December 1, 2020 which is the date the review of applications will begin. The review will continue until the position is filled.

Yale University is an Affirmative Action/Equal Opportunity employer. Yale values diversity among its students, staff, and faculty and strongly welcomes applications from women, persons with disabilities, protected veterans, and under-represented minorities.

5.29. Faculty: The University of Tasmania, Australia
Contributed by: Bernardo Leon de la Barra, b.a.leondelabarra@ieee.org

The School of Engineering at the University of Tasmania, Australia, is looking for a new Head of School (https://bit.ly/3nHY3Yn).

Please help us widen the applicants' pool by sharing this news item across your networks.

Thank you all.

Regards, Bernardo.

5.30. Faculty: Swiss Federal Institute of Aquatic Science, Switzerland
Contributed by: Giancarlo Ferrari Trecate, giancarlo.ferraritrecate@epfl.ch

Tenure-track Group Leader position at Eawag (Switzerland) in monitoring, control, and automation of water and wastewater treatment processes

Eawag, the Swiss Federal Institute of Aquatic Science and Technology, is an internationally networked aquatic research institute within the ETH Domain (Swiss Federal Institutes of Technology). Eawag conducts research, education and expert consulting to achieve the dual goals of meeting direct human needs for water and maintaining the function and integrity of aquatic ecosystems.

The Process Engineering Department (ENG) invites applications from highly motivated researchers for a Tenure-track position as Group Leader in monitoring, control and automation of water and wastewater treatment processes. Process monitoring, control, and machine learning in combination with on-line sensors provide new opportunities for optimizing current and developing new water and wastewater treatment processes. Urban water management is changing with an increased demand for recovery of valuable resources, increasing process performance and reliability, and reducing energy input and costs. Developing new processes and optimizing existing systems is relevant for existing centralized systems as well as onsite treatment and recovery systems.

This position complements existing strength in process engineering. We seek candidates who study sensor application, data mining, machine learning, information processing and management, process monitoring,

control, and automation for water and wastewater treatment processes.

We expect
• Excellent knowledge and research portfolio in online monitoring, control, automation, and operation of treatment processes
• Experience in process engineering (biological, chemical, and/or physical process) with application in the treatment of water, wastewater, urine, fecal sludge, greywater, etc.
• Experience in mathematical modeling of complex biological, chemical, and/or physical processes
• PhD in environmental engineering, chemical engineering, civil engineering, or related engineering field
• Interest in working in multidisciplinary teams and developing links with the engineering practice in Switzerland and internationally, as well as establishing cooperative relationships with experts in sensor design, machine learning, statistics, and systems analysis at Eawag

Eawag offers a unique research and working environment and is committed to promoting equal opportunities for women and men and to support the compatibility of family and work. Applications from women are especially welcome. For more information about Eawag and our work conditions please consult www.eawag.ch and https://www.eawag.ch/en/aboutus/working/employment/. A group leader at Eawag is expected to build up an externally funded research group. There are no formal teaching requirements.

Applications must be submitted by 15 January 2021 and should include a cover letter, a research statement (2-5 pages) describing your interests and their relevance to this position and – if applicable – potential for stakeholder engagement, a CV as well as a list of publications and the names and contact information for three references. For further information, please contact Prof. Dr Eberhard Morgenroth.

We look forward to receiving your application. Please send it through this webpage, any other way of applying will not be considered. A click on the link below will take you directly to the application form.

https://apply.refline.ch/673277/0808/pub/1/index.html

5.31. Faculty: Northeastern University, USA
   Contributed by: Rifat Sipahi, r.sipahi@northeastern.edu

Faculty position in dynamical systems, controls, robotics at Northeastern University, Boston

An open faculty position in the Department of Mechanical and Industrial Engineering at Northeastern University, Boston is available.

Applicants will be considered at all ranks and are being sought in areas with emphases on multidisciplinary, interdisciplinary, and crosscutting activities. We invite faculty candidates leveraging fundamental research in model-based and data-driven dynamical systems, controls, and robotics in the broad research areas of human-in-the-loop systems/machines, human haptic interfaces, systems biology, and development of novel control systems, sensors, and actuator paradigms, with applications including but not limited to rehabilitation, rehabilitation robotics, patient focused rehabilitation, tele-medicine/tele-operated health, and

public health and policy. This position may be a joint appointment between the College of Engineering and Bouvé College of Health Sciences.

Further details including how to apply can be found at:

https://careers.hrm.northeastern.edu/en-us/job/504210/assistantassociatefull-professor-robotics-mechanical-and-industrial-engineering

5.32. Researcher: Advanced Center for Electrical and Electronic Engineering, Chile
Contributed by: Juan I. Yuz, juan.yuz@usm.cl

AC3E Researcher Position

The Advanced Center for Electrical and Electronic Engineering (AC3E) is offering a full time researcher position in any of the following lines of research of the Center: Control and Automation, Renewable Energy and Power Conversion, Robotics, Electrical Systems, Data Analytics and Computational Intelligence, and Biomedical Systems. AC3E is part of Universidad Técnica Federico Santa María (USM), one of the most prestigious universities in Chile and Latin America, being ranked #1 in Latin America in Electronic & Electrical Engineering and in Automation & Control, according to the ARWU Shanghai Ranking by Subject 2020. Additional information about the center and the university can be found at www.ac3e.usm.cl and www.usm.cl

Job description
• Design, organize and conduct highly specialized research in the field of expertise
• Generate scientific reports and publish results in high-impact journals
• Attract competitive external research funds
• Participate in industrial projects in the area of expertise, translating research knowledge into action
• Collaborate with members of the AC3E team
• Provide supervision and guidance to postdocs, students, and junior technicians/engineers

Requirements
• Documentation providing evidence of the possession of a PhD
• Strong publication record demonstrated with publications in WoS and external funding, in one of the research lines of the center
• Experience in the field of innovation and technology transfer is desired, through patents and industrial projects
• Language proficiency: English and Spanish (desired)

Application Documents
• Cover letter stating your motivation to join AC3E.
• Curriculum Vitae, including a list of publications, patents, grants and projects.
• Documentation providing evidence of the possession of a PhD.
• Contact details of at least two references (former supervisor is encouraged), that may be contacted for a reference letter

General Information

- The research position is up to four years (evaluated on a yearly basis)
- Salary according to a competitive standard
- Required documents should be provided in English in a single PDF file
- AC3E is located at UTFSM main campus in Valparaiso, Chile
- AC3E is committed to gender diversity and inclusion
- Applications should be sent to ac3e@usm.cl with subject AC3E RESEARCHER POSITION
- Deadline to submit applications is January 15, 2021
- Results will be informed during February, 2021
- Further enquiries can be addressed to ac3e@usm.cl

Back to the contents