IEEE VANCOUVER CONTACT

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We are pleased to announce the formation of the second IEEE PES student branch chapter in IEEE Vancouver

The new BCIT chapter joins the student chapter at UBC, which was the first one formed in Canada.

The chair of the BCIT chapter is Mark Crapper, a student in the electrical engineering program at BCIT.

The chapter advisor is Ali Palizban

BCIT student branch chair is Koji Otomo

and the student branch advisor is Glenn Pellegrin

IEEE PES Power & Energy Society®

We look forward to working with the new PES Chapter leaders at BCIT!

Mazana Armstrong
IEEE Vancouversection Student Activities
IEEE PES chapters, region representative for Canada

Meliha Selak
IEEE PES
Vice-president for chapters

Xi-Ren Cao
Shanghai Jiao Tong University

Distinguished Lecturer

Thursday 15 August
11am-noon

Kaiser 2020/2030
UBC

Sponsored by the joint chapters of IEEE Control Systems, Robotics and Automation, and Systems, Man and Cybernetics societies

Information
CS/RA/SMC
Joint chapter chair
Ryozo Nagamune
nagamune@mech.ubc.ca

Event-based optimization - a new optimization framework

In many practical systems, such as engineering, social, and financial systems, control decisions are made only when certain events happen. This is either because of the discrete nature of sensor detection and digital computing equipment, or the limitation of computing power, which makes state-based control infeasible due to the huge state spaces involved. The performance optimization of such systems is generally different from traditional optimization approaches, such as Markov decision processes, or dynamic programming.

In this talk, we introduce, in an intuitive manner, a new optimization framework called event-based optimization. This framework has a wide applicability to the aforementioned systems. With performance potential as building blocks, we develop optimization algorithms for event-based optimization problems. The optimization algorithms are first proposed based on intuition, and theoretical justifications are then given with a performance sensitivity based approach. Finally, we provide a few practical examples to demonstrate the effectiveness of the event-based optimization framework.

We hope this framework may provide a new perspective to the optimization of the performance of event-triggered dynamic systems.

Speaker: Xi-Ren Cao is a chair professor of Shanghai Jiao Tong University and an affiliate member of the Institute for Advanced Study at the Hong Kong University of Science and Technology (HKUST). He has worked as a consulting engineer for Digital Equipment Corporation, a research fellow at Harvard University, and a reader, professor, and chair professor at HKUST.

He owns three patents in data- and tele-communications and has published three books in the areas of performance optimization and discrete event dynamic systems. Selected honors include being Fellow of IEEE and IFAC and best paper awards from the IEEE Control Systems Society and the Institution of Management Science. He is the Editor-in-Chief of Discrete Event Dynamic Systems: Theory and Applications, and has served as an Associate Editor at Large of the IEEE Transactions of Automatic Control, as a Member of the Board of Governors of the IEEE Control Systems Society, and as a Member on the Technical Board of IFAC.

His current research areas include financial engineering, stochastic learning and optimization, performance analysis of economic systems, and discrete event dynamic systems. He holds a PhD degree from Harvard University

Systems, Man, & Cybernetics Society

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Towards a theory of robot motor control

Frank Chongwoo Park
Seoul National University

Room #9896
Applied Sciences Building
SFU Burnaby Campus

Friday 09 August
11am-noon

Sponsored by the joint chapters of IEEE Control Systems, Robotics and Automation, and Systems, Man and Cybernetics societies

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In this talk we propose some possible elements of a robot motor control system that have direct counterparts in human motor control, based on the assumption that optimality is the fundamental principle underlying both human and robot motor control. After reviewing our previous work on dynamics-based motion optimization, some new mechanisms for dimension reduction based on Gaussian process models are proposed, which offer a means of defining and encoding low-dimensional motion primitives that can in turn be used to generate locally optimal motions in real-time. Kinematic feedback control laws that generate minimum variance motions are also derived. The minimum attention functional is also considered as a criterion that captures the cost of control implementation.

Speaker: Frank Chongwoo Park received his B.S. in Electrical Engineering from MIT in 1985, and Ph.D. in Applied Mathematics from Harvard University in 1991. From 1991 to 1995 he was assistant professor of mechanical and aerospace engineering at the University of California, Irvine. Since 1995 he has been professor of mechanical and aerospace engineering at Seoul National University. From 2009-2012 was an adjunct professor in the Department of Interactive Computing at the Georgia Institute of Technology, and in 2001-2002 was a visiting professor at the Courant Institute of Mathematical Sciences at New York University.

His research interests are in robot mechanics, planning, and control, visual tracking, and related areas of applied mathematics. In 2007-2008 he was an IEEE Robotics and Automation Society (RAS) Distinguished Lecturer, and has served as secretary of RAS from 2009-2010 and 2012-2013. the He has served as senior editor of the IEEE Transactions on Robotics, an area editor of the Springer Handbook of Robotics and Advanced Tracts in Robotics (STAR), and as an associate editor of the ASME Journal of Mechanisms and Robotics. He is a fellow of the IEEE, and incoming editor-in-chief of the IEEE Transactions on Robotics.

Systems, Man, & Cybernetics Society

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Free professional development workshops at Okanagan College

Five practical workshops for senior managers of small and medium sized technology enterprises will be held at the Centre for Learning at Okanagan College on 26 - 30 August 2013.

These high quality workshops will increase participants knowledge and develop their skills at the front edge of new technology: software development; using new problem solving methods; people management skills; expanding your business internationally and many others.

Qualified instructors, including Okanagan College Professors and two European experts in international business, will deliver the workshops.

The workshops will be organized as follows:

1. August 26 & 27: Strategic Customer Management
2. August 27 & 28: Data Management and Data Administration in SMEs
3. August 27 & 28: Effective Small Business Management
4. August 28 & 29: Accelerating Growth in International Markets
5. August 29 & 30: People Management Essentials

You can view the August 2013 training event flyer at:
http://www.trainingbc.ca/#!flyer-august/cgdk

For more information and to apply for upcoming workshops please visit: http://www.trainingbc.ca

Feel free to contact info@trainingbc.ca for more information.

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EDOC 2013

Call for Participation

We invite you to participate in the 17th IEEE International EDOC Conference

09-13 September Vancouver BC

Enterprise of the future in a world of cloud, social and big data

Sponsored by IEEE Computer Society and IEEE Communications Society
http://www.edocconference.org http://twitter.com/ieee_edoc

Some highlights from the program

- Keynote 1: Rajkumar Buyya, University of Melbourne and Manjrasoft
  "Market-Oriented Cloud Computing"
- Keynote 2: Keith Swenson, Fujitsu America Inc.
  "System architects rely on their intuition when designing a system to support the work"
- Keynote 3: Francisco Curbera, IBM
  "Integrating The Business Cloud"

About the conference

IEEE EDOC 2013 is the seventeenth conference in a series that provides the key forum for researchers and practitioners in the field of enterprise computing. EDOC conferences address the full range of models, methodologies, and engineering technologies contributing to intra- and inter-nterprise application systems. Since 1997, EDOC has brought together leading computer scientists, IT decision makers, enterprise architects, solution designers, and practitioners to discuss enterprise computing challenges, models and solutions from the perspectives of academia, industry, and government. The IEEE EDOC conference series emphasizes a holistic view on enterprise applications engineering and management, fostering integrated approaches that address and relate business processes, people and technology.

EDOC 2013 welcomes high quality scientific submissions as well as experience papers on enterprise computing from industry.

The main theme of EDOC 2013 is the "enterprise of the future in a world of cloud, social and big data". Distributed and cloud computing are fundamental pillars of this theme enabling collaborations based on service offerings, delivery and consumption within an enterprise and across enterprise borders. Expert panel discussions and keynotes will address current topics and issues in the domain.

Conference workshops

- 8th International Workshop on Vocabularies, Ontologies and Rules for the Enterprise and Beyond
  Keynote: Gabor Melli (PredictionWorks Inc.)
- 6th International Workshop on Evolutionary Business Processes
  Keynote: Manfred Reichert (Ulm University, Germany)
- 5th Workshop on Service-oriented Enterprise Architecture for Enterprise Engineering
  Keynote: Eric Dubois (CRP Henri Tudor, Luxembourg
- 1st International Workshop on Methodologies for Robustness Injection into Business Processes
  Keynote: Thomas Erl (Arcitura Education Inc.)
- 4th International Workshop on Models and Model-driven Methods for Service Engineering
- 1st International Workshop on Methodical Development of Modeling Tools
- 8th Trends in Enterprise Architecture Research Workshop

Registration is now open on the EDOC 2013 web site:
http://planet-sl.org/edoc2013/index.php?option=com_content&view=article&id=264&Itemid=775&lang=en
The entire conference program is available on the EDOC 2013 web site:
http://planet-sl.org/edoc2013/index.php?option=com_content&view=article&id=316&Itemid=904&lang=en

IEEE computer society

IEEE COMMUNICATIONS SOCIETY

Music emotion recognition and computational imaging

Homer Chen
National Taiwan University

Distinguished Lecturer

Friday 09 August
3:30 pm to 4:30 pm

ASB 10900 (IRMACS Presentation Studio), Simon Fraser University

Light refreshments served
Open to public

Please register so we may estimate room size and refreshments

Cosponsor
IEEE CAS
Victoria chapter

Information
Circuits and Systems chair Ljiljana Trajkovic
ljilja@cs.sfu.ca

My research team at the Multimedia Processing and Communications (MPAC) Laboratory, National Taiwan University, has been engaged in a variety of research projects related to the processing and communication of multimedia signals, with applications to digital video camera, P2P IPTV, digital home, and music information retrieval.

In this talk, I will first briefly introduce our research projects in the area of music emotion recognition and perception inspired video processing through a series of demos. Then I will zoom in on our recent work on computational imaging, in particular, digital autofocus and light field acquisition. The former, which is fundamental to digital cameras and digital video camcorder, is by no means an easy problem. It eventually led us to an alternative solution involving light field acquisition.

The latter is about a programmable aperture technique that exploits the fast multiple-exposure feature of digital sensors without trading off the sensor resolution and without moving the camera in the light field acquisition process. I will then conclude the talk by highlighting the challenges of super resolution light field rendering.

Speaker: Homer H. Chen (M'86-SM'01-F'03) received the Ph.D. degree in Electrical and Computer Engineering from University of Illinois at Urbana-Champaign.

Dr. Chen is a renowned expert in multimedia signal processing and communications. His professional career has spanned across academia and industry. Since August 2003, he has been with the College of Electrical Engineering and Computer Science, National Taiwan University, where he is Irving T. Ho Chair Professor. Prior to that, he held various R&D management and engineering positions with U.S. companies over a period of 17 years, including AT&T Bell Labs, Rockwell Science Center, iVast, and Digital Island (acquired by Cable & Wireless). He was a U.S. delegate for ISO and ITU standards committees and contributed to the development of many new interactive multimedia technologies that are now part of the MPEG-4 and JPEG-2000 standards. His professional interests lie in the broad area of multimedia signal processing and communications.

Dr. Chen is an IEEE Fellow. As a Technical Program Co-Chair, he helped revamp the IEEE International Conference on Multimedia and Expo in 2010. He was an Associate Editor of IEEE Transactions on Circuits and Systems for Video Technology from 2004 to 2010, IEEE Transactions on Image Processing from 1992 to 1994, and Pattern Recognition from 1989 to 1999. He served as a Guest Editor for IEEE Transactions on Circuits and Systems for Video Technology in 1999 and for IEEE Transactions on Multimedia in 2011.

Registration
https://meetings.vtools.ieee.org/meeting_registration/register/19535

IEEE CIRCUITS AND SYSTEMS SOCIETY

New tricks in analog-to-digital conversion

Michael Flynn
University of Michigan

Distinguished Lecturer

Wednesday 21 August
5:30 pm to 7:00 pm

Rm 2020 Kaiser Building
2332 Main Mall
UBC

Although analog-to-digital converters (ADCs) have existed for more than 70 years, new analog-to-digital conversion techniques continue to emerge. ADC architectures are evolving to deliver higher performance and also to take advantage of improved process performance. This presentation will discuss a new noise-shaping successive approximation register (SAR) ADC recently introduced at the IEEE International Solid-State Circuits Conference (ISSCC) and a new bandpass ADC architecture presented at the same conference. A SAR ADC that incorporates a programmable filter will also be discussed. This filtering SAR ADC is the basis of a flexible reconfigurable CMOS receiver.

Speaker: Michael P. Flynn received the Ph.D. degree from Carnegie Mellon University in 1995. He received the B.E. and M.Eng.Sc. degrees from University College Cork, Ireland in 1988 and 1990, respectively. From 1988 to 1991 he was with the National Microelectronics Research Centre in Cork, Ireland. He was with National Semiconductor in Santa Clara, CA, from 1993 to 1995 and from 1995 to 1997 he was a Member of Technical Staff with Texas Instruments, Dallas, TX. During the four-year period from 1997 to 2001, he was with Parthus Technologies, Cork, Ireland. Dr. Flynn joined the University of Michigan in 2001 and is currently Professor. His technical interests are in data conversion, RF circuits, serial transceivers and biomedical systems. Michael Flynn is a 2008 Guggenheim Fellow. He received the 2011 Education Excellence Award and the 2010 College of Engineering Ted Kennedy Family Team Excellence Award from the College of Engineering at the University of Michigan. He received the 2005-2006 Outstanding Achievement Award from the Department of Electrical Engineering and Computer Science at the University of Michigan. He received the NSF Early Career Award in 2004. He received the 1992-93 IEEE Solid-State Circuits Pre-doctoral Fellowship. He was an Associate Editor of the IEEE Journal of Solid State Circuits (JSSC) and an Associate Editor of IEEE Transactions on Circuits and Systems II. He has served on the Technical Program Committees of the International Solid State Circuits Conference (ISSCC), the Symposium on VLSI Circuits and the Asian Solid-State Circuits Conference (ASSCC). He currently serves on the Technical Program Committee of the European Solid-State Circuits Conference (ESSCIRC). He is a Distinguished Lecturer of the IEEE Solid-State Circuits Society.

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