

Curriculum Vitae

YangQuan Chen, Ph.D.

Associate Professor, Dept. of Electrical and Computer Engineering, Utah State University (USU)

Director, Center for Self-Organizing and Intelligent Systems (CSOIS), ECE Dept. of USU

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Home page: <http://mechatronics.ece.usu.edu/yqchen/>

Home address: 1038 East, 100 South, Logan, Utah 84321, USA. Home phone: (435)750-7390

Education

Ph.D.	Electrical Engineering	Nanyang Technological University, Singapore	1998
M.S.	Automatic Control	Beijing Institute of Technology, China	1989
B.S.	Industrial Automation	Univ. of Science and Technology of Beijing, China	1985

USU Employment History

2008-	Associate Professor with tenure, Graduate Coordinator (08-10), ECE Dept. of USU.
2002-2008	Assistant Professor, ECE Dept. of USU. Director of CSOIS (since June 2004)
2000-2002	Research Assistant Professor of Electrical Engineering, ECE Dept. and CSOIS.

Other Related Experience

1999-2000	Staff Engineer, Servo Product Dev. Group, Seagate Technology International, Singapore Science Park Design Center, Singapore. (http://www.seagate.com)
1998-1999	Professional Officer, Center for Intelligent Control, National University of Singapore. (http://www.ece.nus.edu.sg/cic)
1996-1998	Research Engineer, ECE Dept. of National University of Singapore.
1995-1996	Research Scholar, School of EEE, Nanyang Technological University, Singapore. (http://www.ntu.edu.sg/eee/)
1994-1995	Associate Professor, Dept. of Electrical Engineering, Xi'an Institute of Technology
1992-1995	Deputy Dept. Head, Dept. of Electrical Engineering, Xi'an Institute of Technology, China (now Xi'an Technological University http://www.xatu.edu.cn)
1988-1994	Lecturer, Dept. of Electrical Engineering, Xi'an Institute of Technology, China
1987-1988	Visiting Researcher, Dept. of Automatic Control, Beijing Institute of Technology, China.

Patents

1. US06,324,890. 12/04/2001. "Method of characterizing and screening voice coil motor pivot friction in a low velocity region"
2. US06,437,936. 08/20/2002. "Repeatable runout compensation using a learning algorithm with scheduled parameters"
3. US06,563,663. 05/13/2003. "Repeatable runout compensation using iterative learning control in a disc storage system"
4. US06,574,067. 06/03/2003. "Optimally designed parsimonious repetitive learning compensator for HDDs having high track density"
5. US06,636,375. 10/21/2003. "Seek in a disc drive with nonlinear pivot friction"

6. US06,654,198. 11/25/2003. "Repeatable run-out error compensation method for a disc drive"
7. US06,661,599. 12/09/2003. "Enhanced adaptive feedforward control to cancel OPR disturbance by shaping the internal mode"
8. US06,674,589. 01/06/2004. "Method for harmonic frequency identification in a disc drive".
9. US06,674,607. 01/06/2004. "Method and apparatus for determining high order polynomials for linearization of position signals".
10. US06,690,534. 02/01/2004. "Method & apparatus for handling multiple resonance freq. in disc drives using active damping".
11. US06,704,159. 03/09/2004. "Automatic acoustic management system for a disc drive"
12. US06,785,073. 08//31/2004 "Identification and cancellation of cage frequency in a hard disc drive"
13. US06,831,804. 12/14/2004 "Method and apparatus for handling resonance effects in disc drives using active damping"
14. US07,599,752. 10/06/2009. "Tuning methods for fractional-order controllers"

Consulting

2002 Seagate Technology International.

2004 Cornice Inc.

2010- Samsung SISA.

Professional Registration

Certified Six Sigma Green Belt (2000, Singapore)

Scientific and Professional Societies Membership

Senior Member, IEEE (Control Systems Society, Systems, Man, and Cybernetics Society, Robotics and Automation Society);

Member of ASME (American Society of Mechanical Engineers), AMA (Academy of Model Aeronautics), ASEE (American Society for Engineering Education), AUUSI (The Association for Unmanned Vehicle Systems International), AWRA (American Water Resources Association).

Teaching

Number of different graduate courses taught at USU: 5+10 (IS: "Independent Study" course)

- **ECE/MAE6320** **Linear Multivariable Controls (3 credits, also online distant edu)**
- **ECE/MAE7350** **Intelligent Control Systems (3 credits)**
- **ECE/MAE7330** **Nonlinear and Adaptive Control (3 credits)**
- **ECE/MAE7360** **Robust and Optimal Control (3 credits)**
- **ECE/MAE7750** **Distributed Control Systems (3 credits)**
- **ECE6010** **Random Processes in Electronic Systems (3 credits)**
- ECE6930 ST: Machine Vision in Control and Automation (**3 credits, IS**)
- ECE7930 ST: Computational Intelligence (**3 credits, IS**)
- ECE7930 ST: Computational Optimal Control (**3 credits, IS**)
- ECE6930 ST: Advanced Control Designs (**3 credits, IS**)
- ECE6930 ST: Sensor Networks (**3 credits, IS**)
- ECE6930 ST: Fractional Calculus in Modeling, Control & Signal Proc. (**3 cr., IS**)
- ECE7930 ST: Distributed Control of Robotic Networks (**4 credits, IS**)
- ECE6930 ST: Multi Unmanned Aerial Vehicle Systems (**3 credits, IS 09, 10**)
- ECE6930 ST: Solving Math. Problems in MATLAB
(**3 credits, regular summer'09 course, with D. Xue**)
- ECE6930 ST: Applied Fractional Calculus in Engineering
(**3 credits, regular summer'09 course, with C. Li, Y. Li and D. Xue**)

- ECE6930 ST: Multimodal Collaborative Inertial Navigation Measurement (Fall10) (3 credits, IS)
- ECE6930 ST: Fractional Order Stochastic Systems and Controls (Fall10) (3 credits, IS)

Number of different undergraduate courses taught at USU: 4+2

- ECE/MAE5320 Mechatronics (lab intensive) (4 credits)
- ECE3620 Circuits and Signals (3 credits)
- ECE4840 Design-II (Senior Design) Engineering Design (3 credits)
- ECE4850 Design-III (Senior Design) Engineering Communications (2 credits)
- PHYX2400 ST: Nanoscience and Technology - Materials Today (2 credits, regular course, NSF NUE grant)
- PHYX3500 ST: Nanomechatronics (3 credits, regular course, NSF NUE grant)

Honors and Awards (1999-2011)

- 2012. Guest co-editor, **International Journal of Bifurcation Chaos**, Special Issue on “*Fractional Dynamics and Control*” (April issue of 2012, to appear)
- 2011. Invited Panelist. Int. Symposium on Resilient Control Systems. August 2010, Boise, ID, USA.
- 2011: Recommended and selected to serve as Associate Editor for the journal *ISA Transactions*.
- 2011: **Best Journal Paper Award** \$500 (among all IFAC “*Control Engineering Practice*” journal papers published in 2008-2011), IFAC World Congress, Milan, Italy.
- 2011: Member of Advisory Committee. Invited Tutorial at 2011 ICUAS (Int. Conf. on Unmanned Aerial Systems) (full day) on May 24th, 2011, Denver, CO., on “*Multi-UAV Based Multi-Spectrum Collaborative Personal Remote Sensing: Concepts, Platform & Applications*”
- 2011: 1st Place again! 9th AUVSI SUAS (Student Unmanned Aerial Systems) Competition. Wins \$13,400. First team in the history of the competition to have won first place twice!
- 2011: Visiting Professor (Jan. – May, 2011). University of Pretoria, South Africa.
- 2010: Dissemination Award. Program Chair. The 4th IFAC Fractional Differentiation and its Applications (FDA10). Badajoz, Spain.
- 2010. Invited participant. NSF DDDAS Workshop. Aug. 30-31. Hilton Ballston. Washington DC.
- 2010. Invited Panelist. International Symposium on Resilient Control Systems. August 12, 2010, Idaho Falls, ID, USA.
- 2010. Invited Speaker. Institute of Mathematical Science, Shandong University, China. July 8th
- 2010. 9th Place! 8th AUVSI UAS (Unmanned Aerial Systems) Competition. Wins \$6,200. First team in the history of the competition to have finally figured out the magic phrase: “**FLY SAFE JUST JOE**”
- 2010. **Designated Editor**. (IFAC journal) *Control Engineering Practice* (CEP) (since August 2010)
- 2010. **Associate Editor** for IFAC journal *Mechatronics*.
- 2009. **Associate Editor** for *IEEE Transactions on Control Systems Technology* (TCST)
- 2009. **Associate Editor**, *ASME Journal of Dynamic Systems, Measurement and Control* (J-DSMC)
- 2009. **Member of Editorial Board**, *Fractional Calculus and Applied Analysis* (FCAA)
- 2009. **Associate Editor**, *Acta Montanistica Slovaca* (<http://actamont.tuke.sk/eb.html>)
- 2009. Retention Award, USU.
- 2009. First Prize, 7th AUVSI UAS (Unmanned Aerial Systems) Competition. Wins \$14,000 for First Place Overall
- 2009. Graduate thesis External Examiner. Kuwait University
- 2009. Graduate thesis External Examiner & Oral Examiner, University of Canterbury, New Zealand.
- 2009: May-June. Invited recruitment/academic visits and seminars to 9 Chinese universities.
 - Beijing Institute of Technology (BIT), Beijing, China (5/15)
 - Nantong University (NTU), Jiangsu Province, China (5/21)
 - Hohai University (HHU), Nanjing, Jiangsu Province, China (5/22)

- ❑ Nanjing Institute of Technology (NJIT), Nanjing, Jiangsu Province, China (5/22)
- ❑ Xi'an Technological University (XATU), Xi'an, Shaanxi Province, China (5/26)
- ❑ Xidian University, Xi'an, Shaanxi Province, China (5/26)
- ❑ Northwestern Forest & Agriculture Univ. (NWF&AU), Yangling, Shaanxi Province, China (5/28)
- ❑ South China University of Technology (SCUT), Guangzhou, Guangdong Province, China (6/1)
- ❑ Beijing Jiao Tong University (BJTU), Beijing, China (6/3)
- ❑ 2009: June 10. Tutorial Session. Organizer and Speaker. American Control Conference. June 10-12, 2009, St. Louis, MO, USA
- ❑ 2009: May 27. Semi-Plenary Speaker. The 4th IEEE Conference on Industrial Electronics and Applications (ICIEA 2009), Xi'an, China.
- ❑ 2009: March 13. UC Berkeley Invited Seminar. "Fractional order thinking: from mechatronics to biomechatronics and beyond".
- ❑ 2008: Second Prize, 6th AUVSI UAS (Unmanned Aerial Systems) Competition. Wins \$8,000 for 2nd Place Overall, 2nd Place in Mission, Honorable Mention in both Orals and Journal, and Prize Barrels for Autonomous Mission Flight, Autonomous Landing, JAUS and Perfect Identification of the Off-Path Target.
- ❑ 2008: Invited Panelist. "*Panel Discussion: What skills do controls engineering graduates need to have for industry?*" 2008 American Control Conference, Seattle, WA, July 2008.
- ❑ 2008: Plenary Speaker. The 3rd IFAC Fractional Differentiation and its Applications (FDA08). Ankara, Turkey, 05 - 07 Nov., 2008.
- ❑ 2008: Ph.D. student Yan Li won the prestigious FDA08 Young Riemann-Liouville Award.
- ❑ 2007: Outstanding Researcher of the Year. Dept. of Electrical and Computer Engineering, Utah State University.
- ❑ 2007: Special Invited Talk. The 2nd IEEE Conference on Industrial Electronics and Applications (ICIEA 2007), 23-25 May 2007, Harbin, China.
- ❑ 2006: Achievement Award, 2nd IFAC Int. Workshop on Fractional Derivative and its Applications (FDA06), Porto, Portugal.
- ❑ 2006: Plenary Speaker, 2nd IFAC Int. Workshop on Fractional Derivative and its Applications (FDA06), Porto, Portugal.
- ❑ 2005: 2nd Place. Crossbow Smart Dust Contest, \$2000 Cash Reward and \$500 Travel Allowance.
- ❑ 2003: *Automatica* Outstanding Reviewer.
- ❑ 2003: Invited Tutorial Lecturer (3 hours). The 1st Int. Summer School on Iterative Learning Control. June. CSOIS, Logan, Utah.
- ❑ 1999, 2000: Many Seagate Patent Awards. 1st Seagate TEC Speaker, Seagate Core Employee Award (2000).

Institutional and Professional Service

Institutional:

- Member. Dean's Associate Professor Committee for Strategic Planning (2010-)
- Member. Senior Faculty Search Committee for USTAR in "Energy". (College of Engineering and College of Science) (2010)
- Member. Faculty Senate. Utah State University (2010-)
- Chair, Promotion/Tenure Committee for a faculty member in ECE Dept. (2009-)
- Director, CSOIS Center for Self-Organizing and Intelligent Systems (<http://www.csois.usu.edu>) (since June 2004)
- Chair, Electrical Engineering Faculty Search Committee, ECE Dept. of USU (2007),
- Chair of the Graduate Committee, ECE Dept. of USU (2008-2010)
- Member, Dept. Head Search Committee, ECE Dept. of USU (2007).
- Member, Executive Committee, ECE Dept. of USU (2007-).
- Member of the Electrical Engineering Faculty Search Committee, ECE Dept. of USU (2004, 2006),

- Member of the Graduate Committee, ECE Dept. of USU (2002-2008)
- Judge, USU Graduate Symposium, USU Graduate Student Senate, March 4, 2004; April 15, 2005.
- USU CSSA (Chinese Students and Scholars Association) Faculty Advisory Committee (2003).
- Faculty Mentor (2001-2002) for Vector Floor Theme Hall Program, Jones Hall, Housing and Food Service and College of Engineering.
- Faculty Mentor (2002-2003) for Theme Housing Program, Reeder Hall, Housing and Food Service and College of Engineering.
- Appreciation Letter from the late USU President Kermit L. Hall. "Student Move-in Days". Volunteer helper, for two days, 2003.

Professional:

- Immediate Past Chair, Technical Committee of Mechatronics and Embedded Systems and Applications (MESA), ASME DED (Design Engineering Division) (2010-2011)
- Chair, Technical Committee of Mechatronics and Embedded Systems and Applications (MESA), ASME DED (Design Engineering Division) (2009-2010)
- Chair, Technical Committee of Mechatronics and Embedded Systems (MES), IEEE ITSS (Intelligent Transportation Systems Society) (2009-2010)
- Member of Editorial Advisory Board, *An International Journal of Optimization and Control: Theories & Applications* (IJOCTA), <http://ijocta.balikesir.edu.tr> (2011-)
- Designated Editor, IFAC journal *Control Engineering Practice* (CEP), (2010-)
- Associate Editor, *ISA Transactions* (2011-)
- Associate Editor, *IEEE Transactions on Control Systems Technology* (TCST) (2010-)
- Associate Editor, *ASME Journal of Dynamic Systems, Measurement and Control* (J-DSMC) (2009-)
- Associate Editor, *Fractional Calculus and Applied Analysis* (FCAA: ISSN 1311-0454) (2009-)
- Associate Editor, *Fractional Differential Calculus* (FDC), <http://fdc.ele-math.com/> (2009-)
- Associate Editor, *Acta Montanistica Slovaca* <http://actamont.tuke.sk/eb.html> (2009-)
- Associate Editor, ISA Review Board for American Control Conference of AACC (2004-)
- Associate Editor, IEEE Control Systems Society Conference Editorial Board (2002-)
- External Thesis Examiner, University of Pretoria, South Africa, 2011
- Tenure/promotion external reviewer, 2011 (two US universities)
- AAAS review panelist for Saudi Arabia, 2011
- Luxemburg Science Foundation proposal review, 2011
- Netherlands Science Foundation proposal review, 2011
- Elsevier book series proposal review and book proposal reviews, 2011
- South Africa NRF proposal review, 2010.
- ARL Proposal Review, 2009
- NASA Panel Review, 2008
- NSF CISE REU Panel Review, 2009, 2010.
- NSF CAREER Panel Review, 2009.
- NSF Panel Review, 2007, 2008, 2009, 2010.
- Chilean NSF Proposal Review, 2008.
- Oversea Ph.D. Dissertation External Examiner, 2009, U. of Canterbury, New Zealand.
- Oversea Thesis External Examiner, 2009, Kuwait University.
- Oversea Ph.D. Dissertation External Examiner, 2006, IIT, India.
- Canada NSERC Proposal Review, 2004

2012:

- Steering Committee Chair. IEEE/ASME Int Conf. on Mechatronics and Embedded Systems and

- Applications, Suzhou, China, July 8-10, 2012; <http://www.asmemesa.org>
- Award Committee Chair. The 5th IFAC Fractional Differentiation and its Applications (FDA12). Nanjing, China, May 2012; <http://em.hhu.edu.cn/fda12/>
- Tutorial Workshop Chair. 2012 International Conference on Unmanned Aircraft Systems (ICUAS). Philadelphia, PA, 2012 <http://www.uasconferences.com/>
- Invited Session Co-Chair, CCDC 2012. <http://www.ccdc.neu.edu.cn/>
- Symposium co-chair, 4th SUAVTA, IEEE/ASME MESA 2012 (<http://www.asmemesa.org>)
- Program Committee Member
 - IFAC PID12; <http://pid12.ing.unibs.it/committees.html>
 - IEEE ISRCS2012; IEEE ICAL12; IEEE ICNSC2012; ICINCO 2012; ISNN12; ICC12
 - A few others

2011:

- Track Chair on Complex Networked Control Systems, IEEE ISRCS 2011. Boise, ID. <https://secureweb.inl.gov/ISRCS2010/presentations.aspx>
- Advisory Committee. 2011 International Conference on Unmanned Aircraft Systems (ICUAS). Denver Colorado USA May 24-27, 2011 <http://www.uasconferences.com/>
- Symposium Co-Chair/Organizer, ASME FDTA 2011 under ASME/IEEE MESA2010. <https://www.asmeconferences.org/IDETC2011/>
- Symposium Chair. 3rd SUAVTA under ASME/IEEE MESA2011. <https://www.asmeconferences.org/IDETC2011/>
- Invited Session Co-Chair. CCDC2011. The 2011 Chinese Control and Decision Conference (2011 CCDC) is the 23rd of the series, Mianyang, China in May 23-25, 2011. <http://www.ccdc.neu.edu.cn>
- IPC member,
 - IEEE ISNN, 2011, Hong Kong, China, <http://isnn2011.mae.cuhk.edu.hk/>
 - A few more

2010:

- **General Chair**, IEEE/ASME Int. Conf. on Mechatronics and Embedded Systems and Applications (MESA2010), July 15-17, 2010, Qingdao, China, www.asmemesa.org
- **Program Chair**, International Program Committee. 4th IFAC Int. Workshop on Fractional Derivative and Applications (FDA2010), Spain. <http://web.tuke.sk/fda10/>
- **Track Chair** for Complex Networked Control Systems. International Symposium on Resilient Control Systems. August 12, 2010, Idaho Falls, ID, USA.
- **Program Chair**. Academic Day on Fractional Dynamics, Shanghai University, May 16-18, 2010.
- IPC member, 2010 IEEE MFI (multisensory fusion and integration), Salt Lake City, UT, USA, <http://www.cs.utah.edu/mfi2010/>
- IPC member. The 3rd International Symposium on Systems and Control in Aeronautics and Astronautics (ISSCAA 2010, <http://www.isscaa.net/> Harbin, China, June 08-10, 2010
- Tutorial/Workshop Chair, Organizing Committee. The 4th Annual Electrical Power and Energy Conference (EPEC 2010), Halifax, NS, Canada, August 25-27, 2010.
- IPC member, IEEE ICCA, Xiamen, China, <http://www.ieee-icca.org/>
- IPC Member. IEEE ICNSC, 2010, Chicago, USA. <http://www.ezconf.net/icnsc10/>
- IPC member, IEEE ISNN, 2010, Shanghai, China, <http://isnn2010.sjtu.edu.cn/>
- **Invited Session Co-Chair**. The 22nd CCDC2010. May 26-28, 2010, Xuzhou, China. <http://www.ccdc.neu.edu.cn/>
- **Workshop Co-Chair**. The 8th WCICA, July 6-9, 2010, Jinan, China. <http://www.wcica.info/>
- IPC member. 2010 International Conference on Modeling, Identification and Control, Okayama City, Japan, July 17-19, 2010. <http://www.suri.sys.okayama-u.ac.jp/icmic2010>

- **Workshop Co-Chair.** IEEE ICIA. 2010 IEEE International Conference on Information and Automation, June 20 - 23, 2010, Harbin, Heilongjiang, China. <http://www.icia2010.org/>
- IPC member, ICARCV 2010, Singapore. www.icarcv.org/
- IPC member, IEEE CASE 2010, <http://www.case2010.org/>

2009:

- **Program Chair,** 2009 ASME/IEEE Mechatronic and Embedded Systems and Applications (MESA), San Diego, CA, August 30-Sept. 2, 2009. <http://iel.ucdavis.edu/ mesa/MESA09/>
- **Member, Advisory Committee.** Symposium on Learning Control at IEEE CDC 2009. December 14-15, Shanghai 2009.
- **Organizing Committee.** IFAC Workshop on Networked Robotics. Golden, CO, USA. <http://control.mines.edu/netrob09/>
- **Organizer.** Whole day workshop. “Fractional Calculus Day @ Utah State University”. CSOIS. April 24, 2009. http://mechatronics.ece.usu.edu/foc/event/FOC_Day@USU/2009.html
- IPC member. IEEE CBMS. <http://cviat.ece.ttu.edu/cbms2009/>
- IPC member. IASTED CI 2009
- IPC member, IEEE ICCA, New Zealand, <http://www.ieee-icca.org/>
- IPC member. 2009 Fifth International Conference on Intelligent Sensors, Sensor Networks and Information Processing. Melbourne, Australia, <http://www.issnip.org/2009/>
- **Symposium Co-Chair.** The first Symp. on CPS (Cyber-Physical Systems) at MESA09, San Diego.
- **Symposium Co-Chair.** The first Symposium on Small Unmanned Aerial Vehicle Technologies and Applications (SUAUTA) at MESA09, San Diego.
- **Organizer.** Pre-Conference One-Day Workshop on “Fractional Calculus in Controls and Signal Processing”, 2009 American Control Conference. (www.a2c2.org/) (cancelled)
- **Organizer.** Tutorial Session on “Fractional Calculus in Controls and Signal Processing” during 2009 American Control Conference. (more info: <http://fractionalcalculus.googlepages.com>)
- **Invited Session Co-Chair,** Int. Conf. on Decision and Control in China (CCDC09), Guilin, China.
- **Track Chair of Mechatronics.** The 4th IEEE Conference on Industrial Electronics and Applications (ICIEA 2009) Xi’an, China. (www.ieeeiciea.org)
- Tutorial/Workshop Co-Chair. IEEE ICMA2009. Changchun, China. (www.ieee-icma.org)
- Member of IPC. The 6th International Conference on Informatics in Control, Automation and Robotics. ICINCO 2009. Milan, Italy. <http://www.icinco.org/cfp.htm>
- Member of IPC. The 2009 IEEE Symposium on Approximate Dynamic Programming and Reinforcement Learning (ADPRL 2009) Nashville, Tennessee, USA, March 30 - April 2, 2009, as part of the SSCI 2009, <http://www.ieee-ssci.org/>
- Member of IPC. Sixth International Symposium on Neural Networks. ISNN2009. Wuhan, China. <http://www.easychair.org/conferences/?conf=isnn2009>

2008:

- **Technical Program Chair, Members of Executive Committee, Chair of Mechatronics Control,** 2008-2009 ASME/IEEE Mechatronic and Embedded Systems and Applications (MESA) Committee. <http://iel.ucdavis.edu/ mesa/>
- Member, International Program Committee. 3rd IFAC Int. Workshop on Fractional Derivative and Applications (FDA08), Turkey.
- **Technical Program Co-Chair,** 2008 Int. Conf. on Decision and Control in China (CCDC08), Yantai, China.
- **Tutorial/Workshop Co-Chair,** 2008 IEEE/ASME International Conference on Advanced Intelligent Mechatronics (AIM08), Xi’an, China.

- **Tutorial/Workshop Co-Chair**, 2008 IEEE International Conference on Mechatronics and Automation (ICMA08), Japan.
- Member, International Program Committee. The 7th World congress on Intelligent Control and Automation (WCICA'08), Chongqing China during June 25-27, 2008.
- Member, International Program Committee. 2008 IEEE Conference on Soft Computing in Industrial Applications in Muroran, Japan, June 25-27, 2008.
- Member, Program Committee. 2008 IEEE International Conference on Networking, Sensing and Control (IEEE ICNSC'08), Sanya, China.
- Member, Program Committee. IEEE ISIC (International Symposium of Intelligent Control) track of the IEEE MSC2008, San Antonio, TX, USA, October 2008.
- Member, International Program Committee. NSC08 - Conference on Nonlinear Science and Complexity, July 28-31, 2008, Porto, Portugal
- **Track Chair**, The 3rd IEEE Conf. on Industrial Electronics & Apps (ICIEA08) 3-5 June 2008, Singapore.
- **Co-Organizer**, Invited Session on Iterative Learning Control. *The 10th International Conference on Control, Automation, Robotics and Vision*, ICARCV 2008, Hanoi, Vietnam, 17 - 20 December 2008.

2007:

- **Organizer**. Whole day workshop. "Fractional Calculus Day @ Utah State Univ.". Sept. 3, 2007.
- **Program Chair**, ASME/IEEE Int. Conf. on Mechatronics, Embedded Systems and Applications (MESA07), 9/4-7, 2006, Las Vegas.
- Member, Scientific Committee. Symposium on Applied Fractional Calculus. Badajoz (Industrial Engineering School), Spain, October 15-17, 2007.
- Member, Program Committee. 2007 IEEE International Conference on Automation and Logistics (ICAL 2007), Jinan, Shandong, China, August 18–21, 2007.
- Member, International Program Committee. 8th International Carpathian Control Conference (ICCC). Hotel Patria, Štrbské Pleso, High Tatras, Slovak Republic on May 24-27, 2007.
- Member, Technical Program Committee (TPC). 2007 IEEE Symposium on Computational Intelligence in Bioinformatics and Computational Biology (CIBCB 2007). Honolulu, Hawaii, USA, April 1-5, 2007.
- Member of the International Program Committee (IPC) for the 20th IEEE International Symposium on Computer-Based Medical Systems, Maribor, Slovenia, June 20-22, 2007.
- Member, International Program Committee. ICINCO 2007. International Conference on Informatics in Control, Automation & Robotics
- **Tutorial and Workshop Co-Chair**. Member, International Program Committee. The 2007 IEEE International Conference on Robotics and Biomimetics (ROBIO 2007), Sanya, China, December 15 to 18, 2007.
- **Track Chair of Mechatronics**. 2007 IEEE International Conference on Industrial Electronics and Applications, Harbin, China.
- **Special Invited Talk/Discussion**. 2007 IEEE International Conference on Industrial Electronics and Applications, Harbin, China
- **IPC Co-Chair**. 2007 IEEE International Conference on Industrial Electronics and Applications ([IEEE ICMA07](#)), Harbin, China.
- IPC member. 2007 IEEE Int. Symposium on Approximate Dynamic Programming and Reinforcement Learning ([ADPRL07](#)), Hawaii, USA.
- IPC member. IEEE SMCia/07 workshop in Passau, Germany, on August 1 - 3, 2007.
- IPC member. The International Conference on Advanced Engineering Computing and Applications in Sciences (ADVCOMP 2007). November 4-9, 2007 - Papeete, French Polynesia (Tahiti)
- IPC member. IASTED International Conference on Computational Intelligence (CI 2007), Jul 02,

2007 to Jul 04, 2007, Banff, Canada.

- **Review Co-Coordinator.** 2007 ASME Int. Design Engineering Technical Conference and Computers and Information in Engineering (DETC/CIE) Conference. 6th Int. Conf. on Multibody Systems, Nonlinear Dynamics, and Control (MSNDC). MSNDC-14: Fractional Derivatives and Their Applications (FDA07). Sept. 2007. Las Vegas, NV, USA
- Member, IPC. CSI 2007. 10th Int. Conf. on Computer Science and Informatics with 8th Joint Conf. on Information Sciences (JCIS 2007) July 18 - 24, 2007, Salt Lake City, Utah.

2006:

- IPC member, The International Conference on Wireless Algorithms, Systems and Applications ([WASA06](#)), Xi'an China;
- **Award Committee Chair**, IEEE Mountain Workshop on Adaptive & Learning Systems ([SMC/ALS06](#)), Utah State Univ., Logan, 7/24-26/2006
- Member, Program Committee, 2006 IEEE Symposium on Computer-Based Medical Systems, Marriott Salt Lake City – City Center, Salt Lake City, Utah, USA, June 22-23, 2006. <http://CBMS2006.ece.byu.edu>
- Member, Program Committee, IEEE Int. Conf. On Networking, Sensing & Control (ICNSC06) Ft. Lauderdale, Fl., U.S.A. April 23-25, 2006
- **Tutorial and Workshops co-Chair.** IEEE Int. Conf. on Information Acquisition (ICIA06), August 20 - 23, 2006, Shandong University, China.
- **Program co-Chair**, The 2006 IEEE Int. Conf. on Mechatronics & Automation, June 25-28, 2006 (ICMA06) Luoyang, Henan Province, China.
- Member, IPC, the 2nd IFAC Workshop on Fractional Differentiation and its Applications , 19-21 July, 2006, Porto, Portugal.
- **Plenary Speaker**, the 2nd IFAC Workshop on Fractional Differentiation and its Applications , 19-21 July, 2006, Porto, Portugal.
- Member, IPC, 9th Int. Conf. on Control, Automation, Robotics and Vision, ICARCV'06, Singapore, 5-8 Dec. 2006.

2005:

- **Organizer.** Whole day workshop. "Fractional Calculus Day @ Utah State University". CSOIS. April 19, 2005.
- Member, IPC. 7-th Computational Intelligence and Natural Computing (CINC05) with 8th Joint Conf. on Information Sciences (JCIS 2005) July 21 - 26, 2005, Salt Lake City, Utah.
- Member, IPC. CSI 2005. 8th Int. Conf. on Computer Science and Informatics with 8th Joint Conf. on Information Sciences (JCIS 2005) July 21 - 26, 2005, Salt Lake City, Utah.
- Member, TPC for Track 8: "Theory, Design and Implementation of Circuits & Systems". 2005 ICCAS , Hong Kong, China.
- **Tutorials/Workshops Co-Chair.** IEEE Int. Conf. on Information Acquisition (IEEE ICIA 2005), Hong Kong/Macau, China. July 9 to 10 and the regular conference program at the Chinese University of Hong Kong from July 11 to 13, 2005.
- Member, International Program Committee; Invited Session co-Chair, 2005 IEEE ICMA05, July 29-August 1, Niagara Falls, Ontario, Canada.
- **Co-Chair, Special/Organized Sessions**, 2005 IEEE/RSJ IROS05. August 2-6, 2005, Edmonton, Alberta, Canada.

2004:

- **Reviewer Committee**, IFAC Int. Workshop on Fractional Derivative and Applications (FDA04), July 19-21, 2004, Bordeaux, France.

- Member, Technical Program Committee (TPC). 2004 International Conference on Communications, Circuits and Systems (ICCCAS04), June 28-June 30, 2004, Chengdu, Sichuan, China.
- Member, International Program Committee (IPC), IEEE Int. Conf. Computational Cybernetics 2004 (ICCC04), Austria.
- Session Chair. Geometric and Computational Methods in Control American Control Conference 2004.

2003:

- Member, International Program Committee (IPC), IEEE CIAC2003, Hong Kong, China; IEEE CIRA2003, Kobe, Japan.
- Session Chair and Session co-Chair. ASME DETC 2003. VIB. Chicago; Session co-Chair. IEEE CDC2003 (Program), Hawaii, USA.
- **Founding Member** of ASME subcommittee “*Fractional Dynamics*”. (2003, Chicago)
- **Co-organizer and Instructor**, Tutorial Workshop on “Fractional order calculus in control and robotics” at IEEE CDC’02, Las Vegas, NE, USA.
- Co-organizer, Invited Sessions on “Iterative Learning Control – Design & Applications”. 17th IEEE ISIC’02, Oct. 27-30, Vancouver, Canada.
- Reviewer, NSERC funding proposal, Canada, 2001. South Africa Science Foundation proposal review, 2005.
- Co-organizer, International Mini-Symposium on Iterative Learning Control, CSOIS, Utah State University, Logan, Nov. 2001.
- Member, IPC, IEEE CIRA 2001, July 29 - August 1, 2001, Banff, Alberta, Canada
- **Panelist**, “Panel discussions on iterative learning control”, The 3rd Asian Control Conference, Shanghai, China, July 2000.
- Co-organizer, Multiple Invited Sessions on “Iterative Learning Control” in the ICARCV’2000. Dec. 2000, Singapore.

Reviewers for many journals and international conferences. Session chair/co-chair for many international conferences.

Professional Development Activities

- ❑ Dec. 10, 2011. “[Traffic Modeling and Estimation at the Age of Smartphones: Leveraging Statistical Modeling and Optimal Control](#)”, full day workshop, IEEE CDC’11, Orlando, FL.
- ❑ August 30-31, 2010. Invited Workshop. <http://www.DDDAS.org>
- ❑ June 13, 2009. Workshop in honor of Professor B. Ross Barmish after American Control Conference. St. Louis, MO, USA. <http://www.personal.psu.edu/cml18/barmish60th/html/talks.html>
- ❑ Dec. 8, 2008, Tutorial Workshop on *Modeling, Estimation and Control in Neuroscience* Organized by Sridevi Sarma (MIT, USA), The 44th IEEE Conference on Decision and Control, Cancun, Mexico. (very gainful, techniques around Deep Brain Stimulation)
- ❑ May 19-20, 2004. 5th Annual Edison Conference and Innovation Showcase. University of Utah, SLC.
- ❑ May 3-6, 2004. “Road Scholar”. USU President Hall’s Road Scholars 2004 Tour. South East Utah.
- ❑ March 2003. NSF Junior Faculty Travel Grant for NSF Career Workshop at Tempe, Arizona.
- ❑ June 2003. Travel grant from NCAR (National Center for Atmospheric Research), Junior Faculty Forum, Boulder, CO. <http://www.asp.ucar.edu/ecsa/announce.html>
- ❑ June 2002, Course Design & Development Workshop. Office of Instructional Support, Utah State University.
- ❑ Dec. 2001, Tutorial Workshop on *Networked Autonomous and Semi-autonomous Vehicles*, The 40th IEEE Conference on Decision and Control, Hyatt Regency Grand Cypress Resort in Orlando, Florida. (Given by UC Berkeley PATH people, interesting talks)
- ❑ March 2000-July 2000, **DFSS** – Design for Six Sigma Green Belt Certification Training (80 hours), Seagate Technology International, Singapore.

Grants and Funding History

Year	Sponsor	PI/CoPI	Project Title	Amount total	Amount responsible
2011-2012	SDL USURF	PI	SDL “ New fractional order maximal power point tracking controller for small satellite photovoltaic panels ”	\$35,000	\$35,000
2011-2012	NSF	PI	NSF “ RAPID: Low Cost Personal Remote Sensing for Cognitive Disaster Assessment with Enhanced Human-Machine Interface ”	\$49,999	\$49,999
2010-2013	DOE	Co-PI	“ Automatic Electric Transportation ” (PI: Dr. Kevin Heaslip)	\$947,000	\$270,000
2011-2012	UWRL	PI	Utah Water Research Laboratory (UWRL) MLF Seed Grant: “ Ultra light, High Grain UAV Fish Tracking Antennas ” (year-2)	\$37,085	\$37,085
2011-2012	UWRL	PI	Utah Water Research Laboratory (UWRL) MLF Seed Grant: “ Low Cost Vertical Take Off and Landing Personal Remote Sensing Systems for Water Engineering: AggieVTOL ” (year-2)	\$49,154	\$49,154
2011-2012	UWRL	PI	Utah Water Research Laboratory (UWRL) MLF Seed Grant: “ Multispectral UAV Collaborative Remote Sensing System for Irrigation Water Management and Ecological Assessment ” (year-5)	\$79,963	\$79,963
2011-2014	NIDRR	Co-PI	National Institute on Disability & Rehabilitation Research. “ Experimental Research on Pedestrian and Evacuation Behaviors of Individuals with Disabilities; Theory Development Necessary to Characterize Individual-Based Models ” (PI: Dr. Keith Christensen)	\$594,486	\$200,000
2011-2014	NASA	PI	NASA UAS2NAS “ Cognitive autopilot techniques and flight evaluation for integrating low cost personal remote sensing UAVs in the national airspace system ”	\$300,000	\$300,000
2010-2011	UWRL	PI	Utah Water Research Laboratory (UWRL) MLF Seed Grant: “ Ultra light, High Grain UAV Fish Tracking Antennas ” (year-1)	\$38,000	\$38,000
2011	USU	PI	AUVSI Competition travel grant from Dean’s Office, College of Engineering, USU	\$5,000	\$5,000
2011	SDL	PI	AUVSI Competition travel grant from Space Dynamics Laboratory, USU	\$2,500	\$2,500
2011	Samsung	PI	“ SISA-USU R&D Partnership in High TPI Harddisk Drives ” (Year 1 of 5)	\$20,000	\$20,000
2010-2011	UWRL	PI	Utah Water Research Laboratory (UWRL) MLF Seed Grant: “ Multispectral UAV Collaborative Remote Sensing System for Irrigation Water Management and Ecological Assessment ” (year-4)	\$102,185	\$102,185
2010	Samsung	PI	“ Performance Improvement Techniques in High TPI Harddisk Drives ”	\$79,212	\$79,212
2010	Samsung	PI	“ Harnessing Fractional Order Control Techniques in Harddisk Servo ”	\$43,371	\$43,371
2009-2010	Dean’s Office	PI	Postdoc Research Support. Dean’s Office, College of Engineering, USU	\$35,000	\$35,000
2010	USU TCO USTAR	Co-PI	ARRA USTAR TCG (technology commercialization grant) “ USU AggieAir: Flying Networked Sensors for Collaborative Multispectral Remote Sensing ”	\$49,673	\$49,673

2010-2011	UWRL	PI	Postdoc support for UAV research	\$35,000	\$35,000
2010-2011	UWRL	PI	Utah Water Research Laboratory (UWRL) MLF Seed Grant: “Low Cost Vertical Take Off and Landing Personal Remote Sensing Systems for Water Engineering: AggieVTOL” (year-1)	\$82,000	\$82,000
2010	USU	PI	AUVSI Competition travel grant from Dean’s Office, College of Engineering, USU	\$5,000	\$5,000
2009	USU	PI	AUVSI Competition travel grant from Dean’s Office, College of Engineering, USU	\$5,000	\$5,000
2009-2010	EAFB	PI	AUVSI Competition grant from Edwards Air Force Base	\$6,000	\$6,000
2009-2012	NSF	PI	NSF REU Site: “Mobile Actuator and Sensor Networks”	\$282,789	\$282,789
2008-2009	UWRL	PI	Utah Water Research Laboratory (UWRL) MLF Seed Grant: “Multispectral UAV Collaborative Remote Sensing System for Irrigation Water Management and Ecological Assessment” (year-3)	\$104,000	\$104,000
2008	USU	PI	AUVSI Competition travel grant from Dean’s Office, College of Engineering, USU	\$5,000	\$5,000
2007-2008	DOI	PI	Dept. of Interior (DOI) “Water 2025” project “Scipio water user association and irrigation management”	\$30,000	\$30,000
2007-2008	UWRL	PI	Utah Water Research Laboratory (UWRL) MLF Seed Grant: “Multispectral UAV Collaborative Remote Sensing System for Irrigation Water Management and Ecological Assessment” (year-2)	\$88,175	\$88,175
2006-2010	NASA	PI	NASA AIST “Adaptive Algorithms for Optimal Classification and Compression of Hyperspectral Images” (PI transferred from Dr Tamal Bose)	\$436,710	\$15,000
2006-2007	UWRL	PI	Utah Water Research Laboratory (UWRL) MLF Seed Grant: “Multispectral UAV Collaborative Remote Sensing System for Irrigation Water Management and Ecological Assessment” (year-1)	\$127,451	\$127,451
2006-2007	UWRL	PI	Utah Water Research Laboratory (UWRL) MLF Seed Grant: “Scipio realtime irrigation control”	\$32,675	\$32,675
2006-2009	NIH (R15)	Co-PI	NIH (R15) “Whole Cell Biosensing of Bacterial Chemotaxis”	\$214,500	\$20,000
2006	NSF SBIR	PI	NSF SBIR grant subcontract from Wavelength Electronics “True Fractional Order Device: Fractor”	\$15,000	\$15,000
2007	NSF	PI	NSF IREE. “Optimal interlaced distributed control and distributed measurement with networked mobile actuators and sensors”	\$29,000	\$29,000
2006-2009	NSF	PI	NSF REU Site: “Mobile Actuator and Sensor Networks”	\$229,035	\$229,035
2006-2007	NSF	PI	DDDAS/SEP. “Optimal interlaced distributed control and distributed measurement with networked mobile actuators and sensors”	\$42,000	\$42,000
2005-2006	USU SDL	PI	USURF Space Dynamics Laboratory (SDL) Skunkworks Research Initiative Fund. “Temperature uniformity control”	\$17,500	\$17,500

2005-2006	USU SDL	PI	USURF Space Dynamics Laboratory (SDL) Skunkworks Research Initiative Fund. “Fractional order signal processing for bioelectrochemical sensors”	\$17,500	\$17,500
2005-2006	USU VPR	PI	Community and University Research Initiative (CURI) grant “Chemotaxis Behavior in Mobile Actuator and Sensor Networks for Environmental Monitoring”	\$20,000	\$20,000
2005	DesignJug	PI	“Vision-Based Road Detection and Tracking for an Autonomous Vehicle Platform” , DesignJug team support for DARPA Grand Challenge	\$12,000	\$12,000
2005	USURF TCO	PI	USU TCO Technology Bridge Grant “Fractional Order Control Tuning Methods”	\$13,910	\$13,910
2004	Cornice LLC	PI	“Advanced repeatable runout compensation in micro hard disk drives”	\$51,000	\$51,000
2004	NSF	Co-PI	US-France Workshop on Fractional Derivatives and Their Applications. NSF Workshop grant (Post IFAC FDA’04, Bordeaux, France) (PI: Dr. Om Agrawal)	\$16,000	\$3,000
2004-2006	NSF	Co-PI	NSF NUE (Nano Undergraduate Education) Grant. (PI: Dr. Haeyang Yang)	\$100,000	\$20,000
2003-2004	Private	PI	Donation to further develop “RIOTS_95 package for solving general purpose optimal control problems in MATLAB.”	\$4,000	\$4,000
2003-2004	SDL	PI	USURF Space Dynamics Laboratory (SDL) Skunkworks Research Initiative Fund. “Mobile Sensor and Actuator Networks”	\$15,000	\$15,000
2003-2005	NRC	PI	National Research Council Twinning Grant with Technical University of Kosice, Slovakia. “Application of fractional calculus in engineering and applied sciences”	\$16,000	\$16,000
2003-2004	USU FACT	PI	“Real-time Tele-lab implementation and demonstration using Quanser TeleLab”	\$12,000	\$12,000
2003	NCAR	PI	Travel grant from National Center for Atmospheric Research (NCAR), Junior Faculty Forum. June 2003, Boulder, CO.	\$2,000	\$2,000
2003	NSF	PI	NSF Junior Faculty Travel Grant for NSF Career Workshop at Tempe, Arizona.	\$700	\$700
2002-2003	Utah State University	PI	USU New Faculty Research Grant. “Tuning methods for fractional order PI/PID controllers”	\$10,100	\$10,100
			Total	\$4,464,710	\$2,684,014
			Current active funding	\$2,012,724	\$1,021,201

Workshops and Short Courses Offered/Organized:

1. Blas M. Vinagre and YangQuan Chen. 2002. *“Lecture Notes for the Tutorial Workshop on Fractional Order Calculus in Control and Robotics at IEEE CDC2002 Las Vegas”*. Unpublished. Distributed at the IEEE CDC Tutorial Workshop. Las Vegas, Dec. 2002. (316 PDF pages)
2. 06/13/2003. **“Parsimonious ILC and RC: Seagate Experience”** (Tutorial Lecture) at the first **Iterative Learning Control** International Summer School at **Utah State University** (See other presentations and photos [here](#)) (half day)
3. YangQuan Chen. *“Task-Oriented Mobile Actuator and Sensor Networks”*. IEEE/RSJ IROS2005 Full Day Tutorial Workshop slide set. August 2, 2005. Edmonton (with Hairong Qi and Kevin L. Moore) (A Full Day)
4. FOC Day @ USU, April 19, 2005. *“Fractional Order Calculus Day at Utah State University”*. Full day workshop. http://mechatronics.ece.usu.edu/foc/event/FOC_Day@USU/

5. YangQuan Chen. Iterative Learning Control: from Academia to Industry – An expository tutorial. IEEE ICMA2005 Half Day Tutorial Workshop slide set, Niagara Falls, Canada, July 29, 2005. (with Hyosung Ahn and Kevin L. Moore) (Half day)
6. June 25, 2006. Tutorial workshop at IEEE ICMA2006, Luoyang, China. “[Fractional Order Calculus and Its Applications in Mechatronic System Controls](#)” (Half day)
7. June 25, 2006. Tutorial workshop at IEEE ICMA2006, Luoyang, China. “[Cooperative Control and Consensus Building for Multiple Autonomous Vehicles](#)” (Half day)
8. June 25, 2006. Tutorial workshop at IEEE ICMA2006, Luoyang, China. “[Iterative Learning Control: Algebraic Analysis and Optimal Design](#)” (all slides are [here](#)) (Half day)
9. Dec. 2006. IEEE CDC2006, Industrial Tutorial Session on “Iterative learning control and repetitive control in hard disk drive industry”. San Diego, California, USA (2 hours)
10. December 8, 2006. Friday 9AM-5PM. International Mini-Workshop on DDDAS (Dynamic Data Driven Application Systems) "Optimal measurement and control of distributed parameter systems using mobile actuator and sensor networks". <http://mechatronics.ece.usu.edu/mas-net/dddas/> Full day workshop.
11. FOC Day @ USU, Sept. 3, 2007. “*Fractional Order Calculus Day at Utah State University*”. Full day workshop.
12. Tutorial Session “Applied Fractional Calculus in Controls”, 2009 American Control Conference, June 10-12, 2009, St. Louis, Missouri, USA. <http://fractionalcalculus.googlepages.com/>
13. Pre-conference Workshop. “Applied Fractional Calculus in Controls and Signal Processing”, 2009 American Control Conference, June 10-12, 2009, St. Louis, Missouri, USA. <http://fractionalcalculus.googlepages.com/> (cancelled, also by IEEE CDC2009)
14. FOC Day @ USU, April 24, 2009. “*Fractional Order Calculus Day at Utah State University*”. Full day workshop. (Dr. Bruce J. West’s visit, 3 seminars given by Dr. West).
15. Co-Organizer and Co-Instructor. July 6, 2010. Pre-Conference Tutorial Workshop. One Full Day Workshop on “Fractional Order Dynamic Systems and Controls” at WCICA2010, Jinan, Shandong, China. Web: <http://mechatronics.ece.usu.edu/foc/wcica2010tw/>
16. Organizer and Co-Instructor. 12/14/2010. Pre-Conference Tutorial Workshop. One Full Day Workshop on “Applied Fractional Calculus in Controls and Signal Processing” at IEEE CDC2010, Atlanta, GA, USA. Web: <http://mechatronics.ece.usu.edu/foc/cdc10tw/>
17. Invited Tutorial at 2011 ICUAS (Int. Conf. on Unmanned Aerial Systems) (full day) on May 24th, 2011, Denver, CO., on “*Multi-UAV Based Multi-Spectrum Collaborative Personal Remote Sensing: Concepts, Platform & Applications*”
18. FOC Day @ USU, August 22, 2011. “*Fractional Order Calculus Day at Utah State University*”. Full day workshop. (Dr. Igor Podlubny and Dr. Ivo Petras’s visit). <http://mechatronics.ece.usu.edu/foc/afc/>

Invited Seminar/Talks:

- June 1999. "An overview of iterative learning control research," Dept. of Electrical Engineering, Univ. of Alaska at Fairbanks;
- June 1999. "Aerodynamic drag curve identification: optimal dynamic fitting and iterative learning approaches," Dept. of Electrical Engineering, Univ. of Alaska at Fairbanks;
- April 2000. "Frictional force on the high precision servo control". First Seagate Singapore TEC Symposium, Singapore;
- July 2000. "Perspectives in Iterative Learning Control”, 3rd Asian Control Conference, Shanghai, China.
- April 2001. “Fractional order calculus and its applications in systems control - an overview”, Department of Electrical Engineering, Univ. of Alberta, Canada.
- May 2001. “Fractional order calculus and its applications in signal processing and systems control - an overview”, Department of Electrical Engineering, Univ. of Calgary, Canada.
- June 14, 2001. "Iterative Learning Control": From Academia to Industry”. Dept. of Electrical

and Computer Engineering, The University of Windsor, Canada.

- June 14, 2001. "Fractional order calculus and its applications in systems control - an overview." Dept. of Electrical and Computer Engineering, The University of Windsor, Canada.
- 11/6/2003. USU Department of Mathematics [Colloquium](#): Fractional-order Calculus, Fractional-order Filter and Fractional-order Control: An Overview & Some Recent Developments. ([PDF slides](#))
- 06/13/2003. [Parsimonious ILC and RC: Seagate Experience](#) (Tutorial Lecture) at the first [Iterative Learning Control](#) International Summer School at [Utah State University](#) (See other presentations and photos [here](#))
- 06/17/2003. [Some Servo Patents for Low Cost High TPI Hard Disk Drives](#) [abstract/bio](#). The Colorado Center for Information Storage, the University of Colorado, Boulder
- 03/05/2003. USU [ECE6800](#) Seminar by [Dr YangQuan Chen](#) on FOC. Fractional order calculus, fractional order filter and fractional order control: an over view and some recent developments. Check [here](#) for PDF slides.
- 03/28/2003. Une proposition pour la synthèse de correcteurs PI d'ordre non entier. YangQuan Chen (Utah State University, USA), Concepción A. Monje, Blas M. Vinagre (Universidad de Extremadura, Espagne). (Slides [PDF](#)) [Action thématique "Les systèmes à dérivées non entières"](#) - [LAP](#) - [ENSEIRB](#), Bordeaux.
- 10/17/2003. Réalisation analogique de l'opérateur de dérivation non entière. C. Tricaud (ENSEIRB – Université Bordeaux 1) and YangQuan Chen (Utah State University, USA). (Slides [PDF](#)) [Action thématique "Les systèmes à dérivées non entières"](#) - [LAP](#) - [ENSEIRB](#), Bordeaux.
- May 19, 2004. The Innovation Showcase, [The Edison Conference](#), Univ. of Utah, SLC. ([Program.pdf](#), see Booth #44)
- 07/22/2004. "Fractional Future?" A Panel Discussion at the 2004 NSF Sponsored Joint US-France Workshop, Bordeaux, France.
- 08/17/2004. "Mobile actuator and sensor networks for diffusion boundary determination and zone control", Invited talk (75 minutes) at the Institute of Intelligent Machines of Chinese Academy of Sciences (IIM of CAS) in Hefei, the capital city of Anhui Province, China.
- 08/19/2004. "Iterative Learning Control: from Academia to Industry". Invited Seminar (75 minutes) at the Department of Automatic Control, Southeast University, Nanjing, the capital city of Jiangsu Province, China.
- 08/20/2004. "Fractional order control" (75 minutes) Invited Seminar at Institute of Robotics and Artificial Intelligence, Northeastern University, Shenyang, capital city of Liaoning Province, China.
- 2/25/05. ECE Dept. IAC meeting, presentation of "CSOIS: Past, Present, and Future cum MAS-net". Lab tour/Demo.
- 4/5/2005. [ECE6800](#) seminar. [Task Oriented Mobile Actuator and Sensor Networks \(TOMAS-net\)](#)
- 9/28/2005. Fractional Order Control. San Diego Section of IEEE Control Systems Society.
- 10/20/2005. About CSOIS. USU VPR and State of Utah UStar delegate.
- 11/4/2005. USU Dept. of Civil and Environmental Engineering, Transportation Research Seminar Series. "Task Oriented Mobile Actuator and Sensor Networks".
- March 14, 2006. "Non-Integer-Order Calculus, Dynamic Systems, Control and Signal Processing - An Introduction". The Engineering Division Seminar on Automation and Sensing, Colorado School of Mines.
- March 16, 2006. "Interlaced Distributed Control and Distributed Measurement with Mobile Actuator/Sensor Networks (MAS-net): An example of DDDAS". The Center for Automation, Robotics, and Distributed Intelligence (CARDI), Colorado School of Mines.

- June 16, 2006. "HDD servo - All smart ideas tried?!", Seagate SHK Design Center. Minneapolis, MN. (During ACC2006)
- July 6, 2006. "'Interlaced Distributed Control and Distributed Measurement with Mobile Actuator/Sensor Networks (MAS-net): An example of DDDAS". Robotics Center, Beijing Institute of Technology, China.
- July 7, 2006. "Non-Integer-Order Calculus, Dynamic Systems, Control and Signal Processing - An Introduction". Dept. of Automatic Control, Beijing Institute of Technology, China.
- July 21, 2006. "Ubiquitous fractional order controls". IFAC FDA06 Plenary lecture. ([slides](#), [12 pages plenary article](#)) Porto, Portugal.
- May 2007. Special Invited Talks. "Fractional Order Calculus and Its Applications in Mechatronics and Power Electronics - An Introduction". The 2nd IEEE Conference on Industrial Electronics and Applications (ICIEA 2007) 23-25 May 2007, Shangri-la Hotel, Harbin, China. <http://iciea2007.cipsterdesign.com/>
- Fall 2007. USU ECE Colloquium. "An Overview of Fractional Order Signal Processing (FOSP) Techniques".
- March 2008. Invited Seminar. "Mobile Actuator and Sensor Networks (MAS-net)" Worcester Polytechnic Institute.
- March 2008. Invited Seminar. "Fractional Order Thinking at The Edge - from Mechatronics to Biomechatronics to Bioengineering." Computer Engineering Division, UC Santa Cruz.
- Sept. 2008. USU ECE Colloquium. "Mobile Actuator and Sensor Networks (MAS-net) for Cyber-Physical Systems (CPS)".
- Nov. 2008. Plenary Lecture "Fractional Order Signal Processing - Techniques, Applications and Urgency" 3rd IFAC Workshop on Fractional Differentiation and its Applications, Ankara, Turkey, 05 - 07 November, 2008.
- Nov. 2008. Invited Seminar. "Mobile Actuator and Sensor Networks (MAS-net) for Cyber-Physical Systems (CPS)". ECE Dept. of University of New Orleans, New Orleans, Louisiana, USA.
- 2009: Jan. 13. ECE 6800 Graduate Colloquium. "Fractional Order Motion Controls and Fractional Order Networked Control Systems". Utah State University.
- 2009: March 13. UC Berkeley Invited Seminar. "Fractional order thinking: from mechatronics to biomechatronics and beyond".
- 2009: May 27. Semi-Plenary Speaker. The 4th IEEE Conference on Industrial Electronics and Applications (ICIEA 2009), Xi'an, China.
- 5/21/2009: Invited Seminar. "Towards fractional order thinking and engineering." Nantong University (NTU), Jiangsu Province, China.
- 5/21/2009: Invited Seminar. "Towards fractional order thinking and engineering." Hohai University (HHU), Nanjing, China. Part of the "Mini-symposium on Fractional Dynamics" Organized by Prof. Wen Chen.
- 5/22/2009: Invited Seminar. "Towards fractional order thinking and engineering." Nanjing Institute of Technology (NJIT), Nanjing, China.
- 5/22/2009: Invited Seminar. "Iterative Learning Control: A Tutorial and from Academia to Industry." Nanjing Institute of Technology (NJIT), Nanjing, China.
- 5/26/2009: Invited Seminar. "Towards fractional order thinking and engineering." Xi'an Technological University (XATU), Xi'an, China.
- 5/26/2009: Invited Seminar. "Fractional Order Signal Processing - Techniques, Applications and Urgency". Xidian University, Xi'an, China.
- 5/28/2009. Invited Seminar. "An Overview of USU Unmanned Aerial Vehicle Research Program". Northwestern Forest & Agriculture Univ. (NWF&AU), Yangling, Shaanxi Province, China.
- 5/28/2009. Invited Seminar. "Mobile Actuator and Sensor Networks (MAS-net) for Cyber-Physical

Systems (CPS)". Northwestern Forest & Agriculture Univ. (NWF&AU), Yangling, Shaanxi Province, China.

- 6/1/2009: Invited Seminar. "Mobile Actuator and Sensor Networks (MAS-net) for Cyber-Physical Systems (CPS)". South China University of Technology (SCUT), Guangzhou, China.
- 6/3/2009. Invited Seminar. "Iterative Learning Control: A Tutorial and What's Next." Beijing Jiao Tong University (BJTU), Beijing, China.
- 6/21/2009. Invited Presentation. "YangQuan Chen, Ph.D." - King Abdullah University of Science and Technology (KAUST), Saudi Arabia.
- 7/10/2009. Invited Seminar. "Mobile Actuator and Sensor Networks (MAS-net) for Cyber-Physical Systems (CPS)". UT Dallas Erik Jonsson School of Engineering and Computer Science.
<http://www.ee.utdallas.edu/events/chen.html>
- 11/5/2009. Invited Seminar. "Mobile Actuator and Sensor Networks (MAS-net) for Cyber-Physical Systems (CPS)". Dept. of Mechanical Engineering, University of Nevada Las Vegas.
- 7/8/2010. Invited Seminar. "Fractional Order Thinking and Engineering". Shandong University, Math Institute, Jinan, Shandong, China.
- 7/26/2010. Invited Seminar. "Fractional Order Thinking: from Controls to Signal Processing". Samsung SISA, San Jose, CA, USA.
- Invited Seminar. 02/04/2011. "Mobile Actuator and Sensor Networks (MAS-net) for Cyber-Physical Systems (CPS)". Center for New Energy Systems, University of Pretoria, South Africa.
- Invited Seminar. 03/04/2011. "Fractional Order Thinking – from control, signal processing to energy informatics and beyond". Center for New Energy Systems, University of Pretoria, South Africa.
- Invited Seminar. 04/18/2011. "Gegenbauer processes and energy informatics". Center for New Energy Systems, University of Pretoria, South Africa.
- Invited Seminar. 05/02/2011. "A Tutorial on RIOTS_95 – A MATLAB Toolbox for Solving Optimal Control Problems in General Form". Center for New Energy Systems, University of Pretoria, South Africa.
- Invited Seminar. 10/21/2011. "Fractional Order Thinking – from control, signal processing to energy informatics and beyond" UC Berkeley, Tomizuka Lab.
- EE Colloquium. 11/15/2011. "[An Introduction to Fractional Order Modeling and an Application in Characterizing Complex Relaxation Processes](#)", ECE Dept. of Utah State University.

Longer-term Visiting Scholars Hosted by me at CSOIS since 2002 (59 total)

- France (5): Christophe Tricaud, Theodore Ndaza, Nicolas Monégier; Thomas SAQUER; Corentin Chéron;
- Slovakia (4): Igor Podlubny, Tomas Skovranek, Martin Podlubny, Ivo Petras
- China (34): Tengyun Zhao; Zhian Wang; Dr. Jinping Ni; Dr. Shengyuan Xu; Dr. Xia Zhao; Dr. Wen Chen; Yan Li; Bin Wang; Ying Luo; Yongshun Jin, Sheng Hu, Wei Sun, Yingtao Zhang, Chunyang Wang, Hongguang Sun, Xiaona Song, Dr. Changpin Li, Dr. Dingyu Xue; Yu Shang, Dr. Dali Chen, Jinlu Han, Jun Pan, Dr. Deshun Yin, Dingjin Huang, Yaojin Xu, Kexue Li, Hu Shuai, Zhuang Jiao; Chun Yin; Caibin Zeng; Bo Li, Peng Guo, Dr. Xuefeng Zhang, Dr. Kecai Cao
- Germany (7): Fernando Buck; Florian Zwetti; Marc Baumann; Daniel Kaplanek; Norman Wildmann, Tobias Fromm, Johannes Kaplanek
- Finland (1): Sakari Kettunen
- Spain (3): Ángel Rodríguez Castaño; Concha Monje; Inés Tejado Balsera
- Poland (1): Dariusz Ucinski;
- Sweden (2): Dr. Kenneth Holmstrom; Fredrik Hellman
- Iran (1): Sara Dadras
- Czech (1): Michal Podhradsky

Undergraduate Researchers I Mentored:

- Over 70 in total including NSF REU site participants (2006-2011)
- All ECE seniors in Capstone Design courses (Senior Design) (2007-2010) benefitted from me as Senior Design Coordinator. Some were directly sponsored and financially supported by me.
- Mentor for 5 USU URCO (Undergraduate Research and Creative Opportunities) grant projects
 - Christopher Hall, "*Open Source Autonomous Micro Aerial Vehicle*" 2007
 - Mitchel Humpherys, "*Vision-Based Autonomous Navigation of Unmanned Aerial Vehicles for Remote-Sensing Applications*" 2008
 - Johnathan Nielsen. "*Real-time Alpha-numeric Target Recognition for Unmanned Aerial Vehicles*" 2009
 - Montgomery Joseph. "*Automatic Pattern Discovery and Classification in UAV Surveillance*" 2010
 - Christopher Michael Coffin. "*Prognostic Health Management System for Improving Airworthiness for Personal Remote Sensing UAVs*" 2011
- Undergraduate Honors Thesis
 - Jake Erramouspe. "*Autonomous Security Patrol System*" 2010
- Currently, 8 undergraduate students work in CSOIS on various UAV projects.

Graduate Theses I Serve as the Major Advisor On-Going:

- 6 Ph.D. dissertations (Jinlu Han; Austin Jensen; Calvin Coopmans, Hadi Malek, Brandon Stark, Daniel Stuart)
- 4 MS Plan-A theses (Miguel Leonardo; Pooja Kavathekar, David Cornelio, Nathan Hoffer)

Graduate Theses I Served as the Major Advisor Completed at Utah State University:

(Total 23: 4 **Ph.D. dissertations**, 15 MS Plan-A theses, 4 **MS Plan-B reports**; * female graduate students)

1. 2005. Pengyu Chen. "*Pattern Formation in Mobile Wireless Sensor Networks*", Master of Science Thesis.
2. 2005. Zhongmin Wang. "*Distributed Control of Distributed Parameter Systems Using Mobile Actuator and Sensor Networks*", Master of Science Thesis.
3. 2005. Jinsong Liang. "*Control of Linear Time-Invariant Disturbed Parameter Systems - From Integer Order To Fractional Order*", Master of Science Thesis.
4. 2005. Yan Shi. "*An Electrochemical Chip Prototype Using Square Wave Polarography Voltammetry and a Survey on Wireless Power Transmission*", Master of Science Plan-B Report.
5. **2006. Hyo-Sung Ahn. "*Robust and Adaptive Learning Control Design in the Iteration Domain*" Ph.D. Dissertation.**
6. 2006. Yashodhan Tarte. "*Detection, Identification, and Compensation of Nonlinearities and an Experimental Verification Platform for Nonlinear Controllers*", Master of Science Thesis.
7. 2006. Kenton Fife. "*Vision-Based Road Detection and Tracking for an Autonomous Vehicle Platform*", Master of Science Plan-B Report
8. **2007. Zhen Song. "*Optimal Observation Problems Involving Wireless Sensor Networks*" Ph.D. Dissertation.**
9. 2007. William K. Bourgeois. "*Engineering Swarms for Mobile Sensor Networks*", Master of Science Thesis.
10. 2007. Rongtao Sun. "*Fractional Order Signal Processing: Techniques and Applications*", Master of Science Thesis.
11. 2007. Tripti Bhaskaran*. "*Practical Tuning Method for Fractional Order Proportional and Integral Controllers*", Master of Science Thesis.

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13. 2008. Varsha Bhambhani*. “*Optimal Fractional Order Proportional and Integral Controller for Processes with Random Time Delays.*” Master of Science Thesis. <http://digitalcommons.usu.edu/etd/246>
14. 2008. Shelley Rounds*. “*Distributed Control for Robotic Swarms Using Centroidal Voronoi Tessellations.*” Master of Science Thesis. <http://digitalcommons.usu.edu/etd/218>
15. 2009. Austin Jensen. “*gRAID: A Geospatial Real-Time Aerial Image Display For A Low-Cost Autonomous Multispectral Remote Sensing Platform (AggieAir).*” Master of Science Thesis.
16. 2009. Han, Yiding, "An Autonomous Unmanned Aerial Vehicle-Based Imagery System Development and Remote Sensing Images Classification for Agricultural Applications" Master of Science, thesis. <http://digitalcommons.usu.edu/etd/513>
17. 2009. Shayok Mukhopadhyay. “*Fractional Order Modeling & Control: Development of Analog Strategies for Plasma Position Control of the STOR-1M Tokamak.*” Master of Science Thesis. <http://digitalcommons.usu.edu/etd/460>
18. 2010. Adams, Joshua S., "Transmitter Localization Using Autonomous Robotic Swarms" (2010). Master of Science Thesis. <http://digitalcommons.usu.edu/etd/632>
19. 2010. Coopmans, Calvin, "Architecture, Inertial Navigation, and Payload Designs for Low-Cost Unmanned Aerial Vehicle-Based Personal Remote Sensing". Master of Science Thesis. <http://digitalcommons.usu.edu/etd/692>
20. 2010. Chao, Haiyang, "Cooperative Remote Sensing and Actuation Using Networked Unmanned Vehicles" Ph.D. Dissertation. <http://digitalcommons.usu.edu/etd/597>
21. 2010. Tricaud, Christophe. "Optimal Sensing & Actuation Policies for Networked Mobile Agents in a Class of Cyber-Physical Systems" Ph.D. Dissertation. <http://digitalcommons.usu.edu/etd/673>
22. 2010. Abraham A. Clements. “*An Immersive Technology for Indoor Exercise Equipment*”. Master of Science Plan-B Report. http://www.ece.usu.edu/grad/reports_theses_disseratations/2010/Clements_Abraham_A/report.pdf
23. 2011. Dee Long Di. “*Cognitive Formation Flight in Multi-Unmanned Aerial Vehicle-Based Personal Remote Sensing Systems.*” Master of Science Thesis. <http://digitalcommons.usu.edu/etd/985/>

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(* indicates corresponding author, + student coauthor)

Theses:

1. Yangquan Chen, "*High-order Iterative Learning Control: Convergence, Robustness and Applications,*" **Ph.D. Dissertation**, December 1997. School of Electrical and Electronic Engineering, Nanyang Technological University (NTU), Singapore.
2. Yangquan Chen, "*Flying Vehicle Simulation Studies and Identification of Aerodynamic Coefficients From Range Test Data,*" **Master of Engineering Thesis**, April 1988. Department of Automatic Control, Beijing Institute of Technology (BIT), Beijing, China.
3. Yangquan Chen, "*Special Purpose Microcomputer Hardware Design for Industrial Process Control,*" **Bachelor of Engineering Thesis**. June 1985. Department of Automation, University of Science and Technology of Beijing (USTB), Beijing, China.

Monographs and Textbooks (15):

1. Ying Luo+ and YangQuan Chen*. “*Fractional Order Motion Controls*” **John-Wiley and Sons, Inc.**, 2012 (Under contract, to appear summer 2012, 470 pages)
2. Zhuang Jiao+, YangQuan Chen* and Igor Podlubny. “*Distributed-Order Dynamic Systems: Stability, Simulation, Applications and Perspectives*” SpringerBrief, **Springer-Verlag** (under contract, to appear early 2012, 90 pages)
3. Haiyang Chao+ and YangQuan Chen*. “*Remote Sensing and Actuation Using Unmanned Autonomous Vehicles*” **John-Wiley and Sons, Inc.**, 2012 (Under contract, to appear summer 2012, 200 pages)
4. Christophe Tricaud+ and YangQuan Chen*. “*Optimal Mobile Sensing and Actuation Policies in Cyber-physical Systems*”. **Springer**. ISBN 978-1-4471-2261-6. 2012. (170 pages) <http://www.springer.com/engineering/robotics/book/978-1-4471-2261-6>
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6. Concepción A. Monje*+, YangQuan Chen, Blas Vinagre, Dingyu Xue and Vicente Feliu (2010). “*Fractional Order Systems and Controls - Fundamentals and Applications.*” **Advanced Industrial Control Series, Springer-Verlag** <http://www.springer.com/engineering/book/978-1-84996-334-3> (1st Edition, 2010, XXVI, 415 p. 223 illus., 19 in color. Hardcover ISBN: 978-1-84996-334-3)
7. Zheng Song+, YangQuan Chen*, Chellury Ram Sastry and Nazif Cihan Tas (2009). “*Optimal Observation for Cyber-Physical Systems: A Fisher Information Matrix Based Approach.*” **Springer-Verlag**, 2009. (ISBN: 978-1-84882-655-7, July 2009, 170 pages)
8. Dingyu Xue* and YangQuan Chen (2008). “*Solving Applied Mathematical Problems with MATLAB*”. (ISBN: 978-1420082500) **Chapman & Hall/CRC Press**. Nov. 2008. (448 pages)
9. Hyo-Sung Ahn+, Kevin L. Moore*, and YangQuan Chen (2007). “*Iterative Learning Control: Robustness and Monotonic Convergence in the Iteration Domain*”. **Springer-Verlag, Communications and Control Engineering Series**, ISBN: 978-1-84628-846-3. (203 pages)
10. Dingyu Xue, YangQuan Chen* and Derek Atherton (2007). “*Linear Feedback Control – Analysis and Design with Matlab*”. **SIAM Press**, 2007, ISBN: 978-0-898716-38-2. (348 pages) (Book review in IEEE Control Systems Magazine, Jan. issue of 2009)
11. Dingyu Xue* and YangQuan Chen (2007). “*Solving Control Related Mathematical Problems Using Matlab*”. (ISBN: 9787302152972) **Tsinghua University Press**, Beijing, China, 2007. (474 pages in Chinese, <http://www.china-pub.com/computers/common/info.asp?id=37025>)
12. Dingyu Xue* and YangQuan Chen (2004). “*Solving Advanced Applied Mathematical Problems Using Matlab*”. (ISBN 7-302-09311-3/O.392) **Tsinghua University Press**, Beijing, China, August 2004. (419 pages in Chinese). **Second edition:** ISBN 978-7302186182, Tsinghua University Press, Beijing, China, Oct. **2008**. (442 pages in Chinese).
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15. Yonggao Shi* and Yangquan Chen (1995), “*Plastic Belt for Projectiles,*” **Science & Technology Press of Shaanxi Province**, 1995, in Chinese, 162 pages, ISBN 7-5369-2277-9.

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2. Christophe Tricaud+ and YangQuan Chen* (2012). “*Data-Driven Parameter Estimation of Distributed Systems Using Networked Mobile Sensors.*” **DDDAS book chapter**. Invited and Accepted. **Springer-Verlag**. Editor: Dr. Darema, Frederica (www.dddas.org) (pending, 2012)
3. Haiyang Chao, Austin M. Jensen, Yiding Han, YangQuan Chen and Mac Kee (2009). *AggieAir: Towards Low-cost Cooperative Multispectral Remote Sensing Using Small Unmanned Aircraft Systems*, *Advances in Geoscience and Remote Sensing*, Gary Jedlovec (Ed.), ISBN: 978-953-307-005-6, **INTECH**, Available from: <http://sciyo.com/articles/show/title/aggieair-towards-low-cost-cooperative-multispectral-remote-sensing-using-small-unmanned-aircraft-sys> Pages: 463-490.
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10. Dingyu Xue, YangQuan Chen* (2007). "Sub-Optimum H2 Pseudo-Rational Approximations to Fractional Order Linear Time Invariant Systems". In "Advances in Fractional Calculus: Theoretical Developments and Applications in Physics and Engineering." J. Sabatier, J. Machado and O. Agrawal Editors. **Springer-Verlag**. August 2007. ISBN: 978-1402060410. pages: 543-552. (552 pages in total)
11. Jinsong Liang+, YangQuan Chen*, Blas M. Vinagre and Igor Podlubny (2005). "Identifying Diffusion-Wave Constant, Fractional Order and Boundary Profile Of A Time-Fractional Diffusion-Wave Equation From Noisy Boundary Measurements". a chapter in "Fractional Derivatives an Their Applications. Part 3: Systems analysis, implementation and simulation, systems identification and control." Editors: A. Le Mehauté, J. A. Tenreiro Machado, J. C. Trigeassou and J. Sabatier. **UBooks**, Augsburg, Germany, 2005. pp. 517-532. ISBN 3-86608-026-3.
12. YangQuan Chen*, Kevin L. Moore, Blas M. Vinagre and Igor Podlubny (2005). "Robust PID Controller Autotuning with A Phase Shaper ". A chapter in "Fractional Derivatives an Their Applications . Part. 3: Systems analysis, implementation and simulation, systems identification and control." Editors: A. Le Mehauté, J. A. Tenreiro Machado, J. C. Trigeassou and J. Sabatier. **UBooks**, Augsburg, Germany, 2005. pp. 687-706. ISBN 3-86608-026-3.
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15. Dingyu Xue and YangQuan Chen* (2005). "Iterative Learning Control of Uncertain Discrete-time Nonlinear Feedback Systems With A Control Saturater". A chapter in "Intelligent Systems at the Service of Mankind", Volume 2, Editors: Wilfried Elmenreich, J. Tenreiro Machado, Imre J. Rudas. **UBooks**, Augsburg, Germany, 2005. ISBN 978-3866080522.
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3. Changpin Li*, YangQuan Chen, Igor Polubny and Blas Vinagre. "Introduction to Special Issue: *Fractional Dynamics and Control*" **International Journal of Bifurcation Chaos**, Special Issue on "Fractional Dynamics and Control", April issue of 2012. (4 pages)

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41. An introduction to RVSC (13 slides). Aug. 3, 2000.
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44. After SP-ZAP Learning or During SP-ZAP Learning? A Study on the Time-Domain 1F-Component Removal From RROZAP Table. Nov. 24, 1999. (2 pages)
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46. "PES Frequency and Magnitude Dependent Scheduling of Q-filter's Relative Degree in RVSC (Rotational Vibration and Shock Compensator)", Aug. 4, 2000. (9 pages) (with KK Ooi, MZ Ding, LL Tan, SQ Min)
47. "Identification and Cancellation of Cage Frequency in a Hard Disc Drive", July 05, 2000. (14 pages) (with KK Ooi, X. Liu, WW Yeo, WS Lee and BW Quak)
48. "A Hybrid Scheme for Written-in RRO (repeatable runout) Compensation With Adjustable Track-Squeeze Improvement ", August 8, 2000. (6 pages) (With MZ Ding, KK Ooi, SQ Min, X. Liu, and Eric WS Lee)
49. "SP-ZAP error tolerance on consecutive bad track-ID W/R values", 31 August 2000. (5 pages). (with WeiSung Lee Eric, and KianKeong Ooi)
50. "Tips for SP-ZAP Learning Gain Tuning on U6", 11 September 2000 (1 pages).
51. "Remove2f for U6 SP-ZAP", 13 September 2000. (3 pages)
52. "An Investigation of SP-ZAP improvement rate 1-sigma variations". 13 Sept. 2000. (3 pages)
53. "Remove2f for U6 SP-ZAP", 13 September 2000. (3 pages)
54. Learned RROZAP table consistency and REMOVE2f/3f - U6 drive level results. 19 Sept. 2000. (3pages)
55. Memo on SP-ZAP table gain (TG). 20 Sept. 2000. (3pages)

References

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More references:

To: My Promotion and Tenure Committee
Via: Todd Moon, Dept. Head.
From: YangQuan Chen
RE: External P/T Reviewer List
Date: Sept. 1, 2007

In this file, I will list 8 external reviewers with an explanation on the nature of acquaintance and possible research areas that they can remark. When possible, I will include a short biography or resume for your information.

Summary list

- Prof. Richard L. Magin, Professor & Head, Dept. of Bioengineering, **Univ. of Illinois Chicago**. IEEE Fellow.
- Prof. Yu-Chi Ho, Gordon McKay Professor of Systems Engineering, Emeritus; T. Jefferson Coolidge Professor of Applied Mathematics, Emeritus; School of Engineering and Applied Sciences; **Harvard University**. IEEE Life Fellow. Member of National Academy of Engineering.
- Prof. Marc Bodson, Professor and Department Chair, **University of Utah**, Dept. of Electrical and Computer Engineering. IEEE Fellow.
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- Er-Wei Bai, Professor, Electrical and Computer Engineering, **The University of Iowa**. IEEE Fellow.
- Minh Q. Phan, Associate Professor, Thayer School of Engineering, **Dartmouth College**
- Richard W. Longman, The Fu Foundation School of Engineering & Applied Science, **Columbia University**.
- Gang Tao, Professor of Electrical Engineering, **Univ. of Virginia**, IEEE Fellow.