

Dong SHEN Curriculum Vitae

Ph.D., Prof.

Department of Automation

Beijing University of Chemical Technology

BRIEF DESCRIPTION

Dong SHEN (M'10-SM'17) received the B. S. degree in mathematics from School of Mathematics, Shandong University, Jinan, China, in 2005. He received the Ph. D. degree in mathematics from the Key Laboratory of Systems and Control, Institute of Systems Science, Academy of Mathematics and System Science, Chinese Academy of Sciences (CAS), Beijing, China, in 2010.

From 2010 to 2012, he was a Post-Doctoral Fellow with the State Key Laboratory of Management and Control for Complex Systems, Institute of Automation, CAS. From 2016.02 to 2017.02, he was a visiting scholar at National University of Singapore (NUS), Singapore. Since 2012, he has been with College of Information Science and Technology, Beijing University of Chemical Technology (BUCT), Beijing, China, where he now is a Professor.

His current research interests include iterative learning control, stochastic control and optimization. He has published more than 70 refereed journal and conference papers. He is (co-)author of *Iterative Learning Control under Iteration-Varying Lengths: Synthesis and Analysis* (Springer, 2019), *Iterative Learning Control with Passive Incomplete Information: Algorithm Design and Convergence Analysis* (Springer, 2018), *Iterative Learning Control for Multi-Agent Systems Coordination* (Wiley, 2017), and *Stochastic Iterative Learning Control* (Science Press, 2016, in Chinese), and co-editor of *Service Science, Management and Engineering: Theory and Applications* (Academic Press and Zhejiang University Press, 2012). Dr. Shen received IEEE CSS Beijing Chapter Young Author Prize in 2014 and Wentsun Wu Artificial Intelligence Science and Technology Progress Award in 2012.

He is a Senior Member of IEEE.

CONTACT INFORMATION

Current Office Address:

Science & Technology Building 412, Beijing University of Chemical Technology (BUCT),
No. 15 Beisanhuan East Road, Chaoyang District, Beijing 100029, P.R. China

Mailing Address:

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RESEARCH INTERESTS

Iterative Learning Control
Stochastic Approximation
Stochastic Control and Optimization
Decentralized/Distributed Control
Adaptive/Approximation Dynamic Programming

EDUCATION

Ph.D. Degree in Mathematics (Operations Research and Cybernetics), 2005.09 - 2010.07

Institute of Systems Science, Chinese Academy of Sciences

Advisor: Prof. Han-Fu Chen (Academician of CAS, Fellow of IEEE, IFAC, and TWAS)

Doctoral dissertation: Iterative Learning Control for Nonlinear Stochastic Systems

B.S. Degree in Mathematics (Information and Computing Science), 2001.09 - 2005.07

Department of Mathematics, Shandong University

Bachelor thesis: Basis Theory and Design Methods of H_∞ Control for Linear Systems

PROFESSIONAL POSITIONS

- **Beijing University of Chemical Technology**
Professor, 2018.01-
Associate Professor, 2012.06 - 2017.12
- **Qingdao University of Science and Technology**
Adjunct Professor, 2018.07-
- **Institute of Automation, Chinese Academy of Sciences**
Postdoctoral Fellow, 2010.07 - 2012.05
Cooperation Advisor: Prof. Fei-Yue Wang (Fellow of IEEE, IFAC, ASME, AAAS, and INCOSE)
Postdoctoral Report: On Some Problems of Stochastic Iterative Learning Control

VISITING SCHOLARSHIP

- In Visa Application, **RMIT University**, Australia
Visiting Academic, with Prof. Xinghuo Yu (Fellow of IEEE)
- 2016.02-2017.02 **National University of Singapore**, Singapore
Visiting scholar, with Prof. [Jian-Xin Xu](#) (Fellow of IEEE)

INDUSTRIAL, AFFILIATE, AND CONSULTING POSITIONS

Co-founder and Supervisor, HaoWanZhiSheng Co. Ltd., 2015.08-present

Production Consultant, 17zuoye Company, 2015.08-2015.12

Senior Advisor, Beijing Phoenix E-Learning Technology Co. Ltd., 2014.09-2014.12

Individual Trainer of Civil Service Examination, 2013.01-present

Chief Research Fellow/Program Manager, Beijing Fenbi Future Technology Co. Ltd., 2013.01-2014.03
Program Manager, Beijing Zhenguan Rain Technology Co. Ltd., 2012.11-2013.01
Senior Trainer of Civil Service Examination, HUATU Education Group, 2008.06-2012.12

HONORS AND AWARDS

2018 IEEE 7th Data Driven Control and Learning Systems Conference Best Paper Award Finalist
2017 The Hundred Young Talent Program of BUCT (B Class)
2017 **Outstanding Reviewer for IEEE Transactions on Automatic Control**
2015 The 2nd Short-Course ('WEIKE') Teaching Competition (Second Prize, Beijing Division)
2015 Teaching Competition of Young Teachers of BUCT (Third Prize)
2015 Chinese Government Scholarship (CSC No. 201506885019)
2014 **IEEE CSS Beijing Chapter Young Author Prize**
2014 Excellent Short-Course ('WEIKE') Prize of BUCT
2012 Listed in *Who's Who in the World*, 30th Pearl Anniversary Edition
2012 The Wentsun Wu Artificial Intelligence S&T Progress Award (Second Prize, Place No. 5)
2011 The CAS Young Competition of Popular Science (Second Prize, Place No. 2)
2006 Dean Scholarship of School of Mathematical Sciences of GUCAS
2005 Outstanding Graduates of Shandong Province and Shandong University
2004 Wu-Si Academic Papers of Shandong University (First Prize)
2004 President Scholarship of Shandong University
2003 Chinese Undergraduate Mathematical Contest in Modeling (Second Prize)
2002-2004 Undergraduate Scholarship of Shandong University
2000 National High School Mathematics League Match (First Prize)

PLENARY / INVITED SPEAKERS

- Invited talk, invited by Prof. JinRong Wang
Title: Iterative Learning Control with Randomly Varying Trial Lengths
2018-07-28, Guizhou University, Guiyang, China
- Invited talk, invited by Prof. Senping Tian
Title: Iterative Learning Control with Passive Incomplete Information: An Example of Research
2018-05-11, South China University of Technology, Guangzhou, China
- Invited talk, invited by Mrs Lamei Chen
Title: How to prepare a paper, review a paper, and conduct research
2018-04-24, Patent Examination Cooperation Center, SPO, Beijing, China
- Subject report, invited by Prof. Wenxiao Zhao
Workshop on Modeling and Optimization of Stochastic Systems
Title: Iterative Learning Control with Multiple Data Dropout Models: A Framework of Design and Analysis
2018-03-30, the Key Lab of Systems and Control, CAS, Beijing, China
- Subject report, invited by Prof. Zheng Li
The 2018 Annual Academic Conference of CIST, BUCT
Title: Iterative Learning Control Through Unreliable Communication Networks
2018-01-19, Beijing University of Chemical Technology, Beijing, China

- Subject report, invited by Dr. Shujun Liu
The 2nd Workshop on Stochastic Control, Optimization, and Data Fusion
Title: Iterative Learning Control through Unreliable Communication Channels
2017-12-03, Sichuan University, Chengdu, China
- Invited talk, invited by Dr. Wenxiao Zhao
Title: Iterative Learning Control through Networks
2017-04-12, the Key Lab of Systems and Control, CAS, Beijing, China
- Invited talk, invited by Dr. Youqing Wang
2015 International Workshop on Learning Control
Title: ILC under Random Data Dropouts
2015-11-12, Beijing University of Chemical Technology, Beijing, China
- Invited talk, invited by Dr. Yueping Jiang
Title: Networked Iterative Learning Control under Complex Communication Conditions
2015-11-04, Nanjing University of Posts and Telecommunications, Nanjing, China
- Subject report, Young Scholar Forum, 4th Conference on DDCLS
Title: Networked Iterative Learning Control under Complex Communication Conditions
2015-06-14, Beijing Jiaotong University, Beijing, China

PROFESSIONAL SERVICE

♠ Memberships

Senior Member, IEEE, 2017-present; Member, IEEE, 2010-2017

Member of IEEE Control System Society, 2010-

Member of IEEE Robotics and Automation Society, 2017-

Member of IEEE Industrial Electronics Society, 2017-

Member of IEEE Communications Society, 2010

Member, Chinese Association of Automation (CAA), 2015-

Member, Technical Committee on Data-Driven Control, Learning and Optimization, CAA, 2015-

Member, Technical Committee on Hybrid Intelligence, CAA, 2017-

♠ Editorial Positions

♠ Community Positions

Deputy Secretary General, TC on Data-Driven Control, Learning and Optimization, CAA, 2017.12-

♠ Foundation Proposal Reviewer

National Science Centre (Narodowe Centrum Nauki) Poland, 2018

National Natural Science Foundation of China, 2018-

Beijing Natural Science Foundation, 2016-

♠ Conferences Service

Publication Chair, IEEE 7th Data Driven Control and Learning Systems Conference, 2018

IPC Member and Associate Editor, the 2017 Asian Control Conference (ASCC2017), 2017

Invited Session Chair, IEEE 6th Data Driven Control and Learning Systems Conference (DDCLS'17), 2017

Co-Organizer, SS on "Complex Process Control based on Data-driven Learn. Syst.", DDCLS'17, 2017

Publicity Chair, the 5th Data Driven Control and Learning System Conference (DDCLS'16), 2016

Session Co-Chair, the 33rd Chinese Control Conference, 2014

Session Co-Chair, the 11th World Congress on Intelligent Control and Automation, 2014

Session Co-Chair, the 11th IEEE International Conference on Control & Automation, 2014

IPC Member, IEEE International Conference on Service Operations and Logistics, and Informatics, 2012
Session Co-Chair, the 27th Chinese Control Conference, 2008

♠ Journal Reviewer

Including IEEE Transactions Automatic Control, Automatica, IEEE Transactions on Industrial Electronics, IEEE Transactions on Cybernetics, IEEE Transactions on Neural Networks and Learning Systems, IEEE Transactions on Intelligent Transportation Systems, IEEE Transactions on Control Systems Technology, International Journal of Control, Journal of the Franklin Institute, ISA Transactions, IET Control Theory and Applications, Asian Journal of Control, IMA Journal of Mathematical Control and Information, International Journal of Adaptive Control and Signal Processing, etc.

♠ Conference Reviewer

Including Asian Control Conference, European Control Conference, Chinese Control Conference, Chinese Control and Decision Conference, World Congress on Intelligent Control and Automation, IEEE International Conference on Control & Automation, etc.

♠ Others

Judge, Test Director of the “Future Challenge 2011” Intelligent Vehicle Competition, 2011/10, Ordos, China.

Judge, Member of Co-ordination Group, Member of Qualification Test Group, and Chargeman of Score Record Group of the “Future Challenge 2010” Intelligent Vehicle Competition, 2010/10, Xi’an, China.

PROJECTS AND GRANTS

1. PI, 61673045, *Robustness of Iterative Learning Control under Incomplete Data and Control System Design*, National Natural Science Foundation of China, 2017.01-2020.12, ¥ 620 000.00 (Primary part) □
2. PI, XYBK2015-01, “*Three Transitions*” *Oriented Teaching Reform of Principle of Automatic Control*, Specific Project on Undergraduate Education Reform, College of Information Science and Technology, 2015.11-2016.06, ¥ 12 000.00 ♠
3. PI, G-JG-XJ201404, *Mathematics Competency Cultivation for Graduate Student in Automation Discipline*, Education and Teaching Innovation for Graduates, BUCT, 2015.01-2016.12, ¥ 20 000.00 ♠
4. PI, PT154002, *Visiting Fellow: Prof. X. Steven Ding*, the Attracting overseas Talents Funds (Ordinary Project), BUCT, 2015.08, ¥ 6 000.00 ♠
5. PI, 4152040, *Design and Analysis of Iterative Learning Control under Random Packet Losses*, Beijing Natural Science Foundation, 2015.01-2017.12, ¥ 140 000.00 (Final Evaluation: Excellent Grade) ♠
6. PI, PT144004, *Visiting Fellow: Prof. Jay H. Lee*, the Attracting Overseas Talents Funds (Ordinary Project), BUCT, 2014.08, ¥ 6 000.00 ♠
7. Investigator, 61374099, *Control Performance Assessment of Iterative Learning Control Based on Two Dimensional System Framework: Theory and Application* (PI: Youqing Wang), National Natural Science Foundation of China, 2014.01-2017.12, ¥ 780 000.00 ♠
8. PI, 61304085, *Design and Analysis of Iterative Learning Control Algorithms of Stochastic Systems for Unusual Tracking References*, National Natural Science Foundation of China, 2014.01-2016.12, ¥ 220 000.00 ♠
9. PI, PT134003, *Visiting Fellow: Prof. Steven X. Ding*, the Attracting Overseas Talents Funds (Ordinary Project), BUCT, 2013.06, ¥ 6 000.00 ♠
10. PI, *Advanced Iterative Learning Control*, the High-Level Talents Launching Funds, BUCT, 2012.07-2015.06, ¥ 200 000.00 ♠
11. PI, ZY1318, *Stochastic Iterative Learning Control for Iteration-Varying Reference Trajectories*, the Fundamental Research Funds for the Central Universities, BUCT, 2013.01-2014.12, ¥ 50 000.00 ♠

TEACHING EXPERIENCES

♠ Graduate Courses

EE511, Adaptive Control, BUCT, 2 credits, 2014-present

- 12 students, Spring 2017.
- 32 students, Spring 2015.
- 46 students, Spring 2014.



♠ Undergraduate Courses

EEE34400C, Principle of Automatic Control (II), BUCT, 3 credits, 2014-present

- 88 students, Fall 2018.
- 86 students, evaluation 92.987, Fall 2017.
- 95 students, evaluation 94.146, Fall 2015.
- 156 students, evaluation 94.5, Fall 2014.
- 171 students, evaluation 94.468, Spring 2014.



♠ Closed Courses

EEE34201T, Scientific Writing, BUCT, 2 credits, 2012-2013.

- 26 students, evaluation 93.25, Fall 2013.
- 12 students, evaluation 95, Fall 2012.



CSE20000C, Literature Searching, BUCT, 1 credit, 2012-2013.

- 26 students, evaluation 94.87, Fall 2013.
- 109 students, evaluation 92.596, Fall 2012.



STUDENTS SUPERVISED

♠ Master

1. Kun Zeng. Expected graduation at 2021.06.
Topic: *Iterative Learning Control for Multi-Agent Systems*.
2. Niu Huo. Expected graduation at 2021.06.
Topic: *Iterative Learning Control with Multi-Source Information*.
3. Gangui Qu. Expected graduation at 2021.06.
Topic: *Iterative Learning Control with Sampled-data and Quantization*.
4. Chen Liu. Expected graduation at 2020.06.
Topic: *Iterative Learning Control for Multi-Agent Systems*.
5. Chun Zeng. Expected graduation at 2019.06.
Topic: *Iterative Learning Control for Non-uniform Trial Length Problem based on CEF*.
6. Chao Zhang. Expected graduation at 2019.06.
Awards: 2017 China National Scholarship.
Topic: *Quantized Iterative Learning Control Using Coding and Decoding Mechanisms*.
7. Lanjing Wang. Graduated at 2018.06.
Awards: BUCT Excellent Master Thesis.
Topic: *Sampled-Data Iterative Learning Control for Nonlinear Systems with Iteration-Varying Lengths*.
8. Fanshou Zhang. Graduated at 2018.06.
Topic: *Algorithm Design and Analysis Toward Interactions Between Intelligent Vehicles and Environments*.
9. Yun Xu. Graduated at 2017.06.
Awards: 2016 China National Scholarship, BUCT Excellent Master Thesis.
Thesis: *Iterative Learning Control under Active Incomplete Information*.



10. Jian Han. Graduated at 2016.06.
Thesis: *Neural Networks Based Point-to-Point Iterative Learning Control*. ♠
11. Wei Zhang. Graduated at 2016.06.
Thesis: *Iterative Learning Control for Discrete-time Systems with Randomly Iteration-Varying Lengths*. ♠

PUBLICATIONS

♠ Preprints

1. JinRong Wang^{*}, Shengda Liu, **Dong Shen**, Donal O'Regan. Iterative Learning Control for Noninstantaneous Impulsive Fractional Systems with Randomly Varying Trial Lengths. *International Journal of Robust and Nonlinear Control*. **TOP-JOURNAL PAPER**
2. Xiaowen Wang, JinRong Wang^{*}, **Dong Shen**, Yong Zhou. Convergence Analysis for Iterative Learning Control of Conformable Fractional Differential Equations. *Mathematical Methods in the Applied Sciences*.
3. **Dong Shen**^{*}, Jian-Xin Xu. Adaptive Learning Control for Nonlinear Systems with Randomly Varying Iteration Lengths. *IEEE Transactions on Neural Networks and Learning Systems*. **TOP-JOURNAL PAPER, REGULAR PAPER**
4. Chun Zeng, **Dong Shen**^{*}, JinRong Wang. Adaptive Learning Tracking for Uncertain Systems with Partial Structure Information and Varying Trial Lengths. *Journal of the Franklin Institute*.

♠ Books

1. **Dong Shen**, Xuefang Li. *Iterative Learning Control for Systems with Iteration-Varying Trial Lengths: Synthesis and Analysis*. Springer Singapore, 2019.
2. **Dong Shen**. *Iterative Learning Control with Passive Incomplete Information: Algorithm Design and Convergence Analysis*. Springer Singapore, 2018. (ISBN: 978-981-10-8266-5, 1st Edition, 300 pages)
3. Shiping Yang, Jian-Xin Xu, Xuefang Li, **Dong Shen**. *Iterative Learning Control for Multi-Agent Systems Coordination*. Wiley & IEEE Press, 2017. (ISBN: 978-1-119-18904-6, 1st Edition, 250 pages)
4. **Dong Shen**. *Stochastic Iterative Learning Control*. Science Press, 2016. (ISBN: 978-703-050335-0, 1st Edition, 200+ pages, in Chinese)
5. Gang Xiong, Zhong Liu, Xiwei Liu, Fenghua Zhu, **Dong Shen** (Eds). *Service Science, Management and Engineering: Theory and Applications*. Academic Press & Zhejiang University Press, 2012. (ISBN: 978-012-397037-4, 1st Edition, 400+ pages)

♠ Journal Papers

1. Chao Zhang, **Dong Shen**^{*}. Zero-Error Convergence of Iterative Learning Control Based on Uniform Quantisation with Encoding and Decoding Mechanism. *IET Control Theory & Applications*, vol. 12, no. 14, pp. 1907-1915, 2018.
2. **Dong Shen**^{*}. A Technical Overview of Recent Progresses on Stochastic Iterative Learning Control. *Unmanned Systems*, vol. 6, no. 3, pp. 147-164, 2018. **SURVEY PAPER**
3. **Dong Shen**^{*}, Jian-Xin Xu. Distributed Learning Consensus for Heterogenous High-Order Nonlinear Multi-Agent Systems with Output Constraints. *Automatica*, vol. 97, pp. 64-72, 2018. **TOP-JOURNAL PAPER**
4. Yanqiong Jin, **Dong Shen**^{*}. Iterative Learning Control for Nonlinear Systems with Data Dropouts at Both Measurement and Actuator Sides. *Asian Journal of Control*, vol. 20, no. 4, pp. 1624-1636, 2018.
5. Dahui Luo, JinRong Wang^{*}, **Dong Shen**. Learning Formation Control for Fractional-Order Multi-Agent Systems. *Mathematical Methods in the Applied Sciences*, vol. 41, no. 13, pp. 5003-5014, 2018.
6. **Dong Shen**^{*}. Iterative Learning Control with Incomplete Information: A Survey. *IEEE/CAA Journal of Automatica Sinica*, vol. 5, no. 5, pp. 885-901, 2018. **SURVEY PAPER**
7. **Dong Shen**^{*}, Chao Zhang, Yun Xu. Intermittent and Successive ILC for Stochastic Nonlinear Systems with Random Data Dropouts. *Asian Journal of Control*, vol. 20, no. 3, pp. 1102-1114, 2018.
8. **Dong Shen**^{*}. Data-Driven Learning Control for Stochastic Nonlinear Systems: Multiple Communication Constraints and Limited Storage. *IEEE Transactions on Neural Networks and Learning Systems*, vol. 29, no. 6, pp. 2429-2440, 2018. **TOP-JOURNAL PAPER, REGULAR PAPER**

9. Jian Han, **Dong Shen**^{*}, Chiang-Ju Chien. Terminal Iterative Learning Control for Discrete-Time Nonlinear Systems Based on Neural Networks. *Journal of the Franklin Institute*, vol. 355, no. 8, pp. 3641-3658, 2018.
10. Saurab Verma, **Dong Shen**, Jian-Xin Xu^{*}. Motion Control of Robotic Fish under Dynamic Environmental Conditions using Adaptive Control Approach. *IEEE Journal of Oceanic Engineering*, vol. 43, no. 2, pp. 381-390, 2018.
11. Lanjing Wang, Xuefang Li, **Dong Shen**^{*}. Sampled-data Iterative Learning Control for Continuous-time Nonlinear Systems with Iteration-Varying Lengths. *International Journal of Robust and Nonlinear Control*, vol. 28, no. 8, pp. 3073-3091, 2018. **TOP-JOURNAL PAPER**
12. Jinrong Wang^{*}, Zijian Luo, **Dong Shen**. Iterative Learning Control for Linear Delay Systems with Deterministic and Random Impulses. *Journal of the Franklin Institute*, vol. 355, no. 5, pp. 2473-2497, 2018.
13. Zhijiang Lou, **Dong Shen**, Youqing Wang^{*}. Two-Step Principal Component Analysis for Dynamic Processes Monitoring. *The Canadian Journal of Chemical Engineering*, vol. 96, no. 1, pp. 160-170, 2018. **ESI HIGH CITATION**
14. **Dong Shen**^{*}, Jian-Xin Xu. A Framework of Iterative Learning Control under Random Data Dropouts: Mean Square and Almost Sure Convergence. *International Journal of Adaptive Control and Signal Processing*, vol. 31, no. 12, pp. 1825-1852, 2017.
15. **Dong Shen**, Jian-Xin Xu^{*}. Distributed Adaptive Iterative Learning Control for Nonlinear Multi-Agent Systems with State Constraints. *International Journal of Adaptive Control and Signal Processing*, vol. 31, no. 12, pp. 1779-1807, 2017.
16. **Dong Shen**^{*}, Jian-Xin Xu. A Novel Markov Chain Based ILC Analysis for Linear Stochastic Systems under General Data Dropouts Environments. *IEEE Transactions on Automatic Control*, vol. 62, no. 11, pp. 5850-5857, 2017. **TOP-JOURNAL PAPER**
17. Dong Zhao, **Dong Shen**, Youqing Wang^{*}. Fault Diagnosis and Compensation for Two-Dimensional Discrete Time Systems with Sensor Faults and Time-Varying Delays. *International Journal of Robust and Nonlinear Control*, vol. 27, no. 16, pp. 3296-3320, 2017. **TOP-JOURNAL PAPER, ESI HIGH CITATION**
18. Yun Xu, **Dong Shen**^{*}, Xuhui Bu. Zero-Error Convergence of Iterative Learning Control Using Quantized Information. *IMA Journal of Mathematical Control and Information*, vol. 34, no. 3, pp. 1061-1077, 2017.
19. Yun Xu, **Dong Shen**^{*}, Xiao-Dong Zhang. Stochastic Point-to-Point Iterative Learning Control Based on Stochastic Approximation. *Asian Journal of Control*, vol. 19, no. 5, pp. 1748-1755, 2017.
20. **Dong Shen**^{*}, Chao Zhang. Learning Control for Discrete-Time Nonlinear Systems With Sensor Saturation and Measurement Noise. *International Journal of Systems Sciences*, vol. 48, no. 13, pp. 2764-2778, 2017.
21. Xuefang Li, **Dong Shen**^{*}. Two Novel Iterative Learning Control Schemes for Systems with Randomly Varying Trial Lengths. *Systems & Control Letters*, vol. 107, pp. 9-16, 2017.
22. **Dong Shen**^{*}, Yanqiong Jin, Yun Xu. Learning Control for Linear Systems under General Data Dropouts at Both Measurement and Actuator Sides: A Markov Chain Approach. *Journal of the Franklin Institute*, vol. 354, no. 13, pp. 5091-5109, 2017.
23. **Dong Shen**^{*}. Almost Sure Convergence of ILC for Networked Linear Systems with Random Link Failures. *International Journal of Control, Automation, and Systems*, vol. 15, no. 2, pp. 647-655, 2017.
24. **Dong Shen**^{*}, Jian Han, Youqing Wang. Stochastic Point-to-Point Iterative Learning Tracking Without Prior Information on System Matrices. *IEEE Transactions on Automation Science and Engineering*, vol. 14, no. 1, pp. 376-382, 2017.
25. Yun Xu, **Dong Shen**^{*}, Youqing Wang. On Interval Tracking Performance Evaluation and Practical Varying Sampling ILC. *International Journal of Systems Science*, vol. 48, no. 8, pp. 1624-1634, 2017.
26. **Dong Shen**^{*}, Jian Han, Youqing Wang. Convergence Analysis of ILC Input Sequence for Underdetermined Linear Systems. *SCIENCE CHINA Information Sciences*, vol. 60, ID: 099201, 2017.
27. **Dong Shen**^{*}, Chao Zhang, Yun Xu. Two Updating Schemes of Iterative Learning Control for Networked Control Systems with Random Data Dropouts. *Information Sciences*, vol. 381, pp. 352-370, 2017.

28. **Dong Shen**^{*}, Wei Zhang, Jian-Xin Xu. Iterative Learning Control for Discrete Nonlinear Systems with Randomly Iteration Varying Lengths. *Systems & Control Letters*, vol. 96, pp. 81-87, 2016.
29. Yuan Tao, **Dong Shen**, Mengqi Fang, Youqing Wang^{*}. Reliable H_∞ Control of Discrete Time Systems Against Intermittent Faults. *International Journal of System Sciences*, vol. 47, no. 10, pp. 2290-2301, 2016.
30. **Dong Shen**^{*}, Yun Xu. Iterative Learning Control for Discrete-time Stochastic Systems with Quantized Information. *IEEE/CAA Journal of Automatica Sinica*, vol. 3, no. 1, pp. 59-67, 2016.
31. **Dong Shen**^{*}, Wei Zhang, Youqing Wang, Chiang-Ju Chien. On Almost Sure and Mean Square Convergence of P-type ILC Under Randomly Varying Iteration Lengths. *Automatica*, vol. 63, no. 1, pp. 359-365, 2016.
TOP-JOURNAL PAPER
32. Jianyong Tuo, Huiling Sun, **Dong Shen**, Hui Wang, Youqing Wang^{*}. Optimization of Insulin Pump Therapy Based on High Order Run-to-Run Control Scheme. *Computer Methods and Programs in Biomedicine*, vol. 120, no. 3, pp. 123-134, 2015.
33. Yuan Tao, **Dong Shen**, Youqing Wang^{*}, Yinzong Ye. Reliable H_∞ Control for Uncertain Nonlinear Discrete-Time Systems Subject to Multiple Intermittent Faults in Sensors and/or Actuators. *Journal of the Franklin Institute*, vol. 352, no. 11, pp. 4721-4740, 2015.
34. Zhijiang Lou, **Dong Shen**, Youqing Wang^{*}. Preliminary-Summation-Based Principal Component Analysis for Non-Gaussian Processes. *Chemometrics and Intelligent Laboratory Systems*, vol. 146, pp. 270-289, 2015.
35. **Dong Shen**, Youqing Wang^{*}. Iterative Learning Control for Networked Stochastic Systems with Random Packet Losses. *International Journal of Control*, vol. 88, no. 5, pp. 959-968, 2015.
36. **Dong Shen**^{*}, Youqing Wang. ILC for Networked Nonlinear Systems with Unknown Control Direction through Random Lossy Channel. *Systems & Control Letters*, vol. 77, pp. 30-39, 2015.
37. **Dong Shen**^{*}, Youqing Wang^{*}. Survey on Stochastic Iterative Learning Control. *Journal of Process Control*, vol. 24, no. 12, pp. 64-77, 2014. **SURVEY PAPER**
38. **Dong Shen**, Han-Fu Chen^{*}. A Kiefer-Wolfowitz Algorithm Based Iterative Learning Control for Hammerstein-Wiener Systems. *Asian Journal of Control*, vol. 14, no. 4, pp. 1070-1083, 2012.
39. Xin Xu^{*}, **Dong Shen**, Yanqing Gao, Kai Wang. Learning Control of Dynamical Systems Based on Markov Decision Processes: Research Frontiers and Outlooks. *Acta Automatica Sinica*, vol. 38, no. 5, pp. 673-687, 2012 (In Chinese). **SURVEY PAPER**
40. **Dong Shen**, Han-Fu Chen^{*}. Iterative Learning Control for Large Scale Nonlinear Systems with Observation Noise. *Automatica*, vol. 48, no. 3, pp. 577-582, 2012. **TOP-JOURNAL PAPER**
41. **Dong Shen**^{*}, Zhongsheng Hou. Iterative Learning Control with Unknown Control Direction: A Novel Approach. *IEEE Transactions on Neural Networks, Special Issue on Data-based Optimization, Control and Modeling*, vol. 22, no. 12, pp. 2237-2249, 2011. **TOP-JOURNAL PAPER, REGULAR PAPER**
42. **Dong Shen**^{*}, Yutao Mu, Gang Xiong. Iterative Learning Control for Nonlinear Systems with Dead-zone Input and Time-delay in Presence of Measurement Noise. *IET Control Theory and Applications*, vol. 5, no. 12, pp. 1418-1425, 2011.
43. **Dong Shen**, Han-Fu Chen^{*}. Iterative Learning Control for a Class of Nonlinear Systems. *Journal of System Science & Mathematics Sciences*, vol. 28, no. 9, pp. 1053-1064, 2008 (In Chinese).

♠ Referred Conference Papers

1. Chen Liu, **Dong Shen**^{*}. Iterative Learning Consensus for Discrete-time Multi-Agent Systems with Measurement Saturation and Random Noises. *The 2018 IEEE 7th Data Driven Control and Learning Systems Conference*, Enshi, China, May 25-27, 2018, pp.
2. Chao Zhang, **Dong Shen**^{*}. Finite-Level Quantized Iterative Learning Control by Encoding-Decoding Mechanisms. *The 2018 IEEE 7th Data Driven Control and Learning Systems Conference*, Enshi, China, May 25-27, 2018, pp. (This paper won IEEE 7th DDCLS Best Paper Award Finalist)

3. **Dong Shen***, Jian-Xin Xu. Zero-Error Tracking of Iterative Learning Control using Probabilistically Quantized Measurements. *The 2017 Asian Control Conference (ASCC2017)*, Gold Coast, Australia, December 17-20, 2017, pp. 1029-1034.
4. **Dong Shen***, Lanjing Wang. On Iterative Learning Tracking Problem for Multi-Sensor Systems. *The 43rd Annual Conference of the IEEE Industrial Electronics Society*, Beijing, China, October 29 - November 1, 2017, pp. 5918-5923.
5. **Dong Shen***, Jian-Xin Xu. Iterative Learning Control for Linear Systems with Markov Data Dropouts: Noise-free Case. *The 36th Chinese Control Conference (CCC2017)*, Dalian, China, July 26-28, 2017, pp. 3304-3309.
6. Chao Zhang, **Dong Shen***. Zero-Error Convergence of Iterative Learning Control Using Uniform Quantizer with Encoding and Decoding Method. *The 36th Chinese Control Conference (CCC2017)*, Dalian, China, July 26-28, 2017, pp. 3473-3478.
7. Chiang-Ju Chien*, Ying-Chung Wang, Meng-Joo Er, Ronghu Chi, **Dong Shen**. An Adaptive Iterative Learning Control for Discrete-Time Nonlinear Systems with Iteration-Varying Uncertainties. Submitted to *IEEE 6th Data Driven Control and Learning Systems Conference (DDCLS17)*, Chongqing, China, May 26-27, 2017, pp. 390-395.
8. Xuefang Li, Deqing Huang*, **Dong Shen**, Jian-Xin Xu. Boundary Tracking Control for MIMO PDE-ODE Cascade Systems via Learning Control Approach. Submitted to *IEEE 6th Data Driven Control and Learning Systems Conference (DDCLS17)*, Chongqing, China, May 26-27, 2017, pp. 78-83.
9. Lanjing Wang, **Dong Shen***, Xuefang Li, Chiang-Ju Chien, Ying-Chung Wang. Sampled-data Iterative Learning Control for Nonlinear Systems with Iteration Varying Lengths. Submitted to *IEEE 6th Data Driven Control and Learning Systems Conference (DDCLS17)*, Chongqing, China, May 26-27, 2017, pp. 36-41.
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