

March 7th, 2023

## Curriculum Vitae

### Hideaki Ishii

#### Office Address

Department of Computer Science, School of Computing  
Tokyo Institute of Technology  
4259-J2-54, Nagatsuta-cho, Midori-ku  
Yokohama 226-8502, Japan

Phone/Fax: +81-45-924-5371

E-mail: [ishii@c.titech.ac.jp](mailto:ishii@c.titech.ac.jp)

URL: <http://www.sc.dis.titech.ac.jp/ishii>

#### Current Position

- Professor  
Department of Computer Science, School of Computing  
Cyber Security Research Center  
Department of Systems and Control Engineering, School of Engineering (affiliate)  
Center of Data Science and Artificial Intelligence  
Tokyo Institute of Technology, since 2020

#### Earlier Positions

- Associate Professor, Department of Computer Science, School of Computing  
Tokyo Institute of Technology, 2007–2020  
(Until 2016: Department of Computational Intelligence and Systems Science, Interdisciplinary Graduate School of Science and Engineering)
- Research Associate, Department of Information Physics and Computing, Graduate School of Information Science and Technology, and Department of Mathematical Engineering and Information Physics, School of Engineering, University of Tokyo, 2004–2007
- Postdoctoral Research Associate, Coordinated Science Laboratory, University of Illinois at Urbana-Champaign, 2001–2004 (Research adviser: Professor Tamer Başar)

#### Short-Term Appointments

- Visiting Researcher, Technical University of Berlin, Germany, July–October 2018
- Visiting Professor, City University of Hong Kong, China, September 2015
- Visiting Researcher, University of Stuttgart, Germany, April 2014–March 2015

- Visiting Researcher, IEIIT-CNR, Politecnico di Torino, Italy, October–November 2007, September 2008, November 2014

## **Education**

- Ph.D., Electrical and Computer Engineering, University of Toronto, 2002  
(Supervisor: Professor Bruce A. Francis)
- M.Eng., Applied Systems Science, Kyoto University, Japan, 1998
- B.Eng., Engineering Systems, University of Tsukuba, Japan, 1996

## **Personal Data**

Born in 1972 in Tokyo, Japan  
Nationality: Japanese

## **Research Interests**

- Systems and control
- Control over communication networks
- Cooperative control of multi-agent systems
- Distributed algorithms for PageRank computation in search engines
- Cyber security of control systems with applications to power systems
- Hybrid dynamical systems
- Control analysis and design via randomized algorithms
- Sampled-data control theory and its application

## **Awards and Honors**

- Co-author of the Finalist for the Best Young Author Award, IFAC Conference on Networked Systems, Zurich, July 2022.
- IEEE Fellow, Class of 2021, Citation: “For contributions to networked control of large-scale systems”
- Selected in the Tokyo Tech Research Map, 2023–2024, 2021–2022, and 2019–2020
- IFAC Pavel J. Nowacki Distinguished Lecturer, 2020–2023
- IFAC Outstanding Service Award, July 2020
- Co-author for the Best Student Paper Award, 8th IFAC Workshop on Distributed Estimation and Control, Chicago, September 2019

- SICE Control Division Conference Award, 2019.
- Plenary Lecture, 18th International Conference on Control, Automation and Systems (ICCAS), PyeongChang, Korea, October 2018
- Tejima Memorial Research Award (Young Researcher Award), Tokyo Institute of Technology, 2017
- SICE Outstanding Author Award, 2016
- IEEE CSS Control Systems Magazine Outstanding Paper Award, 2015
- Humboldt Research Fellowship, Alexander von Humboldt Foundation, 2014
- Semi-Plenary Lecture, The 21st International Symposium on Mathematical Theory of Networks and Systems (MTNS), Groningen, The Netherlands, July 2014
- SICE Outstanding Paper Award, 2013 and 2014
- SICE Control Division Research Award (Kimura Award), 2013
- Supervisor for the Best Student Paper Award Finalist, The 12th European Control Conference, Zurich, Switzerland, 2013
- SICE Control Division Pioneer Award, 2010
- Supervisor for the Best Student Paper Award, IEEE Multi-Conference on Systems and Control, Yokohama, Japan, 2010
- Nominated as an outstanding reviewer for Automatica, 2003 and 2007
- Wiley Prize for Best Student Paper, International Conference on Control 2000, Cambridge, U.K., 2000
- University of Toronto Open Fellowship, 2000–2001
- Japan Scholarship Foundation Award, 1996–1998

## Membership

- IEEE, Fellow
- SICE (Society of Instrument and Control Engineers, Japan)
- ISCIE (Institute of Systems, Control and Information Engineers, Japan)
- IEICE (Institute of Electronics, Information and Communication Engineers, Japan)

## Editorial Activities

- Associate Editor, Mathematics of Control, Signals and Systems, since 2016.
- Associate Editor, IEEE Control Systems Letters, 2017–2022.
- Associate Editor, IEEE Transactions on Control of Network Systems, 2015–2018.
- Associate Editor, Automatica, 2008–2017.
- Associate Editor, IEEE Transactions on Automatic Control, 2009–2011.
- Associate Editor, Transactions of the SICE, 2011–2013.
- Member, Conference Editorial Board of the European Control Association (EUCA), 2013–2018.
- Guest Editor, Special Issue on Control Technology for Networked and Distributed Robotics, *Advanced Robotics*, 2021–2022.
- Guest Editor, Special Section on Learning and Control for Multi-agent Systems, *Annual Reviews in Control*, 2021–2022.
- Guest Editor, Special Issue on Security and Privacy Issues of Smart Network Systems, *IEEE Transactions on Network Science and Engineering*, 2020.
- Guest Editor, Special Issue on Multi-Symposium on Control Systems, *Transactions of the SICE*, 2020.
- Guest Editor, Special Issue on Feedback Control for the Internet of Things, *IEEE Internet of Things Journal*, 2016–2018.
- Member, Editorial Committee for the Special Section on “Reliable Communication and Control,” *IEICE Transactions on Fundamentals of Electronics, Communications and Computer Sciences*, 2016–2017.
- Member, Editorial Committee for the Special Section on “Networked Control Systems: Theories and Applications,” *IEICE Transactions on Fundamentals of Electronics, Communications and Computer Sciences*, 2012–2013.
- Member, Editorial Committee for the Special Section on “Reliable Robust Radio Control Technology,” *IEICE Transactions on Fundamentals of Electronics, Communications and Computer Sciences*, 2011–2012.
- Guest Editor, Special Issue on Advances in Networking for Distributed Control and Measurement, *SICE Journal of Control, Measurement, and System Integration*, 2010–2011.
- Member, Conference Editorial Board of the IEEE Control Systems Society, 2007–2009.
- Member, Editorial Committee, Journal of the SICE, 2005–2007.

## Scientific and Professional Activities

### International Federation of Automatic Control (IFAC)

- Chair, IFAC Foundation Kwon Award Selection Committee, 2021-2023
- Member, Manfred Thoma Medal Selection Committee, 2020-2023
- Chair, IFAC Coordinating Committee on Systems and Signals (CC 1), since 2017.
- Member, Technical Board, since 2017.
- Ex-Officio Member, Conference Board, since 2020.
- Chair, IFAC Technical Committee on Networked Systems (TC 1.5), 2011–2017 (Member, since 2004).
- IPC Chair, 22nd World Congress of the International Federation of Automatic Control (IFAC), Yokohama, Japan, July 2023.
- Co-organizer (with R. Tanaka, T. Hayakawa, and K. Shimizu), Girls in Control Workshop (in Japanese), August 2022, May and November 2021.
- Co-organizer (with H. Asama and J. Imura), IFAC WC 2023 Preevent Workshop, Nagoya, Japan, November 2018.
- Member, Young Author Prize Selection Committee, 20th World Congress of the International Federation of Automatic Control (IFAC), Toulouse, France, July 2017.
- Member, Best Paper Award Selection Committee, *Nonlinear Analysis: Hybrid Systems*, 2017.
- Conference Chair, 6th IFAC Workshop on Distributed Estimation and Control in Networked Systems, Tokyo, September 2016.
- Member, Committee on Preparation of the IFAC World Congress 2023, Science Council of Japan, 2015–2016.
- Member, Young Author Prize Selection Committee, The 19th World Congress of the International Federation of Automatic Control (IFAC), Cape Town, South Africa, August 2014.
- Member, Committee on Preparation of the IFAC World Congress 2020, Science Council of Japan, 2012–2013.

### IEEE Control Systems Society (IEEE CSS)

- Vice President (for Diversity, Outreach, and Development), since 2022
- Elected Member, Board of Governors, 2014–2016.
- Member, IEEE CSS Technical Committee on Security and Privacy, since 2021.

- Member, IEEE CSS Technical Committee on Networks and Communications, since 2015.
- Member, IEEE CSS Technical Committee on Computational Aspects of Control System Design, since 2010.
- Publicity Chair, 62nd IEEE Conference on Decision and Control, Marina Bay Sands, Singapore, December 2023.
- Publicity Chair, 59th IEEE Conference on Decision and Control, Jeju Island, Korea, December 2020.
- Workshop Co-Chair, 3rd IEEE Conference on Control Technology and Applications (CCTA'19), Hong Kong, August 2019.
- Liaison Representative for SICE, IEEE Control Systems Society, 2019–2021.
- Chair, Japan Chapter of the IEEE Control Systems Society, since 2018 (Co-Chair, 2016–2017)
- Co-organizer (with Quanyan Zhu), Workshop on Learning and Security for Multi-Agent Systems, 59th IEEE Conference on Decision and Control, Jeju Island, Republic of Korea, December 2020.
- Co-organizer (with Masaaki Nagahara, Kenji Kashima, and Kenji Sugimoto), Workshop on Mathematical Theory of Control and Signal Processing in the Digital World (A workshop dedicated to Yutaka Yamamoto's 70th birthday), 58th IEEE Conference on Decision and Control, Nice, France, December 2019.
- Co-organizer (with Quanyan Zhu), Workshop on Secure and Resilient Control Systems, 57th IEEE Conference on Decision and Control, Miami, Florida, December 2018.
- Publicity Chair, 54th IEEE Conference on Decision and Control, Osaka, Japan, December 2015.
- Co-Organizer Invited session (with P. Frasca, C. Ravazzi, and R. Tempo) “Dynamics in social networks: Opinions, games and optimization,” IEEE Conference on Decision and Control, December 2014.
- Registration Chair, IEEE Multi-Conference on Systems and Control (MSC'10), Yokohama, Japan, September 2010.
- Co-Organizer, Invited Session (with Yasumasa Fujisaki) “Probabilistic and Randomized Methods in Systems and Control,” IEEE International Symposium on Computer-Aided Control System Design (CACSD'10), Yokohama, Japan, September 2010.
- Organizer, Invited Session “Control Techniques Using Networks,” IEEE Conference on Control Applications, Taipei, Taiwan, September 2004.

**Society of Instrument and Control Engineers (SICE), Japan**

- Director (for Annual Conferences), 2021–2022.
- Member, SICE Diversity Improvement Activity (SICE-DIA), since 2021.
- Chair, IFAC Committee of the SICE, since 2017.
- Member, Committee of International Affairs, since 2016.
- Co-Organizer, JST-CREST Special Sessions (with Shinji Hara) “Towards Novel Distributed Management for Power Systems,” SICE Control Division Conference, Fukuoka, Japan, March 2013.
- Secretary, IFAC Committee of the SICE, 2012–2017.
- Secretary, Control Division of the SICE, 2012.
- Member, Committee of International Affairs, SICE, 2008–2009.

### **Others**

- Director, Japan Association of Automatic Control (JAAC), since 2020.
- Reviewer, Mathematical Reviews, Michigan, USA, 2008–2015.
- Member, Joint International Lab COOPS (Cooperative Control for Energy Management Systems), National Research Council of Italy (CNR) and Japan Science and Technology Agency (JST), 2015–2018.
- Co-Principal Investigator (PI: Tatsuya Suzuki), “Integrated Design of Local EMSs and their Aggregation Scenario Considering Energy Consumption Behaviors and Cooperative Use of Decentralized In-Vehicle Batteries,” Distributed Energy Management System, Core Research for Evolutional Science and Technology (CREST), Japan Science and Technology Agency (JST), 2015–2020.
- Principal Investigator, “Distributed Intrusion Detection for Power Grids and Control Communication Networks,” Distributed Energy Management System, Core Research for Evolutional Science and Technology (CREST), Japan Science and Technology Agency (JST), 2012–2015.
- Secretary, Technical Committee on Reliable Robust Radio Control, IEICE ESS, 2013–2014; Member, since 2010.
- Member, Local Organizing Committee, Symposium on Developments in Control Theory Towards Glocal Control (in honor of Professor Shinji Hara), University of Tokyo, January 2012.
- Member, Organization Committee, Workshop on Uncertain Dynamical Systems, Awaji Yumebutai, Hyogo, July 2008.
- Co-organizer, Mini-Symposium (with Shinji Hara) “Data Rate Constraints in Networked Control and Estimation,” The 17th International Symposium on Mathematical Theory of Networks and Systems, Kyoto, Japan, July 2006.

## Conference Program Committees

- Senior IPC Member, European Control Conference (ECC'23), Bucharest, Romania, June 2023.
- IPC Member, 19th Latin American Congress of Automatic Control (CLCA'22), Havana, Cuba, November 2022
- IPC Member, IFAC Conference on Networked Systems (NecSys'22), Zurich, Switzerland, July 2022.
- Senior IPC Member, European Control Conference (ECC'22), London, U.K., July 2022.
- TPC Member, 12th Conference on Decision and Game Theory for Security (GameSec'21), Prague, Czech Republic, October 2021.
- Senior IPC Member, European Control Conference (ECC'21), Rotterdam, The Netherlands, June 2021.
- PC Member, 15th International Symposium on Distributed Autonomous Robotic Systems (DARS'21), Kyoto, Japan, June 2021.
- TPC Member, 11th Conference on Decision and Game Theory for Security (GameSec'20), University of Maryland - College Park, USA, October 2020.
- IPC Member, 16th International Conference on Control, Automation, Robotics and Vision (ICARCV), Shenzhen, China, December 2020.
- Editor and Associate Editor, 21st World Congress of the International Federation of Automatic Control (IFAC), Berlin, Germany, July 2020.
- Senior IPC Member, European Control Conference (ECC'20), Saint Petersburg, Russia, July 2020.
- TPC Member, 58th IEEE Conference on Decision and Control, Nice, France, December 2019.
- PC Member, 3rd International Symposium on Swarm Behavior and Bio-Inspired Robotics (SWARM'19), Okinawa, Japan, November 2019.
- TPC Member, 10th Conference on Decision and Game Theory for Security (GameSec'19), Stockholm, Sweden, October 2019.
- IPC Member, 8th IFAC Workshop on Distributed Estimation and Control of Networked Systems (NecSys'19), Chicago, September 2019.
- TPC Member, IEEE Information Theory Workshop (ITW), Gotland, Sweden, August 2019.
- IPC Member, 15th International Conference on Control and Automation (ICCA'19), Edinburgh, Scotland, July 2019.



- TPC Member, 57th IEEE Conference on Decision and Control, Miami, Florida, December 2018.
- IPC Member, 2nd IFAC Conference on Cyber-Physical & Human Systems, Miami, Florida, December 2018.
- IPC Member, 7th IFAC Workshop on Distributed Estimation and Control of Networked Systems (NecSys'18), Groningen, the Netherlands, August 2018.
- IPC Member, IFAC Symposium on Robust Control Design (ROCOND'18), Florianopolis, Brazil, September 2018.
- PC Member, IEEE Conference on Control Technology and Applications (CCTA'18), Copenhagen, Denmark, August 2018.
- IPC Member, 23rd International Symposium on Mathematical Theory of Networks and Systems (MTNS), Hong Kong, July 2018.
- PC Member, 2nd International Symposium on Swarm Behavior and Bio-Inspired Robotics (SWARM'17), Kyoto, Japan, October 2017.
- PC Member, IEEE Conference on Control Technology and Applications (CCTA'17), Hawaii, August 2017.
- Editor, 20th World Congress of the International Federation of Automatic Control (IFAC), Toulouse, France, July 2017.
- TPC Member, 55th IEEE Conference on Decision and Control, Las Vegas, Nevada, December 2016.
- PC Member, 1st IFAC Conference on Cyber-Physical & Human-Systems, Florianopolis, Brazil, December 2016.
- PC Member, IEEE Conference on Control Applications (CCA'16), Buenos Aires, Argentina, September 2016.
- PC Member, 1st International Symposium on Swarm Behavior and Bio-Inspired Robotics (SWARM'15), Kyoto, Japan, October 2015.
- IPC Member, 16th IFAC Workshop on Control Applications of Optimization (CAO'15), Garmisch-Partenkirchen/Murnau, Germany, October 2015.
- IPC Member, 5th IFAC Workshop on Distributed Estimation and Control of Networked Systems (NecSys'15), Philadelphia, Pennsylvania, September 2015.
- PC Member, IEEE Multi-Conference on Systems and Control (MSC'15), Sydney, Australia, September 2015.
- IPC Member, 4th IFAC Conference on Analysis and Control of Chaotic Systems (CHAOS'15), Tokyo, Japan, August 2015.

- IPC Member, 1st IFAC Conference on Modelling, Identification and Control (MIN-CON'15), Saint-Petersburg, Russia, June 2015.
- Editor, 19th World Congress of the International Federation of Automatic Control (IFAC), Cape Town, South Africa, August 2014.
- Scientific Committee Member, Satellite Workshop “New Trends in the Analysis and Control of Complex Networks,” European Conference on Complex Systems, Lucca, Italy, September 2014.
- TPC Member, 52nd IEEE Conference on Decision and Control, Florence, Italy, December 2013.
- IPC Member, 4th IFAC Workshop on Distributed Estimation and Control of Networked Systems (NecSys'13), Koblenz, Germany, September 2013.
- IPC Member, IEEE Conference on Computer-Aided Control System Design (CACSD), Hyderabad, India, August 2013.
- IPC Member, 12th European Control Conference, Zurich, Switzerland, July 2013.
- IPC Member, 13th IFAC Symposium on Large Scale Complex Systems: Theory and Applications (IFAC LSS 2013), Shanghai, China, July 2013.
- TPC Member, 51st IEEE Conference on Decision and Control, Maui, Hawaii, December 2012.
- IPC Member, 3rd IFAC Workshop on Distributed Estimation and Control of Networked Systems (NecSys'12), Santa Barbara CA, September 2012.
- IPC Member, IEEE Joint Symposium on Computer-Aided Control System Design and Systems with Uncertainty (CACSD-SU'12), Dubrovnik, Croatia, October 2012.
- IPC Member, 20th International Symposium on Mathematical Theory of Networks and Systems (MTNS), Melbourne, Australia, July 2012.
- IPC Member, IEEE Joint Symposium on Computer-Aided Control System Design and Systems with Uncertainty (CACSD-SU'11), Denver, Colorado, September 2011.
- IPC Member, 2nd IFAC Workshop on Distributed Estimation and Control of Networked Systems (NecSys'10), Annecy, France, September 2010.
- IPC Member, 8th International Conference on Control and Automation (ICCA'10), Xiamen, China, June 2010.
- IPC Member, IEEE International Symposium on Computer-Aided Control System Design (CACSD'10), Yokohama, Japan, September 2010.
- The 3rd International Symposium on Systems and Control in Aeronautics and Astronautics (ISSCAA'10), Harbin, China, June 2010.

- IPC Member, 1st IFAC Workshop on Distributed Estimation and Control of Networked Systems (NecSys'09), Venice, Italy, September 2009.
- PC Member, Control over Communication Channels Workshop (ConCom'09), Seoul, Korea, June 2009.
- IPC Member, 7th International Conference on Control and Automation (ICCA'09), Christchurch, New Zealand, December 2009.
- IPC Member, SICE Annual Conference 2008, Chofu, Tokyo, August 2008.

## Publications

Google Scholar Citations: 6750 (h-index: 40, i10-index: 110)

## Books

- [B1] H. Ishii and Q. Zhu (editors), *Security and Resilience of Control Systems: Theory and Applications*, vol. 489 in Lecture Notes in Control and Information Sciences, Springer, 2022.
- [B2] S. Fang, J. Chen, and H. Ishii, *Towards Integrating Control and Information Theories: From Information-Theoretic Measures to Control Performance Limitations*, vol. 465 in Lecture Notes in Control and Information Sciences, Springer, 2017.
- [B3] H. Ishii and B. A. Francis, *Limited Data Rate in Control Systems with Networks*, vol. 275 in Lecture Notes in Control and Information Sciences, Springer, 2002.

## Journal Articles

- [J1] S. Feng, M. Ran, H. Ishii, and S. Xu, “Dynamic quantized consensus under DoS attacks: Towards a tight zooming-out factor,” *IEEE Transactions on Control of Network Systems*, accepted, 2023.
- [J2] A. Cetinkaya, H. Ishii, and T. Hayakawa, “Effects of jamming attacks on wireless networked control systems under disturbance,” *IEEE Transactions on Automatic Control*, to appear, 2022.
- [J3] N. Ahmadi, Y. Chakhchoukh, and H. Ishii, “Analysis of targeted coordinated attacks on decomposition-based robust state estimation,” *IEEE Open Access Journal of Power and Energy*, 10: 116-127, 2023.
- [J4] R. K. Mishra and H. Ishii, “Event-triggered control for discrete-time multi-agent average consensus,” *International Journal of Robust and Nonlinear Control*, Special Issue on Sparsity-inducing Methods in Control Theory, 33(1): 159–176, 2023.

- [J5] Y. Nugraha, A. Cetinkaya, T. Hayakawa, H. Ishii, and Q. Zhu, “Rolling horizon games of resilient networks with non-uniform horizons,” *European Journal of Control*, ECC Special Issue, 68: 100693, 2022.
- [J6] Y. Wang, H. Ishii, F. Bonnet, and X. Defago, Resilient consensus for multi-agent systems under adversarial spreading processes, *IEEE Transactions on Network Science and Engineering*, 9(5): 3316–3331, 2022.
- [J7] S. Feng, A. Cetinkaya, H. Ishii, P. Tesi, and C. De Persis, “Resilient quantized control under Denial-of-Service: Variable bit rate quantization,” *Automatica*, 141: 110302, 2022.
- [J8] M. Shi, S. Feng, and H. Ishii, “Quantized state feedback stabilization of nonlinear systems under Denial-of-Service,” *Automatica*, 139: 110180, 2022.
- [J9] H. Ishii, Y. Wang, and S. Feng, “An overview on multi-agent consensus under adversarial attacks,” *Annual Reviews in Control*, Special Section on Learning and Control for Multi-agent Systems, 53: 252-272, 2022. (Also, presented at the 10th IFAC Symposium on Robust Control Design (ROCOND’22) as a dissemination paper, 2022.)
- [J10] R. Kato, A. Cetinkaya, and H. Ishii, “Linearization-based quantized stabilization of nonlinear systems under DoS attacks,” *IEEE Transactions on Automatic Control*, 67(12): 6826-6833, 2022.
- [J11] S. Feng and H. Ishii, “Dynamic quantized consensus of general linear multi-agent systems under Denial-of-Service attacks,” *IEEE Transactions on Control of Network Systems*, 9(2): 562-574, 2022.
- [J12] Y. Wang, H. Ishii, F. Bonnet, and X. Defago, “Resilient real-valued consensus in spite of mobile malicious agents on directed graphs,” *IEEE Transactions on Parallel and Distributed Systems*, 33(3): 586–603, 2022.
- [J13] R. Kato, A. Cetinkaya, and H. Ishii, “Security analysis of linearization for nonlinear networked control systems under DoS,” *IEEE Transactions on Control of Network Systems*, 8(4): 1692–1704, 2021.
- [J14] M. Nakamura, H. Ishii, and S. M. Dibaji, “Resiliency against malicious agents in maximum-based consensus,” *SICE Journal of Control, Measurement, and System Integration*, 14(1): 279–290, 2021.
- [J15] J. M. Maestre, P. Velarde, H. Ishii, and R. R. Negenborn, “Scenario-based defense mechanism against vulnerabilities in Lagrange-based DMPC,” *Control Engineering Practice*, 114: 104879, 2021.
- [J16] X. Wang, H. Ishii, J. He, and P. Cheng, “Dynamic privacy-aware collaborative schemes for average computation: A multi-time reporting case,” *IEEE Transactions on Information Forensics and Security*, 16: 3843–3858, 2021.

- [J17] H. Matsume, Y. Wang, and H. Ishii, “Resilient self/event-triggered consensus based on ternary control,” *Nonlinear Analysis: Hybrid Systems*, 42: 101091, 2021.
- [J18] L. Yuan and H. Ishii, “Secure consensus with distributed detection via two-hop communication,” *Automatica*, 131: 109775, 2021.
- [J19] N. Ahmadi, Y. Chakhchoukh, and H. Ishii, “Power systems decomposition for robustifying state estimation under cyber attacks,” *IEEE Transactions on Power Systems*, 36(3): 1922–1933, 2021.
- [J20] Y. Nugraha, A. Cetinkaya, T. Hayakawa, H. Ishii, and Q. Zhu, “Dynamic resilient network games with applications to multi-agent consensus,” *IEEE Transactions on Control of Network Systems*, 8(1): 246–259, 2021.
- [J21] S. Feng, A. Cetinkaya, H. Ishii, P. Tesi, and C. De Persis, “Networked control under DoS attacks: Trade-offs between resilience and data rate,” *IEEE Transactions on Automatic Control*, 66(1): 460–467, 2021.
- [J22] X. Wang, H. Ishii, L. Du, P. Cheng, and J. Chen, “Privacy-preserving distributed machine learning via local randomization and ADMM perturbation,” *IEEE Transactions on Signal Processing*, 68: 4226–4241, 2020.
- [J23] M. Wakaiki, A. Cetinkaya, and H. Ishii, “Stabilization of networked control systems under DoS attacks and output quantization,” *IEEE Transactions on Automatic Control*, 65(8): 3560–3575, 2020.
- [J24] A. Cetinkaya, K. Kikuchi, T. Hayakawa, and H. Ishii, “Randomized transmission protocols for protection against jamming attacks in multi-agent consensus,” *Automatica*, 117: 108960, 2020.
- [J25] Y. Wang and H. Ishii, “An event-triggered approach to quantized resilient consensus,” *International Journal of Robust and Nonlinear Control*, Special Issue on Privacy and Security of Cyber-Physical Systems, 30(11): 4188–4204, 2020.
- [J26] Y. Wang and H. Ishii, “Resilient consensus through event-based communication,” *IEEE Transactions on Control of Network Systems*, 7(1): 471–482, 2020.
- [J27] W. Ananduta, J. M. Maestre, C. Ocampo-Martinez, and H. Ishii, “Resilient distributed model predictive control for energy management of interconnected microgrids,” *Optimal Control, Applications and Methods*, Special Issue on MPC for Energy Systems: Economic and Distributed Approaches, 41(1): 146–169, 2020.
- [J28] J. Chen, S. Fang, and H. Ishii, “Fundamental limitations and intrinsic limits of feedback: An overview in an information age,” *Annual Reviews in Control*, 47: 155–177, 2019.
- [J29] A. Cetinkaya, H. Ishii, and T. Hayakawa, “Analysis of stochastic switched systems with application to networked control under jamming attacks,” *IEEE Transactions on Automatic Control*, 64(5): 2013–2028, 2019.

- [J30] A. Cetinkaya, H. Ishii, and T. Hayakawa, “An overview on denial-of-service attacks in control systems: Attack models and security analyses,” *Entropy*, Special Issue on Entropy in Networked Control, 21(2): 210, 2019.
- [J31] S. Fang, J. Chen, and H. Ishii, “Power gain bounds of MIMO networked control systems: An entropy perspective,” *IEEE Transactions on Automatic Control*, 64(3): 1170–1177, 2019.
- [J32] A. Cetinkaya, H. Ishii, and T. Hayakawa, “A probabilistic characterization of random and malicious communication failures in multi-hop networked control,” *SIAM Journal on Control and Optimization*, 56(5): 3320–3350, 2018.
- [J33] S. Linsenmayer, H. Ishii, and F. Allgöwer, “Containability with event-based sampling for scalar systems with time-varying delay and uncertainty,” *IEEE Control Systems Letters*, 2(4): 725–730, 2018.
- [J34] K. Takijiri and H. Ishii, “Networked control of uncertain systems via the coarsest quantization and lossy communication,” *Systems & Control Letters*, 119: 57–63, 2018.
- [J35] A. Cetinkaya, H. Ishii, and T. Hayakawa, “The effect of time-varying jamming interference on networked stabilization,” *SIAM Journal on Control and Optimization*, 56(3): 2398–2435, 2018.
- [J36] S. M. Dibaji, H. Ishii, and R. Tempo, “Resilient randomized quantized consensus,” *IEEE Transactions on Automatic Control*, 63(8): 2508–2522, 2018.
- [J37] Y. Kikuya, S. M. Dibaji, and H. Ishii, “Fault tolerant clock synchronization over unreliable channels in wireless sensor networks,” *IEEE Transactions on Control of Network Systems*, 5(4): 1551–1562, 2018.
- [J38] S. Akashi, H. Ishii, and A. Cetinkaya, “Self-triggered control with tradeoffs in communication and computation,” *Automatica*, 94: 373–380, 2018.
- [J39] P. Velarde, J. M. Maestre, H. Ishii, and R. Negenborn, “Vulnerabilities in Lagrange-based distributed model predictive control,” *Optimal Control, Applications and Methods*, 39(2): 601–621, 2018.
- [J40] J. M. Maestre, H. Ishii, and E. Algaba, “Node aggregation for enhancing PageRank,” *IEEE Access*, 5: 19799–19811, 2017.
- [J41] J. M. Maestre and H. Ishii, “A PageRank based coalitional control scheme,” *International Journal of Control, Automation and Systems*, 15: 1983–1990, 2017.
- [J42] Y. Chakhchoukh, V. Vittal, G. T. Heydt, and H. Ishii, “LTS-based robust hybrid SE integrating correlation,” *IEEE Transactions on Power Systems*, 32: 3127–3135, 2017.
- [J43] S. Zeng, H. Ishii, and F. Allgöwer, “Sampled observability and state estimation of linear discrete ensembles,” *IEEE Transactions on Automatic Control*, 62: 2406–2418, 2017.

- [J44] A. Cetinkaya, H. Ishii, and T. Hayakawa, “Networked control under random and malicious packet losses,” *IEEE Transactions on Automatic Control*, 62: 2434–2449, 2017.
- [J45] S. M. Dibaji and H. Ishii, “Resilient consensus of second-order agent networks: Asynchronous update rules over robust graphs,” *Automatica*, 81: 123–132, 2017.
- [J46] K. Okano and H. Ishii, “Stabilization of uncertain systems using quantized and lossy observations and uncertain control inputs,” *Automatica*, 81: 261–269, 2017.
- [J47] S. Fang, J. Chen, and H. Ishii, “Design constraints and limits of networked feedback in disturbance attenuation: An information-theoretic analysis,” *Automatica*, 79: 65–77, 2017.
- [J48] S. Fang, H. Ishii, and J. Chen, “Trade-offs in networked feedback systems: From information-theoretic measures to Bode-type integrals,” *IEEE Transactions on Automatic Control*, 62: 1046–1061, 2017.
- [J49] Y. Chakhchoukh and H. Ishii, “Enhancing robustness to cyber-attacks in power systems through multiple least trimmed squares state estimations,” *IEEE Transactions on Power Systems*, 31: 4395–4405, 2016.
- [J50] Y. Isozaki, S. Yoshizawa, Y. Fujimoto, H. Ishii, I. Ono, T. Onoda, and Y. Hayashi, “Detection of cyber attacks against voltage control in distribution power grids with PVs,” *IEEE Transactions on Smart Grid*, 7: 1824–1835, 2016.
- [J51] E.-W. Bai, H. Ishii, and R. Tempo, “A Markov chain Monte Carlo approach to nonlinear parametric system identification,” *IEEE Transactions on Automatic Control*, 60: 2542–2546, 2015.
- [J52] Y. Kadowaki and H. Ishii, “Event-based distributed clock synchronization for wireless sensor networks,” *IEEE Transactions on Automatic Control*, 60: 2266–2271, 2015.
- [J53] Y. Chakhchoukh and H. Ishii, “Coordinated cyber-attacks on the measurement function in hybrid state estimation,” *IEEE Transactions on Power Systems*, 30: 2487–2497, 2015.
- [J54] P. Frasca, H. Ishii, C. Ravazzi, and R. Tempo, “Distributed randomized algorithms for opinion formation, centrality computation and power systems estimation: A tutorial overview,” *European Journal of Control*, 24: 2–13, 2015.
- [J55] S. M. Dibaji and H. Ishii, “Consensus of second-order multi-agent systems in the presence of locally bounded faults,” *Systems & Control Letters*, 79: 23–29, 2015.
- [J56] C. Ravazzi, P. Frasca, R. Tempo, and H. Ishii, “Ergodic randomized algorithms and dynamics over networks,” *IEEE Transactions on Control of Network Systems*, 2: 78–87, 2015.
- [J57] X. Kang and H. Ishii, “Coarsest quantization for networked control of uncertain linear systems,” *Automatica*, 51: 1–8, 2015.

- [J58] K. Okano and H. Ishii, “Stabilization of uncertain systems with finite data rates and Markovian packet losses,” *IEEE Transactions on Control of Network Systems*, 1: 298–307, 2014.
- [J59] H. Ishii and R. Tempo, “The PageRank problem, multi-agent consensus and web aggregation: A systems and control viewpoint,” *IEEE Control Systems Magazine*, 34(3): 34–53, 2014.
- [J60] K. Cai and H. Ishii, “Average consensus on arbitrary strongly connected digraphs with time-varying topologies,” *IEEE Transactions on Automatic Control*, 59: 1066–1071, 2014.
- [J61] K. Okano and H. Ishii, “Networked control of uncertain systems over data rate limited and lossy channels,” *IEICE Transactions on Fundamentals of Electronics, Communications and Computer Sciences*, E96-A: 853–860, 2013.
- [J62] H. Ishii, R. Tempo, and E.-W. Bai, “PageRank computation via a distributed randomized approach with lossy communication,” *Systems & Control Letters*, 61: 1221–1228, 2012.
- [J63] H. Ishii, R. Tempo, and E.-W. Bai, “A web aggregation approach for distributed randomized PageRank algorithms,” *IEEE Transactions on Automatic Control*, 57: 2703–2717, 2012.
- [J64] K. Cai and H. Ishii, “Average consensus on general strongly connected digraphs,” *Automatica*, 48: 2750–2761, 2012.
- [J65] T. Okajima, K. Tsumura, T. Hayakawa, and H. Ishii, “Cooperative adaptive control of heterogeneous multi-agent systems for leader tracking: Discrete-time case,” *Transactions of the SICE*, 48: 536–544, 2012 (in Japanese).
- [J66] K. Cai and H. Ishii, “Convergence time analysis of quantized gossip consensus on digraphs,” *Automatica*, 48: 2344–2351, 2012.
- [J67] H. Ishii and K. Tsumura, “Networked control systems and communication constraints,” *IEICE Transactions on Fundamentals of Electronics, Communications and Computer Sciences*, E95-A: 680–690, 2012.
- [J68] K. Cai and H. Ishii, “Quantized consensus and averaging on gossip digraphs,” *IEEE Transactions on Automatic Control*, 56: 2087–2100, 2011.
- [J69] T. Kogure and H. Ishii, “Optimal design of cyclic pursuit weights in hierarchical multi-agent systems,” *International Journal of Control*, 84: 1115–1125, 2011.
- [J70] K. Cai and H. Ishii, “Quantized average consensus on gossip digraphs with reduced computation,” Special Issue on Advances in Networking for Distributed Control and Measurement, *SICE Journal of Control, Measurement, and System Integration*, 4: 236–242, 2011.



- [J71] H. Ishii, K. Okano, and S. Hara, “Achievable sensitivity bounds for MIMO control systems via an information theoretic approach,” *Systems & Control Letters*, 60: 111–118, 2011.
- [J72] H. Ishii and R. Tempo, “Distributed randomized algorithms for the PageRank computation,” *IEEE Transactions on Automatic Control*, 55: 1987–2002, 2010.
- [J73] K. Tsumura, H. Ishii, and H. Hoshina, “Tradeoffs between quantization and packet loss in networked control of linear systems,” *Automatica*, 45: 2963–2970, 2009.
- [J74] H. Ishii, “Limitations in remote stabilization over unreliable channels without acknowledgements,” *Automatica*, 45: 2278–2285, 2009.
- [J75] T. Hayakawa, H. Ishii, and K. Tsumura, “Adaptive quantized control for nonlinear uncertain systems,” *Systems & Control Letters*, 58: 625–632, 2009.
- [J76] H. Ishii and R. Tempo, “Probabilistic sorting and stabilization of switched systems,” *Automatica*, 45: 776–782, 2009.
- [J77] T. Hayakawa, H. Ishii, and K. Tsumura, “Adaptive quantized control for linear uncertain discrete-time systems,” *Automatica*, 45: 692–700, 2009.
- [J78] H. Ishii and R. Tempo, “Computing the PageRank variation for fragile web data,” *SICE Journal of Control, Measurement, and System Integration*, 2: 1–9, 2009.
- [J79] K. Okano, S. Hara, and H. Ishii, “Characterization of a complementary sensitivity property in feedback control: An information theoretic approach,” *Automatica*, 45: 504–509, 2009.
- [J80] H. Ishii and T. Başar, “Quantization in  $H^\infty$  parameter identification,” *IEEE Transactions on Automatic Control*, 53: 2186–2192, 2008.
- [J81] H. Ishii, C. Ohyama, and K. Tsumura, “Performance analysis of control systems under limited data rates,” *Transactions of the SICE*, 44: 396–404, 2008.
- [J82] H. Ishii and S. Hara, “A subband coding approach to control under limited data rates and message losses,” *Automatica*, 44: 1141–1148, 2008.
- [J83] H. Hoshina, K. Tsumura, and H. Ishii, “Stabilization of discrete-time linear systems via quantized signals with packet losses,” *Transactions of the SICE*, 44: 234–242, 2008 (in Japanese).
- [J84] H. Ishii, “ $H^\infty$  control with limited communication and message losses,” *Systems & Control Letters*, 57: 322–331, 2008.
- [J85] H. Ishii, “Discussion on ‘Almost sure stability of stochastic linear systems with ergodic parameters,’” *European Journal of Control*, 14: 125–126, 2008.
- [J86] R. Tempo and H. Ishii, “Monte Carlo and Las Vegas randomized algorithms for systems and control: An introduction,” *European Journal of Control*, 13: 189–203, 2007.

- [J87] T. Yoshida, H. Ishii, and K. Tsumura, “Guaranteeing the data rate and control performance by switching control with dwell time,” *Transactions of the SICE*, 43: 581–588, 2007 (in Japanese).
- [J88] H. Ishii, T. Başar, and R. Tempo, “Randomized algorithms for synthesis of switching rules for multi-modal systems,” *IEEE Transactions on Automatic Control*, 50: 754–767, 2005.
- [J89] H. Ishii and T. Başar, “Remote control of LTI systems over networks with state quantization,” *Systems & Control Letters*, 54: 15–31, 2005.
- [J90] H. Ishii, T. Başar, and R. Tempo, “Randomized algorithms for quadratic stability of quantized sampled-data systems,” *Automatica*, 40: 839–846, 2004.
- [J91] H. Ishii and B. A. Francis, “Quadratic stabilization of sampled-data systems with quantization,” *Automatica*, 39: 1793–1800, 2003.
- [J92] H. Ishii and B. A. Francis, “Stabilizing a linear system by switching control with dwell time,” *IEEE Transactions on Automatic Control*, 47: 1962–1973, 2002.
- [J93] H. Ishii and B. A. Francis, “Stabilization with control networks,” *Automatica*, 38: 1745–1751, 2002.
- [J94] H. Ishii and Y. Yamamoto, “Sampled-data  $H^\infty$  and  $H^2/H^\infty$  design of multirate D/A converter,” *Transactions of the ISCIE*, 11: 585–592, 1998 (in Japanese).

### Book Chapters

- [BC1] A. Cetinkaya, H. Ishii, and T. Hayakawa, “Secure networked control under jamming attacks: An SINR-based approach,” in H. Ishii and Q. Zhu (editors), *Security and Resilience of Control Systems*, Springer, pp. 63–91, 2022.
- [BC2] S. M. Dibaji, A. Hussain, and H. Ishii, “Privacy and security of control systems: A tutorial,” in H. Ishii and Q. Zhu (editors), *Security and Resilience of Control Systems*, Springer, pp. 121–146, 2022.
- [BC3] H. Ishii and R. Tempo, “Markov chains and ranking problems in web search,” in T. Samad and J. Baillieul (editors), *Encyclopedia of Systems and Control*, 2nd ed, Springer, 2021.
- [BC4] H. Ishii, S. Yoshizawa, Y. Fujimoto, I. Ono, T. Onoda, and Y. Hayashi, “Cyber security for voltage control of distribution systems under data falsification attacks,” in T. Suzuki, S. Inagaki, Y. Susuki, A. T. Tran (editors), *Design and Analysis of Distributed Energy Management Systems*, Springer, pp. 145–165, 2020.
- [BC5] Y. Chakhchoukh and H. Ishii, “Cyber security for power system state estimation,” in J. Stoustrup, A. Annaswamy, A. Chakraborty, and Z. Qu (editors), *Smart Grid Control: Overview and Research Opportunities*, Springer, pp. 241–256, 2019.

- [BC6] H. Ishii and A Suzuki, “Distributed randomized algorithms for PageRank computation: Recent advances,” in T. Basar (editor), *Uncertainty in Complex Networked Systems: In Honor of Roberto Tempo*, Birkhäuser, pp. 419–447, 2018.
- [BC7] H. Ishii, “Introduction to multi-agent systems,” in S. Azuma and M. Nagahara (editors), *Control of Multi-agent Systems*, pp. 1–20, Corona, Tokyo, 2015 (in Japanese).
- [BC8] H. Ishii and R. Tempo, “Markov chains and ranking problems in web search,” in T. Samad and J. Baillieul (editors), *Encyclopedia of Systems and Control*, Springer, Heidelberg, 2014.
- [BC9] H. Ishii, R. Tempo, and E.-W. Bai, “Distributed randomized PageRank algorithm over unreliable channels,” in L. Qiu, J. Chen, T. Iwasaki, and H. Fujioka (editors), *Developments in Control Theory towards Glocal Control*, pp. 147–156, The Institution of Engineering and Technology, London, 2012.
- [BC10] H. Ishii, “Feedback control over limited capacity channels,” in A. Bemporad, M. Heemels, and M. Johansson, editors, *Networked Control Systems*, Lecture Notes in Control and Information Sciences, vol. 406, pp. 255–291, Springer, Berlin, 2010.
- [BC11] H. Ishii and R. Tempo, “Distributed PageRank computation with link failures,” in S. Hara, Y. Ohta, J. C. Willems, and H. Fujioka, editors, *Perspectives in Mathematical System Theory, Control, and Signal Processing*, Lecture Notes in Control and Information Sciences, vol. 398, pp. 139–150, Springer, Berlin, 2010.

## Conference Papers

- [C1] J. Yan and H. Ishii, “Distributed parameter estimation under Gaussian observation noises,” *Proc. 22nd IFAC World Congress*, to appear, 2023.
- [C2] R. Kato and H. Ishii, “Dimension analysis via differential Lyapunov and dissipation inequalities,” *Proc. 22nd IFAC World Congress*, to appear, 2023.
- [C3] Y. Kato, L. Yuan, and H. Ishii, “Resilient synchronization of pulse-coupled oscillators with time continuity,” *Proc. 22nd IFAC World Congress*, to appear, 2023.
- [C4] Y. Wang, C. Liu, H. Ishii, K. H. Johansson, “Resilient distributed optimization under mobile malicious attacks,” *Proc. 22nd IFAC World Congress*, to appear, 2023.
- [C5] Y. Nugraha, T. Hayakawa, H. Ishii, A. Cetinkaya, and Q. Zhu, “Two-player incomplete games of resilient multiagent systems,” *Proc. 22nd IFAC World Congress*, to appear, 2023.
- [C6] T. Masada, Y. Wang, and H. Ishii, “Resilient consensus in opinion dynamics under adversarial epidemics,” *Proc. 22nd IFAC World Congress*, to appear, 2023.
- [C7] J. Yan, K. Li, and H. Ishii, “Resilient distributed parameter estimation in sensor networks,” *Proc. American Control Conference*, to appear, 2023.

- [C8] L. Yuan and H. Ishii, “Event-triggered approximate Byzantine consensus with multi-hop communication,” *Proc. 61st IEEE Conference on Decision and Control*, pp. 7078–7083, 2022.
- [C9] H. Matsume, Y. Wang, H. Ishii, and X. Defago, “Self-triggered ternary control for resilient consensus against mobile adversarial agents,” *Proc. 61st IEEE Conference on Decision and Control*, pp. 2387–2392, 2022.
- [C10] K. Kimura and H. Ishii, “Quantized zero dynamics attacks against sampled-data control systems,” *Proc. 61st IEEE Conference on Decision and Control*, pp. 6140–6145, 2022.
- [C11] N. Ahmadi, Y. Chakhchoukh, and H. Ishii, “Robust state estimation and power systems decomposition under coordinated targeted attacks,” *Proc. SICE Annual Conference*, pp. 81–82, 2022.
- [C12] J. Yan, Y. Mo, and H. Ishii, “Event-based control for synchronization of stochastic linear systems with application to distributed estimation,” *Proc. IFAC Conference on Networked Systems (NecSys’22)*, Zurich, pp. 115–120, 2022.
- [C13] R. K. Mishra and H. Ishii, “Dynamic event-triggered control in discrete-time multi-agent consensus over directed topologies,” *Proc. IFAC Conference on Networked Systems (NecSys’22)*, Zurich, pp. 162–167, 2022.
- [C14] Y. Nugraha, A. Cetinkaya, T. Hayakawa, H. Ishii, and Q. Zhu, “Rolling horizon games of resilient networks with non-uniform horizons,” *Proc. European Control Conference*, London, U.K., July 2022.
- [C15] L. Yuan and H. Ishii, “Asynchronous approximate Byzantine consensus via multi-hop communication,” *Proc. American Control Conference*, Atlanta, pp. 755–760, 2022.
- [C16] L. Yuan and H. Ishii, “Resilient consensus with multi-hop communication,” *Proc. 60th IEEE Conference on Decision and Control*, Austin, Texas, pp. 2692–2697, December 2021.
- [C17] Y. Nugraha, A. Cetinkaya, T. Hayakawa, H. Ishii, and Q. Zhu, “Rolling horizon games for cluster formation of resilient multiagent systems,” *Proc. 60th IEEE Conference on Decision and Control*, Austin, Texas, pp. 4823–4828, December 2021.
- [C18] X. Kang and H. Ishii, “Resilient control of uncertain networked systems under DoS attacks,” *Proc. 60th IEEE Conference on Decision and Control*, Austin, Texas, pp. 6945–6950, December 2021.
- [C19] Y. Wang, S. Gracy, H. Ishii, and K. H. Johansson, “Suppressing the endemic equilibrium in SIS epidemics: A state dependent approach,” *Proc. 11th IFAC Symposium on Biological and Medical Systems (BMS’21)*, Ghent, Belgium, September 2021.
- [C20] R. K. Mishra and H. Ishii, “Dynamic event-triggered consensus control of discrete-time linear multi-agent systems,” *Proc. IFAC Hybrid Conference on Analysis and Control of Chaotic Systems (CHAOS’21)*, Catania, Italy, September 2021.

- [C21] Y. Iori and H. Ishii, “Resilient synchronization of pulse-coupled oscillators under stealthy attacks,” *Proc. IFAC Conference on Modelling, Identification and Control of Nonlinear Systems (MICNON’21)*, Tokyo, September 2021.
- [C22] N. Ahmadi, Y. Chakhchoukh, and H. Ishii, “Power systems decomposition for robustifying state estimation under cyber attacks,” *Proc. SICE Annual Conference*, Tokyo, September 2021.
- [C23] Y. Nugraha, A. Cetinkaya, T. Hayakawa, H. Ishii, and Q. Zhu, “Cluster formation in multiagent consensus via dynamic resilient graph games,” *Proc. 5th IEEE Conference on Control Technology and Applications*, San Diego, pp. 735–740, August 2021.
- [C24] Y. Wang, H. Ishii, F. Bonnet, and X. Defago, “Resilient consensus against epidemic malicious attacks,” *Proc. European Control Conference*, Rotterdam, the Netherlands, pp. 1387–1392, June/July 2021.
- [C25] R. Kato and H. Ishii, “Averaging and cluster synchronization of Kuramoto oscillators,” *Proc. European Control Conference*, Rotterdam, the Netherlands, pp. 1491–1496, June/July 2021.
- [C26] S. Feng, A. Cetinkaya, H. Ishii, P. Tesi, and C. De Persis, “Resilient quantized control under Denial-of-Service with the application of variable bitrate quantization,” *Proc. European Control Conference*, Rotterdam, the Netherlands, pp. 506–511, June/July 2021.
- [C27] R. K. Mishra and H. Ishii, “Average consensus in discrete-time multi-agent systems with distributed event-triggered control,” *Proc. European Control Conference*, Rotterdam, the Netherlands, pp. 605–610, June/July 2021.
- [C28] M. Shi, S. Feng, and H. Ishii, “Quantized state feedback stabilization of nonlinear systems under DoS,” *Proc. 24th Int. Symposium on Mathematical Theory of Networks and Systems (MTNS)*, Cambridge, U.K., 2021.
- [C29] A. Cetinkaya, P. Arcaini, H. Ishii, and T. Hayakawa, “A search-based approach to identifying jamming attacks and defense policies in wireless networked control,” *Proc. 59th IEEE Conference on Decision and Control*, pp. 5717–5722, Jeju Island, Republic of Korea, December 2020.
- [C30] S. Feng and H. Ishii, “Dynamic quantized leader-follower consensus under denial-of-service attacks,” *Proc. 59th IEEE Conference on Decision and Control*, pp. 488–493, Jeju Island, Republic of Korea, December 2020.
- [C31] H. Matsume, Y. Wang, and H. Ishii, “Resilient self/event-triggered consensus based on ternary control,” *Proc. 59th IEEE Conference on Decision and Control*, pp. 6240–6245, Jeju Island, Republic of Korea, December 2020.
- [C32] Y. Nugraha, A. Cetinkaya, T. Hayakawa, H. Ishii, and Q. Zhu, “Dynamic resilient network games considering connectivity,” *Proc. 59th IEEE Conference on Decision and Control*, pp. 3779–3784, Jeju Island, Republic of Korea, December 2020.

- [C33] Y. Wang, H. Ishii, F. Bonnet, and X. Defago, “Resilient consensus against mobile malicious agents,” *Proc. 21st IFAC World Congress*, Berlin, Germany, July 2020.
- [C34] X. Wang, H. Ishii, J. He, and P. Cheng “Dynamic privacy-preserving collaborative schemes for average computation,” *Proc. 21st IFAC World Congress*, Berlin, Germany, July 2020.
- [C35] D. van Dinther, S. Feng, H. Ishii, and M. Heemels, “Towards the coarsest quantized controller under denial-of-service attacks,” *Proc. 21st IFAC World Congress*, Berlin, Germany, July 2020.
- [C36] Y. Nugraha, A. Cetinkaya, T. Hayakawa, H. Ishii, and Q. Zhu, “Dynamics resilient graph games for state-dependent jamming attacks analysis on multi-agent systems,” *Proc. 21st IFAC World Congress*, Berlin, Germany, July 2020.
- [C37] S. Feng and H. Ishii, “Dynamic quantized consensus of general linear multi-agent systems under denial-of-service attacks,” *Proc. 21st IFAC World Congress*, Berlin, Germany, July 2020.
- [C38] R. Kato, A. Cetinkaya, and H. Ishii, “DoS-aware quantized control of nonlinear systems via linearization,” *Proc. 21st IFAC World Congress*, Berlin, Germany, July 2020.
- [C39] P. Trodden, J. M. Maestre, and H. Ishii, “Actuation attacks on constrained linear systems: A set-theoretic analysis,” *Proc. 21st IFAC World Congress*, Berlin, Germany, July 2020.
- [C40] Y. Iori and H. Ishii, “A resilient synchronization protocol for pulse-coupled oscillators over robust networks,” *Proc. American Control Conference*, Denver, Colorado, June 2020.
- [C41] X. Wang, H. Ishii, L. Du, P. Cheng, and J. Chen, “Differential privacy-preserving distributed machine learning,” *Proc. 58th IEEE Conference on Decision and Control*, pp. 7339–7344, Nice, France, December 2019.
- [C42] A. Suzuki and H. Ishii, “PageRank computation via web aggregation in distributed randomized algorithms,” *Proc. 58th IEEE Conference on Decision and Control*, pp. 1856–1861, Nice, France, December 2019.
- [C43] Y. Iori and H. Ishii, “Resilient synchronization with pulse-based communications under robust networks,” *Proc. 19th International Conference on Control, Automation and Systems (ICCAS)*, Jeju, Republic of Korea, October 2019.
- [C44] T. Sekihara and H. Ishii, “Distributed anomaly detection for voltage control in distribution systems,” *Proc. 19th International Conference on Control, Automation and Systems (ICCAS)*, Jeju, Republic of Korea, October 2019.
- [C45] A. Cetinkaya, H. Ishii, and T. Hayakawa, “Randomized transmissions for networked control under high-frequency jamming,” *Proc. 8th IFAC Workshop on Distributed Estimation and Control in Networked Systems (NecSys’19)*, pp. 375–380, Chicago, September 2019.

- [C46] S. Linsenmayer, M. A. Müller, H. Ishii, and F. Allgöwer, “Event-based containability for linear systems with arbitrarily small bit rates,” *Proc. 8th IFAC Workshop on Distributed Estimation and Control in Networked Systems (NecSys’19)*, pp. 31–36, Chicago, September 2019.
- [C47] L. Yuan and H. Ishii, “Resilient consensus with distributed fault detection,” *Proc. 8th IFAC Workshop on Distributed Estimation and Control in Networked Systems (NecSys’19)*, pp. 285–290, Chicago, September 2019.
- [C48] S. Fang, M. Skoglund, K. H. Johansson, H. Ishii, and Q. Zhu, “Generic variance bounds on estimation and prediction errors in time series analysis: An entropy perspective,” *Proc. IEEE Information Theory Workshop (ITW)*, Gotland, Sweden, August 2019.
- [C49] Y. Wang and H. Ishii, “A distributed model predictive scheme for resilient consensus with input constraints,” *Proc. IEEE Conference on Control Technology and Applications (CCTA)*, pp. 349–354, Hong Kong, August 2019.
- [C50] S. Feng, A. Cetinkaya, H. Ishii, P. Tesi, and C. De Persis, “Data rates for stabilizing control under denial-of-service attacks,” *Proc. American Control Conference*, pp. 378–383, Philadelphia, July 2019.
- [C51] Y. Nugraha, A. Cetinkaya, T. Hayakawa, H. Ishii, and Q. Zhu, “Subgame perfect equilibrium analysis for jamming attacks on resilient graphs,” *Proc. American Control Conference*, pp. 2040–2045, Philadelphia, July 2019.
- [C52] Y. Wang and H. Ishii, “Resilient consensus through asynchronous event-based communication,” *Proc. American Control Conference*, pp. 1842–1847, Philadelphia, July 2019.
- [C53] R. Kato, A. Cetinkaya, and H. Ishii, “Stabilization of nonlinear networked control systems under denial-of-service attacks: A linearization approach,” *Proc. American Control Conference*, pp. 1444–1449, Philadelphia, July 2019.
- [C54] S. M. Dibaji, M. Safi, and H. Ishii, “Resilient distributed averaging,” *Proc. American Control Conference*, pp. 96–101, Philadelphia, July 2019.
- [C55] M. Onogawa, S. Yoshizawa, Y. Fujimoto, H. Ishii, I. Ono, T. Onoda, and Y. Hayashi, “Enhancing security for voltage control of distribution systems under data falsification attacks,” *Proc. American Control Conference*, pp. 3249–3254, Philadelphia, July 2019.
- [C56] W. Ananduta, J. M. Maestre, C. Ocampo-Martinez, and H. Ishii, “A resilient approach for distributed MPC-based economic dispatch in interconnected microgrids,” *Proc. European Control Conference*, pp. 891–896, Napoli, Italy, June 2019.
- [C57] Y. Wang and H. Ishii, “An event-triggered approach to quantized resilient consensus,” *Proc. European Control Conference*, pp. 2719–2724, Napoli, Italy, June 2019.

- [C58] S. Fang, K. H. Johansson, M. Skoglund, H. Sandberg, and H. Ishii, “Two-way coding in control systems under injection attacks: From attack detection to attack correction,” *Proc. 10th ACM/IEEE Int. Conference on Cyber-Physical Systems (ICCPs)*, Montreal, Canada, April 2019.
- [C59] S. Fang, H. Ishii, J. Chen, and K. H. Johansson, “A frequency-domain characterization of optimal error covariance for the Kalman-Bucy filter,” *Proc. 57th IEEE Conference on Decision and Control*, pp. 6366–6371, Miami, Florida, December 2018.
- [C60] J. M. Maestre, P. A. Trodden, and H. Ishii, “A distributed model predictive control scheme with robustness against noncompliant controllers,” *Proc. 57th IEEE Conference on Decision and Control*, pp. 3704–3709, Miami, Florida, December 2018.
- [C61] W. Ananduta, J. M. Maestre, C. Ocampo-Martinez, and H. Ishii, “Resilient distributed energy management for systems of interconnected microgrids,” *Proc. 57th IEEE Conference on Decision and Control*, pp. 6159–6164, Miami, Florida, December 2018.
- [C62] A. Cetinkaya, H. Ishii, and T. Hayakawa, “State-dependent jamming interference in networked stabilization,” *Proc. 57th IEEE Conference on Decision and Control*, pp. 7249–7254, Miami, Florida, December 2018.
- [C63] M. Nakamura, H. Ishii, and S. M. Dibaji, “Maximum-based consensus and its resiliency,” *Proc. 7th IFAC Workshop on Distributed Estimation and Control in Networked Systems (NecSys’18)*, pp. 283–288, Groningen, the Netherlands, August 2018.
- [C64] A. Suzuki, K. Masutomi, I. Ono, H. Ishii, and T. Onoda, “CPS-Sim: Co-simulation for cyber-physical systems with accurate time synchronization,” *Proc. 7th IFAC Workshop on Distributed Estimation and Control in Networked Systems (NecSys’18)*, pp. 70–75, Groningen, the Netherlands, August 2018.
- [C65] A. Cetinkaya, H. Ishii, and T. Hayakawa, “Resilience of networked control systems under jamming attacks,” *Proc. SICE Annual Conference*, Nara, Japan, September 2018.
- [C66] S. Fang, J. Chen, and H. Ishii, “Fundamental limitations of feedback and networked feedback systems: An information-theoretic analysis,” *Proc. 23rd Int. Symposium on Mathematical Theory of Networks and Systems*, Hong Kong, July 2018.
- [C67] A. Cetinkaya, H. Ishii, and T. Hayakawa, “Joint effects of jamming interference and disturbance in networked control systems,” *Proc. 23rd Int. Symposium on Mathematical Theory of Networks and Systems*, Hong Kong, July 2018.
- [C68] S. Fang, H. Ishii, and J. Chen, “An integral characterization of optimal error covariance by Kalman filtering,” *Proc. American Control Conference*, pp. 5031–5036, Milwaukee, Wisconsin, June 2018.
- [C69] M. Wakaiki, A. Cetinkaya, and H. Ishii, “Quantized output feedback stabilization under DoS attacks,” *Proc. American Control Conference*, pp. 6487–6492, Milwaukee, Wisconsin, June 2018.



- [C70] A. Suzuki and H. Ishii, “Distributed randomized algorithms for PageRank based on a novel interpretation,” *Proc. American Control Conference*, pp. 472–477, Milwaukee, Wisconsin, June 2018.
- [C71] P. Chanfreut, J. M. Maestre, and H. Ishii, “Vulnerabilities in distributed model predictive control based on Jacobi-Gauss decomposition,” *Proc. European Control Conference*, pp. 2587–2592, Limassol, Cyprus, June 2018.
- [C72] S. Fang, J. Chen, and H. Ishii, “Fundamental error bounds in state estimation: An information-theoretic analysis,” *Proc. 56th IEEE Conference on Decision and Control*, pp. 357–362, Melbourne, Australia, December 2017.
- [C73] S. Fang, J. Chen, and H. Ishii, “Intrinsic limits of power reduction in MIMO networked control systems,” *Proc. 56th IEEE Conference on Decision and Control*, pp. 4759–4764, Melbourne, Australia, December 2017.
- [C74] K. Kikuchi, A. Cetinkaya, T. Hayakawa, and H. Ishii, “Stochastic communication protocols for multi-agent consensus under jamming attacks,” *Proc. 56th IEEE Conference on Decision and Control*, pp. 1657–1662, Melbourne, Australia, December 2017.
- [C75] P. Velarde Rueda, J. M. Maestre, H. Ishii, and R. Negenborn, “Scenario based defense mechanism for distributed model predictive control,” *Proc. 56th IEEE Conference on Decision and Control*, pp. 6171–6176, Melbourne, Australia, December 2017.
- [C76] Y. Kikuya, S. M. Dibaji, and H. Ishii, “Resilient clock synchronization over unreliable channels in WSNs,” *Proc. 56th IEEE Conference on Decision and Control*, pp. 996–1001, Melbourne, Australia, December 2017.
- [C77] P. Velarde, J. M. Maestre, H. Ishii, and R. Negenborn, “Scenario based defense mechanism for distributed model predictive control,” *Proc. IEEE International Conference on Autonomic Computing*, pp. 215–220, Columbus, Ohio, July 2017.
- [C78] A. Cetinkaya, H. Ishii, and T. Hayakawa, “Wireless control under jamming attacks with bounded average interference power,” *Proc. 20th IFAC World Congress*, pp. 8735–8740, Toulouse, France, July 2017.
- [C79] K. Takijiri and H. Ishii, “Networked control of uncertain systems via the coarsest quantization and lossy communication,” *Proc. 20th IFAC World Congress*, pp. 6570–6575, Toulouse, France, July 2017.
- [C80] S. M. Dibaji, H. Ishii, and R. Tempo, “Resilient randomized quantized consensus with delayed information,” *Proc. 55th IEEE Conference on Decision and Control*, pp. 3505–3510, Las Vegas, December 2016.
- [C81] A. Cetinkaya, H. Ishii, and T. Hayakawa, “Enhanced stability analysis for networked control systems under random and malicious packet losses,” *Proc. 55th IEEE Conference on Decision and Control*, pp. 2721–2726, Las Vegas, December 2016.

- [C82] S. Zeng, H. Ishii, and F. Allgöwer, “State estimation of interconnected ensembles with anonymized outputs,” *Proc. 6th IFAC Workshop on Distributed Estimation and Control in Networked Systems (NecSys’16)*, pp. 109–114, Tokyo, Japan, September 2016.
- [C83] A. Cetinkaya, H. Ishii, and T. Hayakawa, “Random and malicious packet transmission failures on multi-hop channels in networked control systems,” *Proc. 6th IFAC Workshop on Distributed Estimation and Control in Networked Systems (NecSys’16)*, pp. 49–54, Tokyo, Japan, September 2016.
- [C84] S. Akashi, H. Ishii, and A. Cetinkaya, “Self-triggered control for communication reduction in networked systems,” *Proc. 6th IFAC Workshop on Distributed Estimation and Control in Networked Systems (NecSys’16)*, pp. 280–285, Tokyo, Japan, September 2016.
- [C85] Y. Kikuya and H. Ishii, “A fault tolerant protocol for clock synchronization in sensor networks,” *Proc. 6th IFAC Workshop on Distributed Estimation and Control in Networked Systems (NecSys’16)*, pp. 181–186, Tokyo, Japan, September 2016.
- [C86] Y. Chakhchoukh, S. Liu, M. Sugiyama, and H. Ishii, “Statistical outlier detection for diagnosis of cyber attacks in power state estimation,” *Proc. IEEE Power & Energy Society General Meeting*, Boston, July 2016.
- [C87] S. M. Dibaji, H. Ishii, and R. Tempo, “Resilient randomized quantized consensus,” *Proc. American Control Conference*, pp. 5118–5123, Boston, July 2016.
- [C88] J. M. Maestre and H. Ishii, “A cooperative game theory approach to the PageRank problem,” *Proc. American Control Conference*, pp. 3820–3825, Boston, July 2016.
- [C89] S. Zhen, H. Ishii, and F. Allgöwer, “Sampled observability of discrete heterogeneous ensembles from anonymized output measurements,” *Proc. 54th IEEE Conference on Decision and Control*, pp. 5683–5688, Osaka, Japan, December 2015.
- [C90] S. Fang, H. Ishii, and J. Chen, “Bode-type integrals of multivariate networked feedback systems and fire-quenching power allocation,” *Proc. 54th IEEE Conference on Decision and Control*, pp. 6178–6183, Osaka, Japan, December 2015.
- [C91] A. Cetinkaya, H. Ishii, and T. Hayakawa, “Event-triggered control over unreliable networks subject to jamming attacks,” *Proc. 54th IEEE Conference on Decision and Control*, pp. 4818–4823, Osaka, Japan, December 2015.
- [C92] S. M. Dibaji and H. Ishii, “Resilient consensus of double-integrator multi-agent networks with communication delays,” *Proc. 54th IEEE Conference on Decision and Control*, pp. 4290–4295, Osaka, Japan, December 2015.
- [C93] A. Cetinkaya, H. Ishii, and T. Hayakawa, “Event-triggered output feedback control resilient against jamming attacks and random packet losses,” *Proc. 5th IFAC Workshop on Distributed Estimation and Control in Networked Systems (NecSys’15)*, Philadelphia, September 2015.

- [C94] S. M. Dibaji and H. Ishii, “Resilient multi-agent consensus with asynchrony and delayed information,” *Proc. 5th IFAC Workshop on Distributed Estimation and Control in Networked Systems (NecSys’15)*, Philadelphia, September 2015.
- [C95] S. Fuady and H. Ishii, “Alignment forming in source seeking for multi-agent systems,” *Proc. 1st Int. Symposium on Swarm Behavior and Bio-Inspired Robotics (SWARM’15)*, pp. 162–165, Kyoto, Japan, October 2015.
- [C96] Y. Chakhchoukh and H. Ishii, “Robust estimation for enhancing the cyber security of power state estimation,” *Proc. IEEE Power & Energy Society General Meeting*, Denver, Colorado, July 2015.
- [C97] S. Zeng, H. Ishii, and F. Allgöwer, “On the state estimation problem for discrete ensembles from discrete-time output snapshots,” *Proc. American Control Conference*, pp. 4844–4849, 2015. Chicago, Illinois, July 2015.
- [C98] Y. Chakhchoukh and H. Ishii, “Cyber attacks scenarios on the measurement function of power state estimation,” *Proc. American Control Conference*, pp. 3676–3681 Chicago, Illinois, July 2015.
- [C99] S. M. Dibaji and H. Ishii, “Resilient consensus of second-order agent networks: Asynchronous update rules over robust graphs,” *Proc. American Control Conference*, pp. 1451–1456 Chicago, Illinois, July 2015.
- [C100] Y. Isozaki, S. Yoshizawa, Y. Fujimoto, H. Ishii, I. Ono, T. Onoda, and Y. Hayashi, “On detection of cyber attacks against voltage control in distribution power grids,” *Proc. IEEE International Conference on Smart Grid Communications*, pp. 848–853, Venice, Italy, November 2014.
- [C101] S. Fang, H. Ishii, and J. Chen, “Control over additive white Gaussian noise channels: Bode-type integrals, channel blurredness, negentropy rate, and beyond,” *Proc. 18th IFAC World Congress*, pp. 3770–3775, Cape Town, South Africa, August 2014.
- [C102] H. Nishino and H. Ishii, “Distributed detection of cyber attacks and faults for power systems,” *Proc. 18th IFAC World Congress*, pp. 11932–11937, Cape Town, South Africa, August 2014.
- [C103] T. Okajima, K. Tsumura, T. Hayakawa, and H. Ishii, “Leader following of partially heterogeneous multi-agent systems via cooperative adaptive control,” *Proc. 21st International Symposium on Mathematical Theory of Networks and Systems*, pp. 1582–1588, Groningen, the Netherlands, July 2014.
- [C104] K. Okano and H. Ishii, “Stabilization of uncertain systems with finite data rates,” *Proc. European Control Conference*, pp. 240–245, Strassburg, France, June 2014.
- [C105] S. M. Dibaji and H. Ishii, “Resilient consensus of double-integrator multi-agent systems,” *Proc. American Control Conference*, pp. 5139–5144, Portland, Oregon, June 2014.

- [C106] Y. Kadowaki and H. Ishii, “Event-based distributed clock synchronization for wireless sensor networks,” *Proc. 52nd IEEE Conference on Decision and Control*, pp. 6747–6752, Florence, Italy, December 2013.
- [C107] C. Ravazzi, P. Frasca, R. Tempo, and H. Ishii, “Almost sure convergence of a randomized algorithm for relative localization in sensor networks,” *Proc. 52nd IEEE Conference on Decision and Control*, pp. 4778–4783, Florence, Italy, December 2013.
- [C108] P. Frasca, C. Ravazzi, R. Tempo, and H. Ishii, “Gossips and prejudices: Ergodic randomized dynamics in social networks,” *Proc. 4th IFAC Workshop on Distributed Estimation and Control in Networked Systems (NecSys’13)*, pp. 212–219, Koblenz, Germany, September 2013.
- [C109] X. Kang and H. Ishii, “Coarsest quantization for networked control of uncertain systems,” *Proc. 4th IFAC Workshop on Distributed Estimation and Control in Networked Systems (NecSys’13)*, pp. 1–6, Koblenz, Germany, September 2013.
- [C110] K. Okano and H. Ishii, “Stabilization of uncertain systems with finite data rates and Markovian packet losses,” *Proc. European Control Conference*, pp. 2368–2373, Zurich, Switzerland, July 2013.
- [C111] C. Ravazzi, P. Frasca, H. Ishii, and R. Tempo, “A distributed randomized algorithm for relative localization in sensor networks,” *Proc. European Control Conference*, pp. 1776–1781, Zurich, Switzerland, July 2013.
- [C112] K. Okano and H. Ishii, “Data rate limitations for stabilization of uncertain systems,” *Proc. 51st IEEE Conference on Decision and Control*, pp. 3286–3291, Maui, Hawaii, December 2012.
- [C113] M. Okaniwa and H. Ishii, “An averaging method for synchronization in Kuramoto models,” *Proc. 3rd IFAC Workshop on Estimation and Control of Networked Systems (NecSys’12)*, pp. 282–287, Santa Barbara, California, September 2012.
- [C114] K. Cai and H. Ishii, “Average consensus on arbitrary strongly connected digraphs with dynamic topologies,” *Proc. American Control Conference*, pp. 14–19, Montreal, Canada, June 2012.
- [C115] K. Okano and H. Ishii, “Data rate limitations for stabilization of uncertain systems over lossy channels,” *Proc. American Control Conference*, pp. 1260–1265, Montreal, Canada, June 2012.
- [C116] K. Cai and H. Ishii, “Average consensus on general digraphs,” *Proc. 50th IEEE Conference on Decision and Control and European Control Conference*, pp. 1956–1961, Orlando, Florida, December 2011.
- [C117] H. Ishii, R. Tempo, and E.-W. Bai, “A new approach for aggregated PageRank computation via distributed randomized algorithms,” *Proc. 50th IEEE Conference on Decision and Control and European Control Conference*, pp. 6421–6426, Orlando, Florida, December 2011.

- [C118] T. Okajima, K. Tsumura, T. Hayakawa, and H. Ishii, “Adaptive consensus of discrete-time heterogeneous multi-agent systems,” *Proc. SICE Annual Conference 2011*, pp.2237–2242, Tokyo, Japan, September 2011.
- [C119] H. Ishii, R. Tempo, and E.-W. Bai, “Distributed randomized PageRank algorithms based on web aggregation over unreliable channels,” *Proc. 49th IEEE Conference on Decision and Control*, pp. 6602–6607, Atlanta, Georgia, December 2010.
- [C120] K. Cai and H. Ishii, “Convergence time analysis of quantized gossip algorithms on digraphs,” *Proc. 49th IEEE Conference on Decision and Control*, pp. 7669–7674, Atlanta, Georgia, December 2010.
- [C121] M. Siami, T. Hayakawa, H. Ishii, and K. Tsumura, “Adaptive quantized control for linear uncertain systems over channels subject to packet loss,” *Proc. 49th IEEE Conference on Decision and Control*, pp. 4655–4660, Atlanta, Georgia, December 2010.
- [C122] T. Kogure and H. Ishii, “Optimal design of cyclic pursuit weights in hierarchical multi-agent systems,” *Proc. 49th IEEE Conference on Decision and Control*, pp. 3814–3819, Atlanta, Georgia, December 2010.
- [C123] K. Cai and H. Ishii, “Further results on randomized quantized averaging: A surplus-based approach,” *Proc. 2010 IEEE Int. Symp. Computer-Aided Control System Design*, pp. 1558–1563, Yokohama, Japan, September 2010.
- [C124] H. Ishii, K. Tsumura, and T. Hayakawa, “Coarseness in quantization for stabilization of linear systems over networks,” *Proc. 19th International Symposium on Mathematical Theory of Networks and Systems*, pp. 1211–1218, Budapest, Hungary, July 2010.
- [C125] K. Cai and H. Ishii, “Gossip consensus and averaging algorithms with quantization,” *Proc. 2010 American Control Conference*, pp. 6306–6311, Baltimore, Maryland, June 2010.
- [C126] H. Ishii, R. Tempo, E.-W. Bai, and F. Dabbene, “Distributed randomized PageRank computation based on Web aggregation,” *Proc. 48th IEEE Conference on Decision and Control*, pp. 3026–3031, Shanghai, China, December 2009.
- [C127] H. Ishii and R. Tempo, “Fragile Link Structure in PageRank Computation,” *Proc. 48th IEEE Conference on Decision and Control*, pp. 121–126, Shanghai, China, December 2009.
- [C128] H. Ishii and R. Tempo, “Distributed PageRank computation with link failures,” *Proc. 2009 American Control Conference*, pp. 1976–1981, St. Louis, Missouri, June 2009.
- [C129] H. Ishii and R. Tempo, “A distributed randomized approach for the PageRank computation: Part 1,” *Proc. 47th IEEE Conference on Decision and Control*, pp. 3523–3528, Cancun, Mexico, December 2008.

- [C130] H. Ishii and R. Tempo, “A distributed randomized approach for the PageRank computation: Part 2,” *Proc. 47th IEEE Conference on Decision and Control*, pp. 3529–3534, Cancun, Mexico, December 2008.
- [C131] K. Okano, H. Ishii, and S. Hara, “Sensitivity analysis of networked control systems via an information theoretic approach,” *Proc. 47th IEEE Conference on Decision and Control*, pp. 3360–3365, Cancun, Mexico, December 2008.
- [C132] H. Ishii and R. Tempo, “Probabilistic sorting and stabilization of switched systems,” *Proc. 17th IFAC World Congress*, pp. 402–407, Seoul, Korea, July 2008.
- [C133] K. Okano, S. Hara, and H. Ishii, “Characterization of a complementary sensitivity property in feedback control: An information theoretic approach,” *Proc. 17th IFAC World Congress*, pp. 5185–5190, Seoul, Korea, July 2008.
- [C134] H. Ishii, “On the feedback information in stabilization over unreliable channels,” *Proc. 17th IFAC World Congress*, pp. 8050–8055, Seoul, Korea, July 2008.
- [C135] H. Ishii and R. Tempo, “Las Vegas randomized algorithms in distributed consensus problems,” *Proc. 2008 American Control Conference*, pp. 2579–2584, Seattle, Washington, June 2008.
- [C136] H. Hoshina, K. Tsumura, and H. Ishii, “The coarsest logarithmic quantizers for stabilization of linear systems with packet losses,” *Proc. 46th IEEE Conference on Decision and Control*, pp. 2235–2240, New Orleans, December 2007.
- [C137] O. Ratanapinunchai, H. Ishii, and S. Hara, “Feedback control through networks with packet loss: Mixed  $H^2/H^\infty$  approach and application to a teleoperating system,” *Proc. IEEE Conference on Control Applications*, pp. 36–41, Singapore, October 2007.
- [C138] H. Ishii, “Utilizing multiple unreliable channels in remote stabilization of linear systems,” *Proc. 2007 American Control Conference*, pp. 1723–1728, New York, July 2007.
- [C139] T. Hayakawa, H. Ishii, and K. Tsumura, “Adaptive control for linear uncertain discrete-time systems with quantization and deadzone,” *Proc. 2007 American Control Conference*, pp. 293–298, New York, July 2007.
- [C140] H. Ishii, “Stabilization under shared communication with message losses and its limitations,” *Proc. 45th IEEE Conference on Decision and Control*, pp. 4974–4979, San Diego, California, December 2006.
- [C141] H. Ishii, “Remote control of sampled-data systems under constrained communication,” *Proc. IEEE Conference on Control Applications*, pp. 1689–1694, Munich, Germany, October 2006.
- [C142] H. Ishii and S. Hara, “A subband coding approach to networked control,” *Proc. 17th International Symposium on Mathematical Theory of Networks and Systems*, pp. 2906–2911, Kyoto, Japan, July 2006.

- [C143] T. Hayakawa, H. Ishii, and K. Tsumura, “Adaptive quantized control for nonlinear uncertain systems,” *Proc. 2006 American Control Conference*, pp. 2706–2711, Minneapolis, Minnesota, June 2006.
- [C144] H. Ishii, “ $H^\infty$  control with limited communication and message losses,” *Proc. 2006 American Control Conference*, pp. 5620–5625, Minneapolis, Minnesota, June 2006.
- [C145] C. Ohyama, H. Ishii, and K. Tsumura, “Performance analysis of control systems under limited data rates,” *Proc. SICE Annual Conference 2005*, pp. 3436–3442, Okayama, Japan, August 2005.
- [C146] T. Hayakawa, H. Ishii, and K. Tsumura, “Adaptive quantized control for linear uncertain discrete-time systems,” *Proc. 2005 American Control Conference*, pp. 4784–4789, Portland, Oregon, June 2005.
- [C147] H. Ishii and T. Başar, “Robust identification over networks,” *Proc. 2005 American Control Conference*, pp. 1233–1238, Portland, Oregon, June 2005.
- [C148] H. Ishii and T. Başar, “An analysis on quantization effects in  $H^\infty$  parameter identification,” *Proc. IEEE Conference on Control Applications*, pp. 468–473, Taipei, Taiwan, September, 2004.
- [C149] H. Ishii, T. Başar, and R. Tempo, “Randomized algorithms for some hybrid systems problems,” *Proc. 16th International Symposium on Mathematical Theory of Networks and Systems*, Leuven, Belgium, July, 2003.
- [C150] H. Ishii, T. Başar, and R. Tempo, “Synthesis of switching rules for switched linear systems through randomized algorithms,” *Proc. 42nd IEEE Conf. on Decision and Control*, pp. 4788–4793, Maui, Hawaii, December, 2003.
- [C151] H. Ishii, T. Başar, and R. Tempo, “Randomized algorithms for quadratic stability of quantized sampled-data systems,” *Proc. 2003 American Control Conference*, pp. 5046–5051, Denver, Colorado, June, 2003.
- [C152] H. Ishii and T. Başar, “Remote control of LTI systems over networks with state quantization,” *Proc. 41st IEEE Conference on Decision and Control*, pp. 830–835, Las Vegas, Nevada, December, 2002.
- [C153] H. Ishii and B. A. Francis, “Quadratic stabilization of sampled-data systems with quantization,” *Proc. 15th IFAC World Congress*, Barcelona, Spain, July, 2002.
- [C154] H. Ishii and B. A. Francis, “Stabilizing a linear system by switching control and output feedback with dwell time,” *Proc. 40th IEEE Conf. on Decision and Control*, pp. 191–196, Orlando, Florida, December, 2001.
- [C155] H. Ishii and B. A. Francis, “Stabilizing a linear system by switching control with dwell time,” *Proc. 2001 American Control Conference*, pp. 1876–1881, Arlington, Virginia, June, 2001.

- [C156] H. Ishii and B. A. Francis, “Control over networks,” *Proc. 38th Annual Allerton Conference on Communication, Control, and Computing*, Monticello, Illinois, October, 2000.
- [C157] H. Ishii and B. A. Francis, “Stabilization with control networks,” *Proc. International Conference on Control 2000*, Cambridge, U.K., September, 2000.
- [C158] H. Ishii, Y. Yamamoto, and B. A. Francis, “Sample-rate conversion via sampled-data  $H^\infty$  control,” *Proc. 38th IEEE Conf. on Decision and Control*, pp. 3440–3445, Phoenix, Arizona, December, 1999.
- [C159] H. Ishii and Y. Yamamoto, “Periodic compensation for sampled-data  $H^\infty$  repetitive control,” *Proc. 37th IEEE Conf. on Decision and Control*, pp. 331–336, Tampa, Florida, December, 1998.

### Tutorial Articles

- [E1] J. Imura and H. Ishii, “Towards the IFAC World Congress 2023,” *SICE Measurement and Control*, 60(7): 532–534, 2021 (in Japanese).
- [E2] H. Ishii, “Resilient consensus and synchronization in multi-agent systems: Event-based communication approach,” *SICE Measurement and Control*, 60(1): 53–58, 2021 (in Japanese).
- [E3] H. Asama, H. Ishii, and S. Hara, “Wa (Harmony): Control for solving societal problems and creating societal values,” *SICE Measurement and Control*, 57(2): 69–72, 2018 (in Japanese).
- [E4] H. Ishii, “Towards systems supporting cyber secure cities,” *SICE Measurement and Control*, 57: 101-105, 2018 (in Japanese).
- [E5] H. Ishii, “Cyber-security in multi-agent consensus problems,” *SICE Measurement and Control*, 55: 936–941, 2016 (in Japanese).
- [E6] H. Ishii, “Distributed detection of cyber attacks against power systems,” *SICE Measurement and Control*, 53: 916–921, 2014 (in Japanese).
- [E7] H. Ishii, “Control of multi-agent systems – I: Introduction,” *ISCIE Systems, Control and Information*, 57:221–228, 2013 (in Japanese).
- [E8] H. Ishii, “Recent trends in networked multi-agent systems and control,” *ISCIE Systems, Control and Information*, 56: 492–497, 2012 (in Japanese).
- [E9] H. Ishii and R. Tempo, “Distributed probabilistic approach for the PageRank algorithm,” *SICE Measurement and Control*, 50: 975-980, 2011 (in Japanese).
- [E10] H. Ishii, “Quantization in networked control systems,” *SICE Measurement and Control*, 49: 776–782, 2010 (in Japanese).
- [E11] H. Ishii, “Networked control: New directions in control with shared communication,” *SICE Measurement and Control*, 47: 627–636, 2008 (in Japanese).



- [E12] K. Tsumura and H. Ishii, “Design and identification of control systems using quantized signals,” *SICE Measurement and Control*, 44: 70–77, 2005 (in Japanese).
- [E13] H. Ishii, “Control over networks: Bandwidth limitation and quantization,” *ISCIE Systems, Control and Information*, 48: 303-308, 2004 (in Japanese).

## Others

- [O1] H. Ishii, “A tribute to Bruce Francis: What I learned from him,” *IEEE Control Systems Magazine*, 38(5) 101–102, 2018.
- [O2] A. Cetinkaya and H. Ishii, “Jamming attacks: A major threat to controlling over wireless channels,” *IFAC Blog* (blog.ifac-control.org), 2017.

## Selected Invited Lectures

- Panel Session, Workshop on Skills and Perspectives for Early Career Development, 61st IEEE Conference on Decision and Control, December 2022.
- Publishing Research in IEEE Journals and Conferences, IEEE Authorship and Open Access Symposium, October 2022.
- IEEE CSS Workshop on Control for Societal-Scale Challenges: Future Directions, Stockholm, Sweden, June 2022.
- Stockholm Workshop on Emerging Topics in Systems and Control, Stockholm, Sweden, June 2022.
- IEEE CSS Workshop on Control for Societal-Scale Challenges: Future Directions (virtual workshop), June 2021.
- I2CNER-IMI Joint International Workshop, Kyushu University, Japan, January 2021.
- Workshop on Learning and Security for Multi-Agent Systems (with Ahmet Cetinkaya), 59th IEEE Conference on Decision and Control, Jeju Island, Republic of Korea, December 2020.
- 52nd ISCIE International Symposium on Stochastic Systems Theory and Its Applications (SSS’20), Osaka University, Japan, October 2020.
- Workshop on Data-based Methods for Interconnected Systems: Theory and Algorithm, 21st World Congress of the International Federation of Automatic Control (IFAC), Berlin, Germany, July 2020.
- IEICE Technical Committee on Information Theory, Hiroshima, Japan, January 2020.
- Workshop on Learning, Games and Control, Cyber-Physical Systems (with Ahmet Cetinkaya), 58th IEEE Conference on Decision and Control, Nice, France, December 2019.

- 3rd Japanese-French Laboratory for Informatics (JFLI) Workshop, Tokyo Institute of Technology, May 2019.
- Workshop on Secure and Resilient Control Systems, 57th IEEE Conference on Decision and Control, Miami, Florida, December 2018.
- IFAC WC 2023 Pre-event Workshop, Nagoya, Japan, November 2018.
- Plenary Lecture, 18th International Conference on Control, Automation and Systems (ICCAS), PyeongChang, Korea, October 2018.
- Mini-Workshop on Entropy, Information and Control, Oberwolfach, Germany, March 2018.
- Scaling Heights: A Journey through Roberto Tempo’s Research Activity, 56th IEEE Conference on Decision and Control, Melbourne, Australia, December 2017.
- COOPS Workshop, Milano, Italy, November 2017.
- IFAC Special Session, Japan Joint Automatic Control Conference, Tokyo, Japan, November 2017.
- A Tribute in Memory of Roberto Tempo, 20th IFAC World Congress, Toulouse, France, July 2017.
- Workshop on Cyber Threats in Distributed Model Predictive Control and Distributed Estimation, 20th IFAC World Congress, Toulouse, France, July 2017.
- Half a Century of Progress in Teams, Games and Control: A Workshop Dedicated to Tamer Başar’s 70th Birthday, Las Vegas, December 2016
- COOPS Workshop, Osaka, Japan, December 2015.
- Workshop on Control Theory: A Mathematical Perspective on Cyber-Physical Systems, Oberwolfach, Germany, February 2015.
- Workshop on Uncertain Dynamical Systems, Amsterdam, The Netherlands, August 2014.
- Semi-Plenary Lecture, The 21st International Symposium on Mathematical Theory of Networks and Systems (MTNS), Groningen, The Netherlands, July 2014.
- Kimura Award Lecture, The 1st SICE Multi-Symposium on Control Systems, Tokyo, March 2014.
- Workshop on Cooperative Distributed Control for Energy Management Systems: New Frameworks and Research Directions, 52nd IEEE Conference on Decision and Control, Florence, Italy, December 2013.
- Collective Agency and Cooperation in Natural and Artificial Systems, University of Stuttgart, Germany, July 2013.

- International Workshop on Modeling, Analysis and Control of Cyber-Physical Systems, Hong Kong University of Science and Technology, China, June 2012.
- Satellite Meeting of the 2nd International Symposium on Innovative Mathematical Modelling, University of Tokyo, Japan, May 2012.
- Symposium on Developments in Control Theory Towards Glocal Control (in honor of Professor Shinji Hara), University of Tokyo, Japan, January 2012.
- Workshop on Uncertain Dynamical Systems, Udine, Italy, August 2011.
- The 4th HYCON2 Ph.D. School on Control of Networked and Large-Scale Systems, University of Trento, Italy, June 2011.
- Symposium on Systems, Control, and Signal Processing (in honor of Professor Yutaka Yamamoto), Kyoto University, Japan, March 2010.
- Pioneer Award Lecture, Symposium of the SICE Control Division, University of Kumamoto, Japan, March 2010.
- International Workshop on Networked Control Systems, Shenzhen, China, December 2009.
- The 3rd WIDE Ph.D. School on Networked Control Systems, University of Siena, Italy, July 2009.
- Workshop on Uncertain Dynamical Systems, Awaji Yumebutai, Hyogo, Japan, July 2008.
- Global COE Workshop on Networked Control Systems, Kyoto University, Japan, March 2008.
- Japan Joint Automatic Control Conference, Kobe, Japan, November 2006 (Tutorial Lecture).
- Japan Joint Automatic Control Conference, Okayama, Japan, November 2003 (Tutorial Lecture).

### **Lectures at Various Universities**

- University of California, Los Angeles (2022)
- Tsinghua University (2022)
- KTH Royal Institute of Technology (2014, 2021)
- New York University (2019)
- Electric Power Research Institute, Knoxville, TN, USA (2018)
- University of Tennessee, TN, USA (2018)

- Iowa State University, IA, USA (2017, 2018)
- Ruhr-Universität Bochum (2018)
- University of Stuttgart (2014, 2018)
- University of Groningen (2018)
- Technische Universität Berlin (2009, 2018)
- Otto-von-Guericke University Magdeburg (2017)
- Politecnico di Torino (2007, 2008, 2014, 2017)
- University of Tokyo (2012, 2017)
- University of Seville (2016)
- Waseda University (2015)
- SINTEF Trondheim (2015)
- City University of Hong Kong (2015)
- Arizona State University (2015)
- Nagoya University (2015)
- Technical Universität Munich (2015)
- Eindhoven University of Technology (2015)
- Delft University of Technology (2015)
- Zhejiang University (2011)
- Japan Science and Technology Agency (2011)
- The Iron and Steel Institute of Japan (2009)
- Tokyo Institute of Technology (2008, 2009)
- University of Alberta (2008)
- Kobe University (2008)
- Kyushu Institute of Technology (2008)
- Kanazawa University (2007)
- University of Padova (2007)
- Tohoku University (2006)
- Kyoto University (2003)
- Osaka University (2003)

## Research Supervision

### Tokyo Institute of Technology

#### Postdocs

- Jiaqi Yan (since 2021)
- Yuan Wang (2020, Postdoc at the KTH Royal Institute of Technology, Sweden)
- Shuai Feng (2019–2020, Postdoc at the University of Groningen, the Netherlands)
- Ahmet Cetinkaya (2015–2019, Appointed Associate Professor at the National Institute of Informatics, Tokyo)
- Song Fang (2017–2018, Postdoc at New York University)
- Yacine Chakhchoukh (2013–2016, Associate Professor at the University of Idaho)

#### Doctoral Students

- Qiulin Xu (Started in September 2022)
- Rui Kato (Started in April 2021)
- Xile Kang (Started in April 2020)
- Naime Ahmadi (March 2023)
- Liwei Yuan (September 2022)
- Rajiv Mishra (March 2022)
- Yuan Wang (August 2019, Postdoc at KTH Royal Institute of Technology)
- Seyed Mehran Dibaji (March 2016, Postdoc at MIT)
- Kunihisa Okano (September 2013, Associate Professor at Ritsumeikan University)
- Kai Cai (September 2011, Associate Professor at Osaka City University)

#### Master's Students

- Naoto Fujiwara (Started in April 2022)
- Tatsuya Masada (Started in April 2022)
- Takashi Masui (Started in April 2022)
- Yuya Kamo (March 2023)
- Haruhiro Kume (March 2023)
- Mitsuaki Matsubara (March 2022)

- Yukihiro Kato (March 2022)
- Hiroki Matsume (March 2022)
- Kosuke Kimura (March 2022)
- Rui Kato (March 2021)
- Shinya Omori (March 2021)
- Zhuojian Guo (September 2020)
- Yugo Iori (March 2020)
- Kana Nakahara (March 2020)
- Takeshi Sekihara (March 2020)
- Ryoma Yamada (March 2020)
- Liwei Yuan (August 2019)
- Atsushi Suzuki (March 2019)
- Atsushi, Wada (March 2019)
- Takayuki Okamoto (March 2018)
- Masahiro Nakamura (March 2018)
- Mizuki Onogawa (March 2017)
- Muhamadjon Shoev (March 2017)
- Kazuya Takijiri (March 2017)
- Shigeru Akashi (March 2016)
- Hang Yang (March 2016)
- Samratul Fuady (September 2015)
- Yasunori Isozaki (March 2015)
- Hiroaki Nishino (March 2015)
- Yuhta Kobayashi (March 2014)
- Yuki Kadowaki (March 2013)
- Naruhisa Shinjo (March 2013)
- Xile Kang (March 2013)
- Masaki Okaniwa (March 2012)

- Norimitsu Yoshida (March 2012)
- Yusuke Kaji (March 2011)
- Tomoyuki Kogure (March 2010)
- Kai Cai (September 2009)

### **Undergraduate Students**

- Masahiro Fuchiue (March 2023)
- Yu Ishiyama (March 2023)
- Tatsuya Masada (March 2022)
- Takuma Miyamoto (March 2022)
- Kento Toyoda (March 2022)
- Yuya Kamo (March 2021)
- Sahil Bansal (March 2021)
- Hiroki Matsume (March 2020)
- Tomoki Mizogami (March 2020)
- Rui Kato (March 2019)
- Shinya Omori (March 2019)
- Yugo Iori (March 2018)
- Takeshi Sekihara (March 2018)
- Atsushi Suzuki (March 2017)
- Yuhei Kikuya (March 2016)
- Shigeru Akashi (March 2014)
- Hirosuke Nishino (March 2013)

### **Research Students**

- Rajiv Mishra (April 2018–March 2019)
- Naime Ahmadi (April 2017–March 2018)
- Seyed Mehran Dibaji (April 2012–March 2013)
- Hang Yang (October 2011–March 2013)
- Xile Kang (April 2010–March 2011)

## Visiting Students

- Shuaiting Huang (Ph.D. student from Zhejiang University, August 2022–February 2023)
- Xin Wang (Ph.D. student from Zhejiang University, October 2018–October 2019)
- Dorus van Dinther (Master’s student from Eindhoven University of Technology, the Netherlands, February–May 2019)
- Wicak Ananduta (Ph.D. student from the Technical University of Catalonia, Spain, January, March–May 2018)
- Steffen Linsenmayer (Ph.D. student from the University of Stuttgart, Germany, October 2017–January 2018)
- Bas Vermij (Master’s student from Eindhoven University of Technology, the Netherlands, September–December 2017)
- Shuai Feng (Ph.D. student from the University of Groningen, the Netherlands, April–July 2017)
- Otto K. Lote (Under ACAP, undergraduate student from the Norwegian University of Science and Technology, September 2016–August 2017)
- Song Fang (Ph.D. student from the City University of Hong Kong, January 2013–April 2013)

## Ph.D. External Examiner

- David Unsomst (Opponent, KTH Royal Institute of Technology, Sweden, 2021)
- Jiaqi Yan (Nanyang Technical University, Singapore, 2021)
- Javad Jazaeri (University of Melbourne, Australia, 2019)
- Mengbin Ye (Australian National University, Australia, 2018)
- Andre Teixeira (KTH Royal Institute of Technology, Sweden, 2014)

## Long-Term Visitors

- Junfeng Wu (From Chinese University of Hong Kong, Shenzhen, to be scheduled, supported by JSPS)
- Jose M. Maestre (From the University of Seville, April–October 2015, April 2017–March 2018, supported by JSPS)
- Peng Cheng (From Zhejiang University, November 2016–January 2017, supported by JSPS)

## University of Tokyo

### Master’s Students



- Kunihisa Okano, cosupervised with Prof. S. Hara (March 2008)
- Ornwadee Ratanapinunchai, cosupervised with Prof. S. Hara (March 2007)
- Hiroto Hoshina, cosupervised with Prof. K. Tsumura (March 2007)
- Yuichi Kurahashi, cosupervised with Prof. S. Hara (March 2005)

### **Undergraduate Students**

- Takumi Yoshida, cosupervised with Prof. K. Tsumura (March 2006)
- Chiharu Ohyama, cosupervised with Prof. K. Tsumura (March 2005)

## **Lectures**

### **Tokyo Institute of Technology**

#### **Graduate Level**

- Introduction to Data Science (1st Quarter 2022)
- Continuous Systems and Modeling (Spring 2017–2019, 1st Quarter 2020–2022)
- Dynamical Systems (Spring 2016)
- Control of Multi-Agent Systems (Fall 2011–2013, 2015)
- System Modeling (Spring 2010, 2011)
- Dynamical Systems Theory (Spring 2008–2011)
- Advanced Topics in Mathematical Information Sciences (Fall 2010–2013, Spring 2015)

#### **Undergraduate Level**

- Systems Control (4th Quarter 2018–2021)
- Digital Control (Fall 2008–2013, 2015)

### **University of Tokyo**

#### **Undergraduate Level**

- Programming with Micro Computers (Spring 2004–2005)
- Undergraduate Laboratory (2004–2006)
- Undergraduate Projects (2004–2006)