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| Education | Nanyang Technological University, Singapore Doctor of Philosophy (PhD), Electrical and Electronic Engineering <ul style="list-style-type: none">- Thesis: <i>Augmented Distributed Optimization for Networked Systems</i>- Advisor: Prof. Yeng Chai Soh (Co: Prof. Lihua Xie) Shandong University, Jinan, China Bachelor of Science (BSc), Mechanical Engineering <ul style="list-style-type: none">- Ranking: 9/204- Excellent Undergraduate Thesis Award (<i>top 5%</i>), 2009 | 2011-2016 2005-2009 |
| Research Interests | <ul style="list-style-type: none">- Distributed optimization, cooperative control, and their applications into large-scale signal processing, machine learning and networked energy systems. | |
| Academic Positions | <ul style="list-style-type: none">- Research Fellow, <i>Nanyang Technological University</i>, Singapore, 9/2016-Present,- Project Officer, <i>Nanyang Technological University</i>, Singapore, 8/2015-8/2016,- Research Assistant, <i>Zhejiang University</i>, China, 9/2009-8/2011. | |
| Honors & Awards | <ul style="list-style-type: none">- NTU RSS Scholarship, 2011- Excellent Undergraduate Thesis Award (<i>top 5%</i>), 2009- Outstanding Student Scholarship (<i>top 5%</i>), 2006-2008 | |
| Project Experience | <p>Distributed Optimization for Sensor Networks [J2, J3, C2, C3, C4] 5/2013-Present</p> <ul style="list-style-type: none">- Developed <i>two novel distributed algorithms</i> for multi-agent optimization problems,- Achieved the <i>best convergence rates</i> for the proposed algorithms,- Applied to large-scale sensor networks for sensor fusion under random link failures. <p>Distributed Optimization for Large-Scale Dynamic Systems [J1, C1] 8/2011-8/2015</p> <ul style="list-style-type: none">- Designed a <i>new distributed scheme</i> for optimization of large-scale networked systems,- Proposed a <i>primal-dual</i> extremum seeking approach accounting for <i>unknown constraints</i>,- Applied the proposed scheme to wind farms for energy maximization. <p>Occupancy Modeling for Optimal HVAC Control [J4] 9/2012-5/2013</p> <ul style="list-style-type: none">- Proposed <i>new stochastic models</i> for occupancy modeling and prediction,- Designed <i>distributed model predictive control schemes</i> for large-scale HVAC systems. | |
| Publications | Journal Articles | |
| | J1 Jinming Xu and Yeng Chai Soh, “A Distributed Simultaneous Perturbation Approach for Large-scale Dynamic Optimization Problems,” <i>Automatica</i> 72 (2016): 194-204 (Regular). | |
| | J2 Jinming Xu , Shanying Zhu, Yeng Chai Soh and Lihua Xie, “A Bregman Splitting Algorithm for Distributed Optimization Problems over Networks,” submitted to <i>IEEE Transactions on Signal Processing</i> (Regular, revised and resubmitted, arxiv). | |
| | J3 Jinming Xu , Shanying Zhu, Yeng Chai Soh and Lihua Xie, “Convergence of Asynchronous Distributed Gradient Methods over Stochastic Networks,” submitted to <i>IEEE Transactions on Automatic Control</i> (Regular, revised and resubmitted). | |
| | J4 Zhenghua Chen, Jinming Xu , Yeng Chai Soh, “Modeling Regular Occupancy in Commercial Buildings Using Stochastic Models”, <i>Energy and Buildings</i> 103 (2015): 216-223. | |

Conference Proceedings

- C1 **Jinming Xu** and Yeng Chai Soh, “Distributed Extremum Seeking Control of Networked Large-scale Systems under Constraints,” In *Proceedings of 52nd IEEE Conference on Decision and Control (CDC)*, 2013.
- C2 **Jinming Xu**, Shanying Zhu, Yeng Chai Soh and Lihua Xie, “Augmented Distributed Gradient Methods for Multi-agent Optimization under Uncoordinated Constant Stepsizes,” In *Proceedings of 54th IEEE Conference on Decision and Control (CDC)*, 2015.
- C3 **Jinming Xu**, Shanying Zhu, Yeng Chai Soh and Lihua Xie, “A Forward-Backward Bregman Splitting Scheme for Regularized Distributed Optimization Problems,” accepted by *55th IEEE Conference on Decision and Control (CDC)*, 2016.
- C4 Shanying Zhu, **Jinming Xu**, Cailian Chen and Xinping Guan, “A Least Square Approach for Distributed Sensor Fusion in Bandwidth-constrained Sensor Networks,” In *Proceedings of 41st IEEE Conference on Acoustics, Speech and Signal Processing (ICASSP)*, 2016.
- C5 Shanying Zhu, **Jinming Xu**, Cailian Chen, Xinping Guan and Binqiang Xue, “DINS: A Scheme for Distributed Sensor Fusion over Fading Channels,” submitted to *International Federation of Automatic Control (IFAC)*, 2017.

Professional

Activities

- Publication Reviewing: IEEE Transactions on Automatic Control • NetSys • CDC • etc.
- Memberships: IEEE Member (since 2011) • IEEE Control Systems Society (since 2013).

References

Available upon request.