Xu Du

CONTACT INFO

Address:	2006 Xiyuan Avenue, Chengdu, Sichuan, P.R.China
Website:	https://fubianhanshu9.github.io/index.html
E–Mail:	duxu@shanghaitech.edu.cn

EDUCATION

University of Chinese Academy of Sciences
Shanghai Institute of Microsystem and Information Technology, Chinese Academy of Sciences Sep.2017-Sep.2022
Ph.D. in Electrical Engineering (Supervised by Professor Boris Houska)

Zhengzhou University Sep.2013-June.2017
B.E,Computer Science, School of Information Engineering

RESEARCH INTERESTS

- Optimal Experiment Design

- Distributed Optimization

- Algorithmic Game Theory

- Robust Optimization

- Power Systems

- Wireless Communication

PUBLICATION

†: equal contribution

- **Xu Du**, Jingzhe Wang.
  Consensus ALADIN: A Framework for Distributed Optimization and Its Application in Federated Learning
  Submit to IEEE Transactions on Pattern Analysis and Machine Intelligence

- **Xu Du**†, Shijie Zhu†, Yifei Wang†, Boyu Han†, Xiaohe He†.
  Optimal Resilience Design of AC Microgrid using AO-SBQP Method
  The 22nd IFAC World Congress, Yokohama, Japan, 2023

- **Xu Du**, Alexander Engelmann, Timm Faulwasser, Boris Houska.
  Approximations for Optimal Experimental Design in Power System Parameter Estimation (invited session)
  The 61th IEEE Conference on Decision and Control (CDC), Cancún, Mexico, 2022

- Shijie Zhu[†], **Xu Du**[†].
  Alternating Direction Based Sequential Boolean Quadratic Programming Method for Transmit Antenna Selection
  The 61th IEEE Conference on Decision and Control (CDC), Cancún, Mexico, 2022

- Boyu Han, Xuwen Liang, Zhuochen Xie, **Xu Du**, Xiaohe He.
  Communication Enhancement Model of Intelligent Reflecting Surface Based on Cooperative Relationship
  Laser & Optoelectronics Progress, 2021

- **Xu Du**, Alexander Engelmann, Timm Faulwasser, Boris Houska.
  Online power system parameter estimation and optimal operation
  In Proceedings of the 2021 American Control Conference (ACC), New Orleans, USA May, 2021

- **Xu Du**, Alexander Engelmann, Yuning Jiang, Timm Faulwasser, Boris Houska.
  Optimal Experiment Design for AC Power Systems Admittance Estimation
  In Proceedings of the 21rst IFAC World Congress, Berlin, Germany, July, 2020

- **Xu Du**, Alexander Engelmann, Yuning Jiang, Timm Faulwasser, Boris Houska.
  Distributed State Estimation for AC Power Systems using Gauss-Newton ALADIN
  In Proceedings of the 58th IEEE Conference on Decision and Control (CDC), Nice, France, December, 2019.

PROFESSIONAL SERVICE

Conference Session Chair/Co-chair

- Co-chair of the invited session for the 61st IEEE Conference on Decision and Control (CDC 2022) "Trends in Optimization for Power Systems", Cancún, Mexico (together with Alexander Engelmann, Timm Faulwasser, Boris Houska)

Technical Meetings—Leadership Roles

- Co-organizer, International Workshop on Advanced Methods for Control and Estimation of Dynamic Systems (AMCEDS 2018), ShanghaiTech University, Shanghai, China, July 23, 2018

Technical Reviewer

- Selected journals: Optimal Control Applications & Methods

- Selected international conferences: CDC, IFAC World Congress, ICCA

PRESENTATION

- Sub-linear Convergence of ADMM
  ShanghaiTech, China, December 8th, 2022 (Online)

- Distributed Optimization with ADMM and ALADIN
  Innovation Academy for Microsatellite, Chinese Academy of Sciences, China, November, 2021

- Online power system parameter estimation and optimal operation
  2021 American Control Conference (ACC), New Orleans, USA May, 2021 (online)

- Optimal Experiment Design for AC Power Systems Admittance Estimation
  21rst IFAC World Congress, Berlin, Germany, July, 2020 (online)

- Distributed State Estimation for AC Power Systems using Gauss-Newton ALADIN
  58th IEEE Conference on Decision and Control (CDC), Nice, France, December, 2019.

HONORS AND AWARDS

- Merit Student, ShanghaiTech University, 2019-2020

- SIST Outstanding Teaching Assistant Award, ShanghaiTech University, 2019-2020

- Outstanding Student Award, Zhengzhou University, 2014-2017

- YiSheng Scholarship, Zhengzhou University, 2015

URL LINKS

- Google Scholar: `https://scholar.google.com/citations?user=OnIuCR0AAAAJ`

- ResearchGate: `https://www.researchgate.net/profile/Xu-Du-9`

- ORCID `https://orcid.org/my-orcid?orcid=0009-0007-6789-1222`

ADVISING

Co-supervised Students

- Co-supervisor of Boyu Han, Innovation Academy for Microsatellite, Chinese Academy of Sciences, 2021. (Master 2021, now with China Unionpay)

- Co-supervisor of Shijie Zhu, Innovation Academy for Microsatellite, Chinese Academy of Sciences, 2021-2023. (Master 2023)

- Co-supervisor of Yifei Wang, Innovation Academy for Microsatellite, Chinese Academy of Sciences, 2021-2023. (Master 2023)

TEACHING

ShanghaiTech

- Teaching Assistant, Introduction to Communication Systems (EE140), ShanghaiTech University, Fall 2021 (Instructor: Professor Lixiang Lian).

- Teaching Assistant, Signals and Systems Lab(EE150L), ShanghaiTech University, Spring 2021 (Instructor: Linyan Lu and Ping Wang).

- Teaching Assistant, Introduction to Control(EE160), ShanghaiTech University, Fall 2020
  http://faculty.sist.shanghaitech.edu.cn/faculty/boris/EE160.html
  (Instructor: Professor Boris Houska and Professor Yang Wang).

- Teaching Assistant, Introduction to Control Project(EE160P), ShanghaiTech University, Fall 2020
  (Instructor: Professor Boris Houska and Professor Yang Wang).

- Teaching Assistant, Signals and Systems(EE150), ShanghaiTech University, Spring 2020
  (Instructor: Professor Yong Zhou, Professor Ziping Zhao, Professor Xin Lou and Professor Lin Xu).

- Teaching Assistant, Numerical Analysis(SI211), ShanghaiTech University, Fall 2019
  http://faculty.sist.shanghaitech.edu.cn/faculty/boris/SI211.html
  (Instructor: Professor Boris Houska).

- Teaching Assistant, Design Thinking, ShanghaiTech University, Fall 2018 and Spring 2019.
  (Instructor: Professor Ding Lu, Professor Xiyi Yang and Professor Xue Chen)

- Teaching Assistant, Signals and Systems(EE150), ShanghaiTech University, Spring 2018 (Instructor: Professor Yanlin Geng)