

# DING, ZHAOHAO

Associate Professor, North China Electric Power University, China  
zhaohao.ding@ncepu.edu.cn

---

## Brief Introduction

Zhaohao Ding (**IEEE Senior Member**) received the B.S. degree in electrical engineering and the B.A. degree in finance from Shandong University, Jinan, China, in 2010, and the Ph.D. degree in electrical engineering from the University of Texas at Arlington, Arlington, TX, USA, in 2015. He is currently an Associate Professor with North China Electric Power University, Beijing, China. His research interests include power system planning and operation, power market, distributed resource management, and electric transportation system. He was the recipient of the **IEEE IAS AWS Outstanding Young Member Achievement Award** in 2022 and the **IEEE IAS Outstanding Young Member Service Award** in 2020. He is the Editor of the IEEE Transactions on Smart Grid and IEEE Transactions on Industry Applications.

## IEEE Volunteer Activities

Dr. Zhaohao Ding is an active member for multiple IEEE IAS technical committees. he is serving as the **secretary of IEEE IAS Energy System committee, chair of IAS MG&VPP subcommittee**, and member of Data Center subcommittee. He has joined the P3000 working group since 2014 and kept being an active member of this working group. Also, he has been serving as the **associate editor for IEEE Transactions on Industry Applications since 2017** and the **associate editor for IEEE Transactions on Smart Grid since 2020**.

As an associate professor at North China Electric Power University (NCEPU), Beijing China, he **founded the IAS student branch chapter at NCEPU in 2016** and has been serving as the advising professor since then. By inviting distinguish experts and organizing more than 120 seminars, he made more faculties and students get familiar with IAS and encouraged more and more students to join IAS activities, such as submitting papers to IAS conferences and co-organizing IAS sponsored student conferences. In each year, NCEPU student branch chapter organized roughly 30 events. Also, he has helped more than 30 undergraduate and graduate students from NCEPU to attend IAS Annual Meetings and I&CPS Technical Conferences.

Meanwhile, Dr. Ding is working on introducing **IAS educational activities to universities all over the world** and helping them establish IAS student branch chapters. Those universities include Peking University, Shanghai Jiaotong University, Shandong University, Jinan University, Shanghai University of Electric Power, Fuzhou University, University of Electronic Science and Technology of China, and the number is still counting. He has given several presentation and tutorials to introduce IAS to Imperial College London (2020, online), University of Cambridge (2018, onsite), National Chung Cheng University (2020, online), Tsinghua University (2019, onsite), Shanghai Jiaotong University (2019, onsite) and China Agricultural University (2021, onsite).

To better connect IAS with students and young professionals in the Asia Pacific region, Zhaohao and his colleagues **founded IEEE/IAS I&CPS Asia conference**. As the secretary of I&CPS Asia operating committee and technical program vice chair, he worked together with the local team and has hold the IEEE IAS I&CPS Asia conference for 4 successive years, which has more than 1000 attendees in total. The events have significantly enhanced the impact of IAS in Asia Pacific region, especially for the young professionals focused on industrial and commercial power system areas.

He has been devoting himself on enhancing the impact of IAS publication by increasing the candidate paper pool and organizing special issues. He worked with other sister societies such PES to organize 4 IAS technical co-sponsored conferences to increase the candidate papers. **He has organized two popular special issue for IAS publication as Committee Administrator or Technical Committee Paper Review Chair**.

Due to his technical contribution, he was selected for **PATHWAYS of Young Professionals** in the IEEE IAS Magazine and an article on him was published in October 2022.

#### Awards

- IEEE IAS AWS Outstanding Young Member Achievement Award 2022
- Young Elite Scientist Sponsorship Program of CAST 2021
- IEEE IAS Outstanding Young Member Service Award 2020
- IEEE IAS Energy System Committee Best Paper Award 2019
- China Energy Innovation Award 2019

#### Technical Society Service

- IEEE Energy System committee Secretary chair
- IEEE IAS MG&VPP subcommittee chair
- IEEE IAS I&CPS Asia Operation Committee Founding Member
- IEEE Industry Application Society Student Branch Chapter at NCEPU Advising Professor
- IEEE IAS Technical Books Coordinating Committee Committee Member
- IEEE Transactions on Smart Grid Associate Editor
- IEEE Transactions on Industry Applications Associate Editor

#### Technical Contribution and Publication

Dr. Zhaohao Ding is in demand side management and power system operation. He has conducted extensive research on various means and mechanisms to improve the flexibility of demand side resources. As the principal investigator of his research team, Dr. Zhaohao Ding has been collaborated with Alibaba Inc. since 2016 and developed several energy-aware ancillary equipment management, job scheduling and resource allocation algorithms for large-scale internet data center clusters. He worked with Alibaba and State Grid North China Branch and conducted the first renewable energy integration driven data center workload management experiments in Feb, 2022. Due to his outstanding contribution on the energy aware operation scheme for data centers, **he was awarded the Young Elite Scientist Sponsorship Program by the China Association for Science and Technology in 2021, which is one of the most prestigious awards for all the Chinese researchers under 32 years old.**

Meanwhile, he and his team have developed a charging navigation scheme for large scale ride-hailing fleet. By providing spatial-temporal varied charging price signal to more than 1100 ride-hailing drivers, the fleet charging demand in Haikou, China, was successfully converted to a virtual power plant. In Haikou, the charging navigation and battery management algorithm developed by him enabled 3 battery swapping stations of EDF China to participate in the local ancillary service market. In north Hebei and Beijing, his software assistant the flexible operation of taxi and ride-hailing fleet which scheduling their charging activities based on the North China peak regulation market. Because of his contribution on those subjects, he was awarded the China Energy Innovation Award (2nd place) by the China Energy Research Society in 2019.

Dr. Zhaohao Ding is regular attendee of IAS Annual Meeting and I&CPS Conference. He has published more than 49 journal papers and 29 conferences papers since 2018. He has received the Best Paper and Best Student Paper (2nd place) in IEEE I&CPS Asia 2022 and 2023, the 2019 IAS Committee Prize Paper Award from IEEE Industry Application Society (IAS), Best Paper Award (2nd place) in 2014 North American Power Symposium, and Daniel J. Noll Best Paper Award in 2013 Texas Energy Challenge. Besides, he has 23 patents and 2 software copyrights.