CV-Dongdong Zhang

Basic Personal Information

Name:	Dongdong Zhang
Nationality:	Chinese
Date of Birth:	1990.10
Academic Certificate:	PhD
Institution:	Xi'an Jiaotong University
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1、Research Interests and Personal Achievements

1) Research Interests

- ✓ Energy-saving motor and high-speed motor
- ✓ Internet of things for smart energy
- ✓ Learning, optimization, incentive mechanism design for smart energy systems

2) Personal Achievements

- ✓ Participation in 4 Chinese national projects, 3 provincial and enterprise projects.
- ✓ Published more than 30 papers, among which 8 are published on SCI journals as the first or corresponding author.
- ✓ Granted 10 patents and software copyrights.
- ✓ Star PhD student of Xi'an Jiao Tong University; Star M. S. student of North China Electric Power University; and Star B. Eng student of Qilu University of Technology. Receive more than 40 honors and awards in those colleges, including national doctoral scholarship, excellent graduation thesis, and outstanding graduate, etc.
- ✓ Highly experienced in peer review (Reviewed more than 120 pre-publication reviews for more than 20 prestigious journals and conferences.); Served as a verified mentor of the Publons Academy; Received the Top Peer Review Awards (Top 1% in Engineering Field) from Publons in 2018; Named the "Star Reviewer" by the IEEE Power & Energy Society and the Editorial Board of the IEEE Transactions on Energy Conversion in 2019.

2、Academic Services

1) IEEE Member, AAAS Member

2) Journal Referee：

[1] IEEE Transactions on Smart Grid （***SCI，IF=10.486***）

[2] IEEE Transactions on Industrial Electronics （***SCI，IF=7.503***）

[3] Energy Conversion and Management （***SCI，IF=7.182***）

[4] IEEE Transactions on Industrial Informatics （***SCI，IF=7.377***）

[5] IEEE Transactions on Transportation Electrification（***SCI, IF=5.27***）

[6] IEEE Transactions on Energy Conversion （***SCI，IF=4.614***）

[7] IEEE Access （***SCI，IF=4.09***）

[8] IEEE Transactions on Industry Applications（***SCI，IF=3.347***）

[9] IEEE Transactions on Instrumentation & Measurement （***SCI，IF=3.067***）

[10] IET Generation, Transmission & Distribution（***SCI，IF=3.229***）

[11] IET Electric Power Applications （***SCI，IF=3.051***）

[12] Mineral Processing and Extractive Metallurgy Review（***SCI，IF=1.615***）

[13] IEEE Industrial Applications Magazine（***SCI，IF=1.373***）

[14] IET The Journal of Engineering （***ESCI、EI***）

3) Conference Referee：

[1] The 9th Annual IEEE Energy Conversion Congress and Exposition (***EI***)

[2] The 44rd Annual Conference of the IEEE Industrial Electronics Society (***EI***)

[3] The 43rd Annual Conference of the IEEE Industrial Electronics Society (***EI***)

[4] The 10th Annual IEEE Energy Conversion Congress and Exposition (***EI***)

[5] The 44rd Annual Conference of the IEEE Industrial Electronics Society (***EI***)

[6] The 11th Annual IEEE Energy Conversion Congress and Exposition (***EI***)

[7] The 2th International Conference on Mechanical, Electric and Industrial Engineering (***EI***)

[8] The 12th International Symposium on Linear Drives for Industry Applications (***EI***)

[9] 2019 International Conference on Artificial Intelligence, Information Processing and Cloud Computing (***EI***)

4) Publons Academy Mentor

I served as a verified mentor of the Publons Academy and offer some peer review's practice tips and guides for the general questions the young researchers may have.

For more information, please refer to publons.com/a/1464356/

3、Education

04/2016 – 09/2019	PhD	Xi'an Jiaotong University (Rank: 2/88)
	Major	Electrical Engineering
07/2013 – 03/2016	M. S.	North China Electric Power University (Rank: 7/137)
	Major	Electric Power System and Automation
09/2009 – 06/2013	B. E.	Qilu University of Technology (Rank: 1/164)
	Major	Electrical Engineering and Automation

4、Publications

Journals published or accepted (first or corresponding author)

[1] **D. Zhang***, H. Dai, H. Zhao and T. Wu, "A fast identification method for rotor flux density harmonics and resulting rotor iron losses of inverter-fed induction motors," IEEE Transactions on Industrial Electronics, vol. 65, no. 7, pp. 5384-5394, July 2018. **(SCI, IF 7.1）**

[2] **D. Zhang,** T. Liu*, H. Zhao and T. Wu*, "An analytical iron loss calculation model of inverter-fed induction motors considering supply and slot harmonics," IEEE Transactions on Industrial Electronics, 2019, doi: 10.1109/TIE.2018.2889631. **(SCI, IF 7.5）**

[3] T. Liu, **D. Zhang***, S. Wang, T. Wu. "Standardized modelling and economic optimization of multi-carrier energy systems considering energy storage and demand response". Energy Conversion and Management, vol. 182, pp. 126-142, Feb. 2019. **(SCI, IF 7.2）**

[4] **D. Zhang** and T. Liu*, "A multi-step modeling and optimal operation calculation method for large-scale energy hub model considering two types demand responses," IEEE Transactions on Smart Grid, 2019，10.1109/TSG.2019.2910930. **(SCI, IF 10.5）**

[5] T. Liu, **D. Zhang*,** H. Dai and T. Wu, "Intelligent modeling and optimization for smart

energy hub," IEEE Transactions on Industrial Electronics, 2019, in press. **（(SCI, IF 7.5）**

[6] H. Zhao, **D. Zhang**, W. Yilong, Z. Yang and X. Guorui, "Piecewise variable parameter loss model of laminated steel and its application in fine analysis of iron loss of inverter-fed induction motors," IEEE Transactions on Industry Applications, vol. 54, no. 1, pp. 832-840, Jan.-Feb. 2018. **(SCI, IF 2.7, Co- first author）**

[7] **D. Zhang**, T. Liu*, C. He and T. Wu, "A new 2-D multi-slice time-stepping finite element method and its application in analyzing the transient characteristics of induction motors under symmetrical sag conditions," IEEE Access, 2018, 6(1): 47036-47046. **(SCI, IF 3.6）**

[8] **D. Zhang***, R. An and T. Wu, "Effect of voltage unbalance and distortion on the loss characteristics of three-phase cage induction motor," IET Electric Power Applications, vol. 12, no. 2, pp. 264-270, 2 2018. **(SCI, IF 2.2）**

[9] T. Liu, **D. Zhang*** and T. Wu, "Energy internet: concept, structure and its potential future development in china", International Journal of Smart Grid and Clean Energy, 2019, in press.

[10]**D. Zhang** and T. Liu*, "Effects of voltage sag on the performance of induction motor based on a new transient sequence component method", CES Transactions on Electrical Machines and Systems, 2019, in press.

[11]**D. Zhang*** and X. Guo, et al, "A separation method of rotor flux density harmonics based on DFT and fine analysis rotor iron losses in inverter-fed induction motors," Transactions of CES., 2019, 34(01):75-83. (In Chinese)

[12]**D. Zhang** and H. Zhao*, et al, "A piecewise variable coefficient model for precise analysis on iron losses of electrical machines," Transactions of CES., vol. 31, no. 15, pp. 16-24, Aug., 2016. (In Chinese)

[13]**D. Zhang*** and H. Zhao, et al, "The loss characteristics of three-phase cage induction motor under bad supply conditions," Motor and control application, 2016, 43(07):45-50. (In Chinese)

Journals in review (first or corresponding author)

[14]**D. Zhang*** and T. Wu, "Estimation of operation cost of residential district considering uncertainty of loads and renewable energies," IEEE Transactions on Industrial Informatics, 2019, under review. **(SCI, IF 7.4）**

[15]**D. Zhang***, T. Liu and T. Wu, "Linearization optimization of the system of interconnected energy hub model considering complex electricity and natural gas networks constraints," Energy Conversion and Management, 2019, under review. **(SCI, IF 7.2）**

[16]**D. Zhang*** and T. Wu, "Equivalent core resistance modeling of converter-fed induction motors accounting for PWM and space harmonics," IEEE Transactions on Power Electronics, 2019, under review. **(SCI, IF 7.1）**

[17]**D. Zhang*** and T. Wu, "The electrical losses analysis of inverter-fed induction motor accounting for slip frequency," IEEE Transactions on Industrial Electronics, under review. **(SCI, IF 7.5）**

Conferences published or accepted (first or corresponding author)

[18]**D. Zhang*** and Thomas Wu, "A fast AGFD identification method and the resulting air-gap force analysis of cage induction motors with skewed rotor bars", The 43rd Annual Conference of the IEEE Industrial Electronics Society (IECON), Beijing, 2017.

[19]**D. Zhang***, Haisen Zhao and Thomas Wu, "The rotor copper and iron loss analysis of inverter-fed induction motor considering rotor slip frequency", 2017 IEEE Energy

Conversion Congress and Exposition (ECCE), Cincinnati, Oct. 2017.

[20]**D. Zhang*** and Thomas Wu, "Loss characteristic analysis of small and medium-sized induction motors fed by PWM inverter based on the experiment measurements", The 43rd Annual Conference of the IEEE Industrial Electronics Society (IECON), Beijing, Oct. 2017.

[21]**D. Zhang***, Ruichi An, Chengyuan He, Lixiao Bu and Thomas Wu, "Electromagnetic design of a megawatt high efficiency high speed solid rotor induction motor", 2017 IEEE International Electric Machines & Drives Conference (IEMDC), Miami, 2017.

[22]**D. Zhang***, Lixiao Bu, Chengyuan He, Ruichi An and Thomas Wu, "A modified 2-D multislice FEM for computing the airgap flux density of induction motor with skewed slots", 2017 IEEE International Electric Machines & Drives Conference (IEMDC), Miami, May 2017.

[23]**D. Zhang***, Zhao Haisen, et al, "A two-term iron losses model with piecewise variable parameter for cage induction motors" The 7th International Conference on Electromagnetic Field Problems and Applications (ICEF2016), Xi'an, Sep. 2016.

[24]T. Liu **and D. Zhang**, "Multi-objective optimal calculation for integrated local area energy system based on NSGA-II algorithm," 2019 IEEE International Conference on Energy Internet, NanJing, China, May, 2019.

Journals and Conferences published or accepted (other)

[25]Z. Yang, H. Zhao, **D. Zhang**, W. Yilong, and X. Guorui, "Fast solution of rotor losses in inverter-fed cage induction motors with skewed slots," IEEE Transactions on Industry Applications, accept, 2019. **(SCI, IF 3.3）**

[26]H. Zhao, Y. W, **D. Zhang**, Yang Zhan, and Yingli Luo, "Piecewise variable parameter model for precise analysis of iron losses in induction motors," IET Electric Power Applications, vol. 11, no. 3, pp. 361-368, Mar. 2017. **(SCI, IF 2.2）**

[27]H. Zhao, **D. Zhang**, et al. "No-Load Iron Loss Distribution Characteristics and Its Fine Analysis for Inverter-Fed Induction Motors," Proceedings of the CSEE, 2016, 36(08): 2260-2269.

[28]H. Zhao, **D. Zhang**, Wang Yilong, Zhan Yang and Xu Guorui, "Piecewise variable parameter loss model of laminated steel and its application in fine analysis of iron loss of inverter-fed induction motors," 2016 IEEE Industry Applications Society Annual Meeting, Portland, OR, 2016, pp. 1-8.

[29]D. Xiao, H. Zhao, **D. Zhang**, P. Yao. "No-Load Magnetic Field and Loss Distribution of Asynchronous Motor under Variable Frequency Power Supply Conditions," Motor and control application, 2015, 42(03): 64-70.

[30]H. Zhao, B. Li, **D. Zhang**, Zhan Yang and Xu Guorui, "Fine analysis on rotor losses of cage induction motors with load conditions" The 7th International Conference on Electromagnetic Field Problems and Applications (ICEF2016), Xi'an, Sep. 2016.

[31]R. Piao, H. Zhao, **D. Zhang**, Jiaxuan, Li. Analytical method for starting performance calculation of induction motors considering skin effect and leakage flux saturation [C]. 17th International Conference on Machines and Systems (ICEMS), 2014, Hangzhou, China, 135-138.

[32]H. Zhao, S. Wang, **D. Zhang,** Liu Xiaofang. Optimal design of premium efficiency cage induction motors (IE3 Level) with non-skewed asymmetrical rotor bars based on FEA [C]. 2015 IEEE in Magnetics Conference (INTERMAG), 2015, Beijing, China, 1-1.

[33]H. Zhao, B. Li, **D. Zhang**, W. Yilong, Z. Yang and X. Guorui, "Separation of slip- and high-frequency electromagnetic quantity and its application in rotor loss fine analysis of induction motor," 2016 IEEE Conference on Electromagnetic Field Computation (CEFC), Miami, FL, 2016, pp. 1-1.

[34]H. Zhao, L. Xin, **D. Zhang**, Z. Yang, X. Guorui and C. Xueshen, "A variable parameter model for precise analysis of iron losses in induction motors considering saturation and harmonic field," 2016 19th International Conference on Electrical Machines and Systems (ICEMS), Chiba, 2016, pp. 1-4.

[35]T. Liu, G. Li, B. Han, **D. Zhang** and S. Youssouf, "Research on the topology of DC distribution network and the influence of distributed generations access to the network," 2015 5th International Conference on Electric Utility Deregulation and Restructuring and Power Technologies (DRPT), Changsha, 2015, pp. 512-517.

[36]H. Zhao, B. Li, W. Y. Y. Zhan, G. Xu and **D. Zhang**, "Separation of slip- and high-frequency flux densities and its application in rotor iron loss fine analysis of induction motors," 2017 IEEE Energy Conversion Congress and Exposition (ECCE), Cincinnati, OH, 2017, pp. 794-800.

[37]Yang Zhan, Libo Ma, Haisen Zhao, Guorui Xu and **D. Zhang**, "Fast solution of rotor losses in inverter-fed cage induction motors with skewed slots," 2018 IEEE Energy Conversion Congress and Exposition (ECCE), Portland, OR, 2018, pp. 794-800.

[38]J. Liu, B. Zhao, H. Zhao, T. Zhao, **D. Zhang**. "Optimization of Surface Mounted Permanent Magnet Motor Based on Halbach Array and Modular Poles," Motor and control application, 2016, 43(02):36-41.

Patents and Softwares

[39]D. Zhang, T. Wu. "Method for calculating iron loss resistance of down-conversion motor with PWM harmonic condition". PCT Patent, 2019, ID: 2019105723599.

[40]D. Zhang, R. An, H. He, L. Bu and S. Chu. "A slotted permanent magnet synchronous motor," Chinese Patent, 2018, ID: 201811064239X.

[41]D. Zhang, S. Chu, T. Wu. "A fast calculation method for iron loss of inverter-fed induction motor considering time and space harmonics". Chinese Patent, 2019, ID: 201910572364X.

[42]D. Zhang, T. Liu and J. Zhang. "A standardized modelling method of energy hub model for integrated energy system". Chinese Patent, 2019, ID: 2019105723052.

[43]D. Zhang, T. Liu. "A standardized linearization method for integrated energy system". Chinese Patent, 2019, ID: 2019105725541.

[44]H. Zhao, D. Zhang, S. Wang. "Construction method of two variable coefficients iron loss model for AC motor," Chinese Patent, 2018, ID: CN 105205234 B.

[45]D. Zhang, L. Bu. "An accurate simulation platform for iron consumption of frequency conversion motor under the condition of time and space harmonic," Software, 2018, ID: 2018SR647911.

[46]D. Zhang, L. Bu. "Position sensorless precision control system for induction motor based on multi-processor co-operation," Software, 2018, ID: 2018SR648003.

[47]D. Zhang, T. Liu. Optimal control platform for PWM inverter and motor under accurate consideration of harmonic iron consumption. Software, 2018, ID: 2018SR648375.

[48]R. An, T. Feng, D. Zhang, J. Zhang, T. Wu. "Sensorless control system of permanent Magnet synchronous Motor based on TMS320F28379D," Software, 2018, ID: 2018SR237811.

Presentations

[49] A fast AGFD identification method and the resulting air-gap force analysis of cage induction motors with skewed rotor bars", The 43rd Annual Conference of the IEEE Industrial Electronics Society (IECON), Beijing, Nov. 2017. (oral)

[50] "Loss characteristic analysis of small and medium-sized induction motors fed by PWM inverter based on the experiment measurements", The 43rd Annual Conference of the IEEE Industrial Electronics Society (IECON), Beijing, Nov. 2017. (poster)

[51] "The rotor copper and iron loss analysis of inverter-fed induction motor considering rotor slip frequency", 2017 IEEE Energy Conversion Congress and Exposition (ECCE), Cincinnati, Oct. 2017. (poster)

[52] "Effect of voltage unbalance and distortion on the loss characteristics of three-phase cage induction motor," 2017 IEEE Energy Conversion Congress and Exposition (ECCE), Cincinnati, Oct. 2017. (oral)

[53] "Electromagnetic design of a megawatt high efficiency high speed solid rotor induction motor", 2017 IEEE International Electric Machines & Drives Conference (IEMDC), Miami, May 2017. (poster)

[54] "A modified 2-D multislice FEM for computing the airgap flux density of induction motor with skewed slots", 2017 IEEE International Electric Machines & Drives Conference (IEMDC), Miami, May 2017. (oral)

[55] "A two-term iron losses model with piecewise variable parameter for cage induction motors" The 7th International Conference on Electromagnetic Field Problems and Applications (ICEF), Xi'an, Sep. 2016. (poster)

5、Selected Awards & Honors

1) Received the "Top Peer Review Awards (Top 1% in Engineering Field)" from Publons **(September 2019)**;
2) Received the "Top Peer Review Awards (Top 1% in Cross-Field Field)" from Publons **(September 2019)**;
3) Named the "Outstanding Ph.D. Graduate Students" from Xi'an Jiaotong University **(June 2019)**;
4) Named the "Star Reviewer" by the IEEE Power & Energy Society and the Editorial Board of the IEEE Transactions on Energy Conversion **(March 2019)**;
5) Named the "Outstanding Graduate Student" in the Xi'an Jiaotong University **(November 2018)**;
6) Received the "National Scholarship for Graduate Students" from the Chinese Government **(October 2018)**;
7) Received the "Top Peer Review Awards (Top 1% in Engineering Field)" from Publons **(September 2018)**;
8) Received the "First-class Scholarship for Graduate Students" from the Xi'an Jiatong University **(September 2018)**;
9) Received the "First-class Scholarship for Graduate Students" from the Xi'an Jiaotong University **(September 2017)**;
10) Received the "First-class Scholarship for Graduate Students" from the Xi'an Jiaotong University **(September 2016)**;

11) Named the “Outstanding Master Graduate Students” from the North China Electric Power University **(April 2016)**;
12) Received the “Outstanding Master Graduate Thesis” from the North China Electric Power University **(April 2016)**;
13) Received the “Sifang Scholarship” from the Chinese Government **(October 2015)**;
14) Received the “First-class Scholarship for Graduate Students” from the North China Electric Power University **(September 2015)**;
15) Received the “First-class Scholarship for Graduate Students” from the North China Electric Power University **(September 2014)**;
16) Named the “Outstanding Undergraduate Students” from the Chinese Government **(July 2013)**.