



Ruting Tang

Dec. 26, 1998

+393447383042

ruting.tang@polimi.it

Milan, Italy

EDUCATION

02/2024-present	Politecnico di Milano	Department of Electronics, Information and Bioengineering (Ph.D.)
09/2019-present	Xi'an Jiaotong University	School of Electrical Engineering (Master and Ph.D.)
09/2015-06/2019	Hunan University	School of Electrical and Information Engineering (Bachelor)

RESEARCH

PhD Research

XJTU and Polimi

- My research topic is electromagnetic transient processes in offshore wind energy transmission systems. Power cables and modular multilevel converters (MMC) are the main electrical components involved in investigating the electromagnetic transient processes of HVDC transmission system.
- During my study at Xi'an Jiaotong University, I established a circuit model for MMC. Since the model contains a large number of power electronic devices, which has a great impact on the electromagnetic transient process of the overall system, I introduced the ADC (Associated Discrete Circuit) model for it. To better reflect the transient process of power electronics such as converters, I improved the model. By introducing a small resistor on the basis of the existing model, the discrete circuit can more accurately reflect the transient process of the circuit components and make the numerical calculation process more stable.
- The research object of the cable is the high-voltage DC submarine cable, which is widely used in offshore wind power systems. The frequency-dependent impedance extraction of cables is currently being carried out in order to more accurately calculate the electromagnetic transient processes of cables using transmission line models.

2021-present

Master Research

XJTU

- A High Performance Simulation and Analysis Software for Power Electronic Circuits Based on Improved Node Method. 2019-2020
- A new switching model is proposed, and a calculation program for power electronics is added to the self-programming software.

PUBLICATIONS

- Wang, S., **Tang, R.**, Zhang, N. (2021). Relationship Between Digital Twin and Software Eco-chain. In: Chen, W., Yang, Q., Wang, L., Liu, D., Han, X., Meng, G. (eds) The Proceedings of the 9th Frontier Academic Forum of Electrical Engineering. Lecture Notes in Electrical Engineering, vol 743. Springer, Singapore. https://doi.org/10.1007/978-981-33-6609-1_66.
- High-performance simulation and analysis software of power electronics. (Software publication)
- **R. Tang**, J. Zhang, X. Ma and S. Wang, "A Thevenin Model for Internal Electromagnetic Transient Characteristics Study of the MMCs," 2023 IEEE/IAS Industrial and Commercial Power System Asia (I&CPS Asia), Chongqing, China, 2023, pp. 1-7, doi: 10.1109/ICPSAsia58343.2023.10294803.

AWARD

- Second Class Scholarship. November 2017
- Outstanding Club Officers of Hunan University. March 2017
- Outstanding volunteers of the Red Cross. June 2018
- Second Class Scholarship. November 2018

SKILLS

Computer: Matlab, C++, VB.net, PSCAD, Simplorer, COMSOL

Languages: Chinese, English