

## Wang Yang

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### Education

- 10/2017 – 02/2022    PhD in Aerospace Engineering  
Department of Aerospace Science and Technology,  
Politecnico di Milano (POLIMI), Italy  
Supervisor: Prof. Francesco Topputo
- 09/2014 – 03/2017    M.Sc in Flight Vehicle Design  
School of Astronautics,  
Northwestern Polytechnical University, China  
Supervisor: Prof. Binfeng Pan
- 09/2010 – 07/2014    B.Eng in Aircraft Design and Engineering  
School of Astronautics,  
Northwestern Polytechnical University, China
- 09/2010 – 07/2013    B.Eng in Aircraft Design and Engineering  
Honors College,  
Northwestern Polytechnical University, China

### Project Experience

- 2018-2019    M-ARGO mission phase A, POLIMI, ESA Contract 4000127373/19/NL/AF  
Taking part in: Reachable asteroid analysis

### Research Topics

- Low-thrust trajectory optimization
- Theory of Functional Connections
- Optimization-based guidance and control

### Papers

- **Y. Wang**, F. Topputo, Indirect Optimization of Power-Limited Asteroid Rendezvous Trajectories. *Journal of Guidance, Control and Dynamics*. 2022. DOI: [10.2514/1.G006179](https://doi.org/10.2514/1.G006179)
- **Y. Wang**, F. Topputo, A TFC-based Homotopy Continuation Algorithm with Application to Dynamics and Control Problems. *Journal of Computational and Applied Mathematics*, 2022, 401: 113777. DOI: [10.1016/j.cam.2021.113777](https://doi.org/10.1016/j.cam.2021.113777)
- F. Topputo, **Y. Wang**, Giordano Carmine, et al. Envelop of reachable asteroids by M-ARGO CubeSat, *Advances in Space Research*, 2021, 67(12): 4193–4221. DOI: [10.1016/j.asr.2021.02.031](https://doi.org/10.1016/j.asr.2021.02.031)
- **Y. Wang**, F. Topputo, Indirect Optimization for Low-Thrust Transfers with Earth-Shadow Eclipses. 31st AAS/AIAA Space Flight Mechanics Meeting, virtual, 2021: 1-17. AAS 21--368.

- **Y. Wang**, F. Topputo. Robust Bang-Off-Bang Low-Thrust Guidance Using Model Predictive Static Programming. Acta Astronautica, 2020, 176: 357-370. DOI: [10.1016/j.actaastro.2020.06.037](https://doi.org/10.1016/j.actaastro.2020.06.037)
- **Y. Wang**, F. Topputo, Model Predictive Static Programming for Bang-off-Bang Low-Thrust Neighboring Control Law Design. 70th International Astronautical Congress, 2019. Washington D.C., IAC-19,C1,9,3,x49975.
- **Y. Wang**, B. Pan, Y. Zheng, et al. ETLBO Based Optimal Targeting to the Moon in the PCR3BP Chaotic System. Chaos, Solitons & Fractals, 2017, 105: 21-28. DOI: [10.1016/j.chaos.2017.10.009](https://doi.org/10.1016/j.chaos.2017.10.009)
- B. Pan, **Y. Wang**, S. Tian. A High-Precision Single Shooting Method for Solving Hypersensitive Optimal Control Problems. Mathematical Problems in Engineering 2018, 2018. DOI: [10.1155/2018/7908378](https://doi.org/10.1155/2018/7908378)