HUANG FANGCHENG

Education

2019–present **PhD Degree in Mathematical Models for Engineering, Electromagnetics and Nanosciences - Sapienza Università di Roma**, *Roma*, Italy.
Thesis Title: The Multi-spheres Scattering and Fourier Modal method in Periodic Scattering
Status: In the writing phase

2012–2015 **M.Sc. Plasma Physics, University of Science and Technology of China**, *Hefei*, China.
Thesis Title: Research and Design KTX Vacuum Chamber Baking System for Desgassing
Innovation Design a new Baking system for Desgassing in the fusion plasma experiment.
Graduation grade: very good

2002–2006 **Phyics, Anqing Normal University**, *Anqing*, China.
Graduation project: The boundary condtion of electromagnetic
Graduation grade: very good

Professional Interests

Interests: The numerical method of Mechanical Metamaterials and its fabrication.

Work Experience

2015–2019 **Research Assistant**, *Ningbo Institute of Industrial Technology, The Chinese Academy of Sciences*.
Task: Simulation of the EM wave for Plasmonics, Solar Cell, Calculate the sphere scattering, participate in the project application,
Roles: The leader of the simulation team, The administrator of servers of the team.

2006–2012 **Phycsc teacher in Middle School**.
Shangtushi high Middle School (Anhui, China)

Skills and Activities

Programming Language MATLAB,C++, using C++ to write programmes: Electromagnetic-wave scattering by a sphere. Using Matlab to write a program of Fourier Modal Method

Software Lumerical, Comsol, using Lumerical to simulate the solar cells and Comsol to simulate the Plasmonics

Operating System Windows server, Linux(The administrator of the servers for more than 5 years)

Languages

Chinese Native Speaker

English PhD in English, PhD dissertations written in English, publications and presentations are in English)

Publications

- **Fangcheng Huang**, Fabrizio Frezza, Joao Cunha, Tianlong Guo, Bo Jiang, Tong Lu, Yanfei Lu, Remo Proietti Zaccaria. The Fourier Modal Method for Plasmonics (PIERs 2019).

- **Fangcheng Huang**, Fabio Mangini, Sidra Batool, Fabrizio Frezza. Electromagnetic Scattering by Metal Spheres (URSI 2022).

- **Fangcheng Huang**Fabio Mangini, Sidra Batool, Sharmetha Kannan, Remo. Proietti Zaccaria and Fabrizio Frezza, "Electromagnetic Scattering by Metal Spheres", Proc. Bremen Workshop on Light Scattering 2022, 21 Marzo 2022.

- Bin Wang, xingwang Zhu, **Fangcheng Huang**, Yu Quan, Gaopeng Lu, Xiaolinzhang, Fangwu wiong, Chao Huang, Mengxia Jia, Huaming Li, Paul K. Chub, Weixiang xia. Porous edge confinement: High carrier potential and low activation energy barrier synergistically boosting the efficiency of selective photocatalytic CO2 conversion. (Applied Catalysis B: Environmental, accepted. 2022)

- Chunyan Wu, Shuo Ding, **Fangcheng Huang**, Guanhua Qiu, Fayin Yu, Tao Sun, Chaoyu Xiang, Lei Qian Enhances the absorbance of lead sulfide quantum dot solar cells by the bilayer layers of ZnO thin film with a self-assembly optical structure. (submitted to Small Journal)

Course:

- Advanced Electromagnetics and Scattering (Prof. Fabrizio Frezza).

- Artificial Materials, Metamaterials and Plasmonics for Electromagnetic Applications (Prof. Frezza)

- ESoA course on Advanced Computational Electromagnetics (Prof. Francesco Andriulli and Prof. Giuseppe Vecchi)