MANSHAN GUO CURRICULUM VITAE

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PERSONAL DETAILS

Nationality: Chinese
Date of Birth: 01/05/1993
Spoken languages:

- Native speaker in mandarin
- IELTS: 7.0

EDUCATIONAL BACKGROUND

Freie Universität Berlin, Berlin, Germany **2021.03---present**

- Doctorate degree in computational neuroscience
- Co-supervised by Prof. Dr. Radoslaw Martin Cichy in Freie Universitäte Berlin and Prof. Dr. Gemma Roig in Goethe University, Frankfurt
- Funded by the China Council Scholarship (CSC)

University of Chinese Academy of Science (UCAS), Beijing, China **2016.09---2019.06**

- M.S. degree in Electronic Communication and Engineering, College of Sciences
- Advised by Prof. Jun Lin in the University of Chinese Academy of Sciences
- Financial support: Graduate-students scholarship of Chinese Academy of Sciences
- Completed in June 2019 with cumulative Overall GPA: 3.7/4.3

Sun-Yat-Sen University (SYSU), Guangzhou, China **2012.09---2016.06**

- B.S. degree in Optical Information Science and Technology, College of Physics
- Completed in June 2016 with cumulative Overall GPA: 3.5/4.0

RESEARCH EXPERIENCE

- **Worked at professor Lin's lab, in Shanghai Institute of Applied Physics, Chinese Academy of Sciences (CAS)** **2016.09---2019.06**
  - Got financial support under the Strategic Pioneer Sci. & Tech. Project of Chinese Academy of Sciences
  - Responsible for implementing X-ray Phase Contrast Imaging (XPCI) modalities to detect inter-structure of TRISO-coated fuel particles and then utilizing Matlab to analyze these XPCI images with digital image processing techniques or machine learning methods
  - Applied knowledge in image processing (noise-reduction, edge-detection and circle-fitting) and statistics to nondestructively measure coating-thickness of TRISO fuel particles
  - Employed knowledge in machine learning (feature extraction and feature recognition) to automatically recognize defects inside TRISO fuel particles

- Wrote two papers about my work and these two papers are published on International Journal of Energy Research (IF=3.343, Q1) and Journal of Nuclear Materials (IF=2.547, Q1), respectively.

- **Worked as a research assistant at professor Qiu's lab, in University of science and technology of China (USTC), Hefei, China. 2017.04---2017.07**
  - Involved in 'HIV-associated neurocognitive disorder' Project
  - Guided to find proper methods to analyze resting-state functional connectivity between different brain regions
  - Responsible for classifying FMRI data according to CD4 value and using Matlab 7.0 to measure the level of correlated dynamics of FMRI time-series
  - Employed techniques including Pearson's correlation and t-test
  - Wrote a thesis about my work, which was checked by the supervisor and was scored 95

- **Worked under Professor Zhou as assistant laboratory staff at Sun-Yat-Sen University (SYSU), Guangzhou, China. 2013.08---2015.11**
  - Assisted senior students with preparing research
  - Responsible for implementing Kinect 2.0 to realize the human-machine interaction
  - Utilized C# programming to process data of color images and depth images obtained by Kinect 2.0
  - Cooperated with another two classmates and succeeded in the skeletal tracking of depth images

WORK EXPERIENCE

- **Internship in the General Electrical Company (GE China) 2019.11---2020.06**
  - Used Python to realize medical image segmentation
  - Used PyQt5 to realize the image-preprocessing part of a user interface aimed at lung-tumor detection

AWARDS AND HONORS

- Phd scholarship funded by the China Scholarship Council 2019
- Merit student of Chinese Academy of Sciences 2018/2019
- Graduate student scholarship of Chinese Academy of Sciences 2016---2019
- Third-class scholarship of Sun-Yat-Sen University 2015
- Meritorious Award of American Mathematical Contest in Modeling (top 15%) 2015
- Excellent officer of League branch in charge of the organization 2014

PUBLICATION

- Guo, M, Yang, X, Zhang, F, Lin, J. A novel method to inspect coating thickness of tristructural isotropic fuel particles. *Int J Energy Res* (IF=3.741, Q1). 2019; 43: 2391–2401. https://doi.org/10.1002/er.4392
- M.-s. Guo, X. Yang, F. Zhang, Y. Zhong, J. Lin, Supervised dictionary learning supported classifier with feature fusion scheme to noninvasively detect TRISO-particle defects, J. Nucl. Mater (IF=2.485, Q1). 523 (2019) 43-50.

SKILLS

- **Computer skills:** Matlab, Python, R (basic), Latex, bash, C++ (basic and mainly for image processing)
- **Language skills:** Chinese (mother tongue), English, German (beginner)
- **Research skills:** Digital image processing (mainly for CT images and X-ray phase contrast images), machine learning, deep learning, ANOVA analysis