



## EDUCATION

<b>Institute of Automation, Chinese Academy of Sciences (CASIA)</b>	Beijing, China
Master in Control Theory and Control Engineering, Department of Artificial Intelligence	09/2018 – 06/2021
<ul style="list-style-type: none"> <li>GPA: 3.55/4.0</li> <li>Conducted research on artificial intelligence in healthcare, one paper accepted to <b>IJCAI 2020</b></li> <li>My research interests include <b>computer vision</b> and <b>medical image analysis</b>.</li> </ul>	
<b>Wuhan University of Technology (211)</b>	Wuhan, China
Bachelor in Electrical Engineering and Automation	09/2014 – 06/2018
<ul style="list-style-type: none"> <li>GPA: 91.6/100</li> <li>Rank: 1/256 in GPA Evaluation</li> <li>Awarded <b>National Scholarships</b> in the Department of Automation for <b>Two</b> Consecutive Years (<b>Top 1%</b>)</li> </ul>	

## PROFESSIONAL CERTIFICATION

TOEFL – The Test of English as a Foreign Language – Score: 83	03/2019
IELTS – International English Language Testing System – Score: 6.0	02/2021

## PUBLICATIONS & PRESENTATIONS

<b>Learning Regional Attention Convolutional Neural Network for Motion Intention Recognition Based on EEG Data</b>	
<b>Authors:</b> Z. Fang, W. Wang, S. Ren, J. Wang, W. Shi, X. Liang, C. Fan and Z.G. Hou.	
Proceedings of the 29th International Joint Conference on Artificial Intelligence (IJCAI 2020, CCF A)	Yokohama, Japan
<ul style="list-style-type: none"> <li>Overall acceptance rate: 12.6%</li> <li>Available on Proceedings of IJCAI: <a href="https://doi.org/10.24963/ijcai.2020/218">https://doi.org/10.24963/ijcai.2020/218</a></li> </ul>	
<b>Convolutional LSTM: A Deep Learning Method for Motion Intention Recognition based on Spatiotemporal EEG Data</b>	
<b>Authors:</b> Z. Fang, W. Wang, Z.G. Hou	
Proceedings of the 26th International Conference on Neural Information Processing (ICONIP 2019, CCF C)	Sydney, Australia
<ul style="list-style-type: none"> <li><b>Oral Presentation</b> at ICONIP 2019</li> <li>Available on the springer: <a href="https://doi.org/10.1007/978-3-030-36808-1_24">https://doi.org/10.1007/978-3-030-36808-1_24</a></li> </ul>	
<b>RAUNet: Residual Attention U-Net for Semantic Segmentation of Cataract Surgical Instruments</b>	
<b>Authors:</b> Z. Ni, G.Bian, X. Zhou, Z. Hou, X. Xie, C. Wang, Y. Zhou, R. Li, Z. Li	
Proceedings of the 26th International Conference on Neural Information Processing (ICONIP 2019, CCF C)	Sydney, Australia
<ul style="list-style-type: none"> <li><b>Oral Presentation</b> at ICONIP 2019</li> <li>Available on the springer: <a href="https://link.springer.com/chapter/10.1007/978-3-030-36711-4_13">https://link.springer.com/chapter/10.1007/978-3-030-36711-4_13</a></li> </ul>	
<b>Bilinear Neural Network with 3-D Attention for Brain Decoding of Motor Imagery Movements from the Human EEG</b>	
<b>Authors:</b> C.C. Fan, H. Yang, Z.G. Hou, Z.L. Ni, S. Chen and Z. Fang	
Journal of Cognitive Neurodynamics (SCI)	
<ul style="list-style-type: none"> <li>Accepted, IF = 2.47</li> <li>Available on the springer: <a href="https://link.springer.com/article/10.1007/s11571-020-09649-8">https://link.springer.com/article/10.1007/s11571-020-09649-8</a></li> </ul>	
<b>Group Feature Learning and Domain Adversarial Neural Network for aMCI Diagnosis System Based on EEG</b>	
<b>Authors:</b> C.C. Fan, H.Q. Xie, H.J. Yang, Z.L. Ni, Z.G. Hou, G.A. Wang, S. Chen, Z. Fang, S. Huang	
Proceedings of the 2021 IEEE International Conference on Robotics and Automation (ICRA)	Xi'an, China
<ul style="list-style-type: none"> <li>Accepted</li> </ul>	

## INTERNSHIPS

<b>Dianzhi Intelligent Technology Co., Ltd., Baidu Innovation Center</b>	Wuhan, China
Assistant Engineer, Autonomous Driving Department	06/2018 – 09/2018
<b>Project: Developing Embedded Object Detection System &amp; Neural Network Inference Computing Framework</b>	
<ul style="list-style-type: none"> <li>Using <b>YOLOv2</b> to detect vehicles.</li> <li>Developing a neural network inference computing framework named <b>NENN</b>.</li> <li>Converting TensorFlow's network weight into NENN's network weight.</li> <li>NENN is cross-compiled from Linux to the <b>ARM</b>.</li> </ul>	

## RESEARCH EXPERIENCE

<b>Deep Learning-based Brain-Computer Interface (BCI) Decoding Algorithm Research</b>	Beijing, China
Advised by Prof. Weiqun Wang, SKL-MCCS	06/2019 – 12/2019
<ul style="list-style-type: none"> <li>Using <b>complex Morlet wavelet convolution</b> to generate time-resolved frequency representation.</li> <li><b>CNN</b> and <b>Attention Mechanism</b> are used to take full advantage of spectral-spatial-temporal features.</li> <li>Developing a <b>BCI Application Program</b> to control the movement of virtual ball.</li> </ul>	

## sEMG Based Lower Limb Motion Intention Recognition Research

Advised by Prof. Weiqun Wang, SKL-MCCS

Beijing, China

07/2019 – 12/2019

- Collecting sEMG data, Pre-processing
- Extracting the signal features from several time windows in **parallel** (reduce over **6 times** computational time)
- Training **SVM** with **RBF** kernel as the classifier

## SELECTED HONORS & AWARDS

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- National Scholarships (top 1% of 550 students) 09/2014-09/2016 two years in row
- Premium Scholarship (top 4% of 550 students) 12/2017
- China Merchants Scholarship (top 4% of 550 students) 12/2017
- First Prize of Hubei Competition Area in National University Mathematical Modeling Competition (top 5% of ~ 6000 students) 09/2016
- Second Prize of Huazhong Competition Area in Mathematical Modeling Competition (top 8% of ~ 6000 students) 05/2016
- Second Prize for Mathematical Contest in Modeling (top 30% of the ~10000 teams) 12/2016
- Outstanding Undergraduate (top 8% of 550 students) 06/2018
- Merit Student in Wuhan University of Technology (top 13% of ~6000 students) 09/2015-09/2017 three years in row

## SKILLS

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- Familiar with deep learning in **object detection**, **segmentation**, classification and other tasks.
- Familiar with Two-Stage detection algorithms: **Faster R-CNN**, **Mask R-CNN** and other common algorithms
- Familiar with **C++**, **Python** and **Linux**
- Familiar with **TensorFlow**, **Caffe**