

# Curriculum Vitae

**Runze Chen**

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## EDUCATION

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- **M. Eng:** College of Computer, NUDT, China. 2015.09–2017.12.
  - Major: Computer science and technology
  - Average score: 88.5/100, within top 5% of my grade
  - Advisor: Prof. Yuhua TANG, yhtang62@163.com
  - Organization: Interdisciplinary Center for Quantum Information (ICQI)
  - Research field: Quantum Computing, Optical Computing, Ultrafast Nano-optics, Hardware Controlling Programming
- **B. Eng:** College of computer, NUDT, China. 2011.09–2015.06.
  - Major: Computer science and technology
  - Average score: 90.7/100, ranked No.1 in my grade
  - Organization: State key Laboratory of High Performance Computing (HPCL)

## PUBLICATIONS

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- [1] Tian Jiang, **Runze Chen**, Xin Zheng, Zhongjie Xu, and Yuhua Tang, “Photo-Induced Excitonic Structure Renormalization and Broadband Absorption in Monolayer Tungsten Disulphide”, *Optics Express* **26**(2), 859-869 (2018) (Co-1<sup>st</sup> Author)
- [2] Jun Zhang, Hao Ouyang, Xin Zheng, Jie You, **Runze Chen**, Tong Zhou, Yizhen Sui, Yu Liu, Xiang'ai Cheng, and Tian Jiang, “Ultrafast saturable absorption of MoS<sub>2</sub> nanosheets under different pulse-width excitation conditions”, *Optics Letters* **43**(2), 243-246 (2017)
- [3] Lan Yang, Ke Wei, Zhongjie Xu, Feiming Li, **Runze Chen**, Xin Zheng, Xiang'ai Cheng, and Tian Jiang, “Nonlinear absorption and temperature-dependent fluorescence of perovskite FAPbBr<sub>3</sub> nanocrystal”, *Optics Letters* **43**(1), 122-125 (2017)
- [4] **Runze Chen**, Xin Zheng, and Tian Jiang, “Broadband Ultrafast Nonlinear Absorption and Ultra-Long Exciton Relaxation Time of Black Phosphorus Quantum Dots”, *Optics Express* **25**(7) (2017)
- [5] **Runze Chen**, Yuhua Tang, Xin Zheng, and Tian Jiang, “Giant Nonlinear Absorption and Excited Carrier Dynamics of Black Phosphorus Few-Layer Nanosheets in Broadband Spectra”, *Applied Optics* **55**(36) (2016)
- [6] Ke Wei, Zhongjie Xu, **Runze Chen**, Xin Zheng, Xiangai Cheng, and Tian Jiang, “Temperature-Dependent Excitonic Photoluminescence Excited by Two-Photon Absorption in Perovskite CsPbBr<sub>3</sub> Quantum Dots”, *Optics Letters* **41**(16) (2016)
- [7] **Runze Chen**, Xin Zheng, Yangwei Zhang, Yuhua Tang, and Tian Jiang, “Z-Scan Measurement of Nonlinear Optical Properties of BiOCl Nanosheets”, *Applied Optics* **54**(21) (2015)
- [8] Zheng, Xin, **Runze Chen**, Gang Shi, Jianwei Zhang, Zhongjie Xu, Xiang'ai Cheng, and Tian Jiang, “Characterization of Nonlinear Properties of Black Phosphorus Nanoplatelets with Femtosecond Pulsed Z-Scan Measurements”, *Optics Letters* **40**(15) (2015)
- [9] Zheng, Xin, Yangwei Zhang, **Runze Chen**, Xiang'ai Cheng, Zhongjie Xu, and Tian Jiang, “Z-Scan Measurement of the Nonlinear Refractive Index of Monolayer WS<sub>2</sub>”, *Optics Express* **23**(12) (2015)
- [10] **Runze Chen**, Sijin Li, Huisheng Mao, and Fan Zhang, “Research on anti-leakage system of sensitive information based on Android platform”, *Network Security Technology & Application* **4** (2014)

- [11] **Runze Chen**, Sijin Li, Huisheng Mao, and Jianglong Song, “Design and implementation of five level pipelined general processor based on Verilog programming”, *Electronic Technology & Software Engineering* 5 (2014)

## RESEARCH & EXCHANGE EXPERIENCE

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- [1] **Research on ultrafast spin and valley polarization properties of excited carrier dynamics in two-dimensional (2D) semiconductors**. 2016.10 – 2017. 2
- Designed and implemented an optical experimental system based on LabVIEW. The system has been applied for utility model patent.
  - Researched and analyzed the potential of application 2D materials in quantum computing, spintronics and valleytronics.
- [2] **Research on Optical Nonlinear Properties of 2D Nano-materials for the sake of Improving Photonic Neural Network**. 2015.10 – 2016. 05
- Research on improving the Neuromorphic Silicon Photonics on Hopfield neural network (Alexander N. Tait, *et al.* arXiv:1611.02272) by using 2D nonlinear optical materials.
  - Awarded the Excellent graduation Thesis of National University of Defense Technology in 2015. (Highest score in the last oral defense)
- [3] **Research on an Intelligent and Secure Express System based of NFC Authentication Strategy**. 2014.03 – 2014. 08 (Marked as **1<sup>st</sup> Prize** in National Information Security Contest for College Students)
- Designed and implemented a server-client system for parcel express companies.
  - The system includes near field communication (NFC) stickers which cryptographically stores the key information of users and delivery addresses, software system and database system distributing at client-end and server-end, respectively.
- [4] **Research on Anti-Leakage System of Sensitive Information on Android Platform**. 2013.05 – 2014. 03 (Marked as **Excellent** in the National Undergraduate Innovation Programs)
- Modified the source code of Android operating system (JAVA and C++) and constructed a Front-End system by JAVA to realize real-time monitoring of user's sensitive information in smartphones.

## HONORS & AWARDS

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- **Excellent Student Award of College**, NUDT, 2012, 2013, 2014, 2015, 2016, 2017
- **Excellent Graduation Thesis Award**, NUDT, 2015 (Top 0.1%)
- **1<sup>st</sup> Prize** in Supercomputer Competition, NUDT, 2014 (Top 5%) [[link](#)]
- **1<sup>st</sup> Prize** in Asia Student Supercomputer Challenge (ASC) in Sun Yat-Sen University, 2014 (Top 5%) [[link](#)]
- **1<sup>st</sup> Prize** in Kylin Software Designing Competition, NUDT, 2014 (Top 5%)
- **1<sup>st</sup> Prize** in National Information Security Contest for College Students, 2014 (Top 5%) [[link](#)]
- **1<sup>st</sup> Prize** of YinHe Scholarship, NUDT, 2014 (Top 2%)
- **Honorable Mention** in International Interdisciplinary Contest in Modelling (ICM), USA, 2014 (Top 25%) [[link](#)]
- **2<sup>nd</sup> Prize** in National Mathematical Contest in Modelling for College Students in Hunan Province, 2013 (Top 25%) [[link](#)]
- **Model Student of Academic Records**, NUDT, 2013 (Top 1%)

## PROGRAMMING & SOFTWARE SKILLS

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- **Proficient:** MATLAB, LabVIEW, C/C++, JAVA
- **Familiar:** Verilog, Python