李华康

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武汉大学 • 中国科学院大学 电力电子/电气工程 • 硕士 1997-11-01 上海

小米手机电源技术组 3 年工作经验，主要负责无线充电系统仿真、电荷泵仿真优化、新技术预研等，同时有有线、无线项目开发经验以及芯片验证经验。武汉大学电气专业本科，保研至中国科学院电工研究所攻读电力电子专业硕士，从事碳化硅功率模块封装、测试、应用相关研究工作。熟悉计算机知识，有软硬件开发经验。

教育背景

2019.09-2022.06	**中国科学院大学** • 电力电子与电力传动 • 工学硕士	GPA：3.7/4.0
2015.09-2019.06	**武汉大学** • 电气工程及其自动化 • 工学学士	GPA：3.7/4.0 （保研）

工作经历

现在 – 2022.08 硬件研发工程师 @ **小米集团**

- 负责上海区域无线充电项目关键问题看护
- 从 0 到 1 建设无线充电系统仿真评估平台，负责系统仿真与落地指导
- 主导 2 个无线充电创新技术预研，负责方案提出、调试、验证与推广
- 负责 4 个校企合作项目的课题提出、合作高校选择、项目管理与成果验收

2022.06 – 2019.09 硕士研究生 @ **中科院电工所**

- 参与设计功率模块的封装设计，对样品电气和热性能进行测试
- 负责在线结温监测方案的原理分析、电路设计与方案验证
- 负责功率模块健康状态管理的前期调研

知识体系与技能

工作技能 预研项目管理与开发、新技术探索、校企合作、量产项目看护、技术文档维护。
专业知识 电路、电力电子、信号与系统、模电、数电、自动控制理论、半导体器件物理学、传热学等。
专业技能 电路仿真：LTspice、Matlab；磁场仿真：HFSS；热仿真：COMSOL；编程：Python、Java、C。
语言 **英语** – 六级，读写（优良），听说（日常交流） **日语** – N3，简单阅读与交流

其他项目

- IGBT、SiC 驱动设计
- 逆变器电磁干扰（EMI）抑制方法（无源滤波器、随机 PWM）研究
- ESP32 的音频播放器（电源、音频电路设计、C 程序编写与调试）
- 技术知识文档：SVPWM 数学原理与实现 、半导体器件物理笔记；课程设计：电机模型仿真、电力电子仿真等。

专利与论文

- 一作 @Xiaomi: A Wideband Tuning Method for Extended Operating Frequency Range of Wireless Power Receiver, WPTCE 2024, 2024.5
- 一作 @CAS：A Combination Method for Full-time and Comprehensive Virtual Junction Temperature Estimation of IGBT Power Module, EVS 34, 2021.6. （国际会议）
  Thermal Evaluation of SiC MOSFET Power Modules with HPD Package and Double-sided Cooling Package, PCIM Asia 2022, 2022.10.
- 模块驱动、电荷泵拓扑、无线充电系统相关专利共计 10+。

荣誉

- 小米集团上海区域总经理特别贡献奖（团队）、科技创新奖、优秀案例
- 中国科学院大学三好学生、全国大学生数学竞赛二等奖、武汉大学三好学生、武汉大学曾宪梓奖学金

Weitian LI

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Ph.D. in Physics Shanghai Jiao Tong University (SJTU) 1991 Sept. Shanghai

Highly-motivated Ph.D. in Physics (radio astronomy) with good foundations of math and statistics. Proficient in data modeling and analysis, and enthusiastic about computer and network technologies. With 10 years experience in Linux and BSD, skilled in Shell, Python, and C programming. Passionate about open source and share multiple projects on my GitHub. Meanwhile a DragonFly BSD operating system developer and a contributor to several other open source projects.

Competences & Languages

Operating Systems	Linux (10 years), DragonFly BSD & FreeBSD (7 years)
Programming	Python, C, Shell, R, Tcl/Tk
Tools	SSH, Git, Make, Tmux, Vi, Ansible
Data Analysis	R, Pandas; Matplotlib, ggplot2; Keras, Scikit-learn
Web Development	Flask, JavaScript, jQuery, Bootstrap
Languages	**English** — reading & writing (good); listening & speaking (conversant)

Education

September 2019	School of Physics and Astronomy, **Shanghai Jiao Tong University**
September 2013	Ph.D. in Physics
June 2013	Department of Physics and Astronomy, **Shanghai Jiao Tong University**
September 2009	Bachelor's Degree in Applied Physics

Computer Skills

- DragonFly BSD operating system developer: 200+ code commits; kernel and system utilities; participate in discussions and anwser questions in mailing lists and the IRC channel.
- Use Ansible to manage a VPS running DragonFly BSD that serves personal email, authoritative DNS, website, Git, IRC, etc.
- Built and administrate the workstations, a 4-node computer cluster, and network facilities for the team.
- Participated in building and testing the SKA high-performance cluster prototype (1 login node + 1 data node + 4 computing nodes) in Shanghai Astronomical Observatory.
- Designed and developed the whole website (Django, Bootstrap, jQuery) for "The 1st China–New Zealand Joint SKA Summer School" in 2014.

Personal Projects

- `atoolbox`: (Python, Shell) Various tools collected over the years, to help manage systems, do daily tasks, analyze data, etc.
- `dfly-update`: (Shell) A simple tool to update a DragonFly BSD system.
- `openrcs`: (C) Enhance `OpenBSD RCS`, to make it compatible with `GNU RCS`.
- `fg21sim`: (Python) Simulate the low-frequency radio sky maps.
- `cdae-eor`: (Python, Keras) Use a Convolutional Denoising Autoencoder (CDAE) to separate the faint EoR signal.
- `chandra-acis-analysis`: (Python, Shell, Tcl) Semi-automate utilities for analyzing X-ray astronomical data.
- `resume`: (LaTeX) The template and source files of *this resume*.

Research Achievements

- Developed the low-frequency radio sky image simulation software: `FG21sim`.
- Developed a suite of utilities to semi-automate the X-ray astronomical data analysis: `chandra-acis-analysis`.

- Separated the faint cosmological EoR signal along the frequency dimension using a Convolutional Denoising Autoencoder (CDAE).
- Classified the radio galaxies in the FIRST survey according to morphologies using a Convolutional Neutral Network (CNN).
- Significantly improved the modeling of radio halos, and integrated the instrumental effects of radio interferometers into the simulation pipeline.
- Improved the background modeling in X-ray spectral fitting achieved more accurate and robust fitting results.
- Published 2 first-author and 8 co-authored SCI papers.

Internships

August 2018 – April 2018 | Data Engineer @ Leadvisor Technology Inc. (startup company)

- Search and scrape product and advertising data from Amazon web (Python, Requests, BeautifulSoup).
- Deployed the Airflow server and database to periodically retrieve product sales and advertising data from Amazon.
- Developed the website (Flask, jQuery) to help customers to optimize their advertising campaigns on Amazon.

September 2013 – July 2013 | Web Developer @ 97 Suifang (startup company)

- Developed the back-end (Django) to support user registration, data storage and search.
- Developed the front-end (jQuery, AJAX) to visualize the temporal variations of a patient's examination indicators.