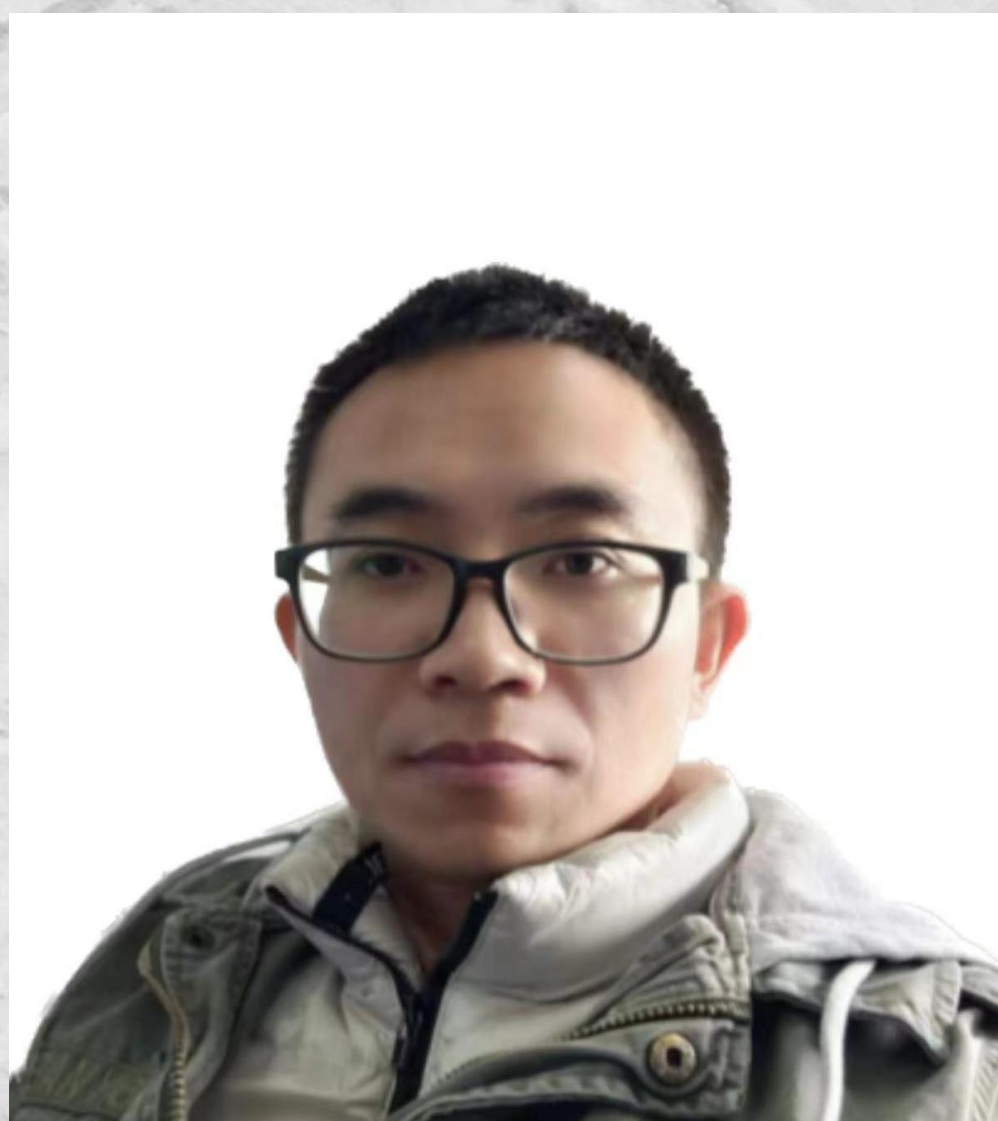




Spin-based electronics in present and future computing



- **Speaker:** 毕冲研究员 (中国科学院微电子研究所)
- **Date and Time :** 2023年4月4日 (周二) 2: 30PM
- **Venue:** 科大西区电二楼102会议室

◆**报告摘要:** Traditional charge-based electronic devices are the core of current computing technologies, which are now approaching their physical limit, leading to a huge energy consumption and making further scaling impossible. In this talk, I will review the history of spin-based electronic devices for computing technologies and the cutting-edge spin-related researches on addressing the challenges of charge-based devices, especially as an alternative to transistor-based cache memory beyond the 7 nm technology node of semiconducting manufacturing process. Finally, I will introduce the specific technical difficulties of spin-transfer and spin-orbit torque memories and our research in this field from the viewpoints of both fundamental and technology researches.

◆**报告人简介:** 毕冲: 中国科学院微电子研究所研究员, 博士生导师, 国家青年特聘专家。主要从事新型存储和量子计算器件研究, 专注于新原理、新材料和新物理器件在解决限制半导体技术进一步提升计算能力等相关领域的应用, 包括目前接近成熟的磁存储技术 (MRAM) 在传统存储器领域以及新兴的人工智能、感存算一体等相关领域的应用。目前已发表论文50余篇, 包括Physical Review Letter, Nature Electronics, IEEE Electron Device Letters等物理、电子类顶级期刊; 发表SOT-MRAM专著 (章节) 一部; 申请专利20余项。

欢迎全校感兴趣师生参加! 同时也欢迎各位同学报考研究生!

主办单位: 微电子学院