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Our new explorations based on advanced silicon nanofabrication technology

Prof. Zhen Zhang

Department of Electrical Engineering, Uppsala University, Sweden

时间：**2023** 年 **6** 月 **21** 日（星期三）上午 **10:30**

地点：嘉定园区 F 楼 **5** 楼第一会议室

欢迎广大科研人员和研究生参与讨论！

联系人：史 迅（69163528）

Abstract:

Silicon (Si) integrated circuit chip technology created the technical foundation of the modern information society. The rapid advancement of the Si technology during the past decades was mainly driven by the aggressive size down scaling of Si devices, since smaller device size means faster operation speed and higher integration density. As the dimension of Si devices is reaching sub-10 nm to enable the integration of billions of devices in a fingernail sized Si chip, the size scaling is also approaching its fundamental physical limit. Now it is time for us to think how to move forward beyond size scaling… In this talk, Prof. Zhang will share their exploration on Ag_2S based memristors for energy-efficient computing and Si based nanosensor chip for rapid antibiotic susceptibility tests, based on the powerful Si technology toolbox.

Biography:

Prof. Zhen Zhang is currently a full professor in solid-state electronics at the Department of Electrical Engineering, Uppsala University, Sweden and an adjunct researcher with IBM T. J. Watson Research Center, Yorktown Heights, New York. Before joining Uppsala University as a tenure track assistant professor in Aug. 2013, he was a postdoctoral research fellow (2008-2010) then a Research Staff Member (2010-2013) at IBM T. J. Watson Research Center. Prof. Zhang received his Ph.D degree from the Royal Institute of Technology (KTH), Sweden in 2008. He got the M.Sc degree at Chinese Academy of Sciences in 2003 and the B.Sc. degree at University of Science and Technology of China (USTC) in 2000.

Prof. Zhang received 12 Invention Achievement Awards from IBM CEO Office. He was also a recipient of the Chinese Government Award for Outstanding Ph.D. Students Abroad in 2006, a recipient of the Ingvar Clarsson Award from the Swedish Strategic Research Foundation (SSF) in 2013, the Young Researcher Grant from the Swedish Research Council (VR) in 2014, and a recipient of the Göran Gustafssons Prize in 2014. He was appointed Wallenberg Academy Fellow in 2015, SSF Future Research Leader in 2016, and Wallenberg Senior Academy Fellow in 2020.