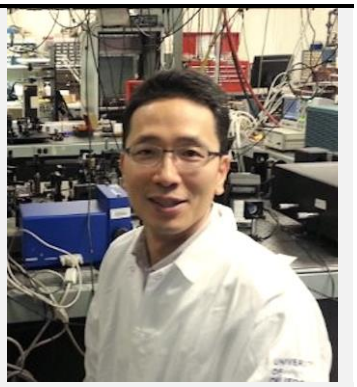

Prof. Jeongmin Hong

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Jeongmin Hong is a University Distinguished Professor of Microelectronics a Hubei University of Technology, a Visiting Professor of Physics, Electrical Engineering and Data Sciences at UC Berkeley, and a Principal Investigator at Marvell Nanofabrication Laboratory at UC Berkeley and the Molecular Foundry/Advanced Light Source at Lawrence Berkeley National Lab. He specializes in the field of nanomagnetics / spintronics for the advancement of energy-efficient information technologies. His research group has been at the forefront of developing multilevel 3D magnetic devices, demonstrating the manipulable magnetic properties of 2D materials, and conducting experimental investigations on probe-based magnetic recording for future information technology applications. Additionally, his team has established the minimum energy dissipation of nanomagnetic memory bits and the efficacy of low-energy spin switching using sub-10-nanometer magnets. Hong boasts a portfolio of over 20 patents, has authored more than 90 peer-reviewed papers, and has delivered in excess of 50 presentations, including numerous invited seminars and colloquia at esteemed international conferences. He serves as an editorial board member for iScience, Scientific Reports, and Public Library of Science One, as well as a reputable panel reviewer for the National Science Foundation (NSF) and the American Association for the Advancement of Science (AAAS). He obtained his Ph.D. from UC Riverside in 2009, having conducted his graduate research at the NSF-funded MRSEC center (under the leadership of Professors Haddon and de Heer) at the University of California, Riverside, CA. During this period, he focused on exploring the magnetic and electric properties of carbon nano-structures and the cutting-edge technology of magnetic materials/devices. In 2013, he was awarded a prestigious NSF-STC postdoctoral fellowship, affiliated with one of the largest centers supported by the NSF in the United States and awarded Distinguished Fellowship at HBUT in 2022.