BANNER WITCOFF

Kamaram Munira, Ph.D.

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Recognized in the Electrical Engineering field for strong and multi-dimensional technical and research skills, Kamaram applies her expertise and experience to innovate and customize legal and business solutions for the firm's clients. Kamaram has extensive experience in drafting and prosecution of U.S. and international patent applications for both large companies and start-up clients in software and hardware technology areas. Areas of expertise include Semiconductor Devices, Machine Learning , Blockchain Technology, 3D Memories, Robotics, Computing-In-Memory, Autonomous Vehicles, Spintronics, Magnetism and Quantum Transport.

Kamaram has an extensive understanding of physics-based modeling and the simulation of next-generation semiconductor and magnetic devices - and novel material investigation using Density Functional Theory. Furthermore, she possesses a strong understanding of Semiconductor Device Physics and Materials Science. Kamaram's sharp attention to detail and ability to quickly learn new processes continuously aids her in applying engineering concepts, principles and practices to device design and engineering.

Kamaram received a B.S. in Computer Science with high honors and a certificate in Nanomaterials from the Georgia Institute of Technology in 2006. She received a Ph.D. in Electrical Engineering from the University of Virginia in 2012, completing her dissertation on "Achieving Low Energy and Reliable Performance in Magnetic Memory and Logic." Kamaram was honored with the Louis T. Rader Graduate Research Award from the University of Virginia, and the President's Undergraduate Research Award from the Georgia Institute of Technology.

She also served as a postdoctoral research fellow at the Center for Materials for Information Technology at University of Alabama, where she investigated highly polarized full, half and inverse Heusler alloys to identify materials to be used as free layers in STT-MRAM to improve the efficiency of switching (heusleralloys.mint.ua.edu). Furthermore, she analyzed layered Heusler superlattices, Heusler alloy and MgO interface for half-metallicity and perpendicular anisotropy. She also was involved in identifying incoherent switching modes in the free layer in STT-MRAM cells, as well as evaluated potential trapped states along each mode during the writing process.

In addition, Kamaram also served as a postdoctoral fellow at Micron Technology, Inc., where she created physics-based compact models for emerging memory technologies and next generation DRAM in MATLAB and Verilog, simulating devices and analyzing results to build a more realistic model for engineers. She also tested the reliability of voltage controlled anisotropy-magnetic RAMs (VCMA-MRAM), investigating alternative writing mechanisms to spin transfer torque in magnetic RAM (MRAM).

In her spare time, Kamaram volunteers as a mentor for the American Physical Society's Industry Mentoring for Physicists (IMPact) program.

Education

Georgia Institute of Technology
2006, B.S., Computer Science

University of Virginia
2012, Ph.D., Electrical Engineering

Practices

Patent Prosecution

Industries

Electrical + Computer Technologies

Recent News + Events + Related Publications

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