

Brief bio of Samia Subrina



Samia Subrina is a Professor in the Department of Electrical and Electronic Engineering (EEE) at Bangladesh University of Engineering and Technology (BUET), Bangladesh. She completed her B.Sc. (2003) and M.Sc. (2006) Engg. degree from EEE, BUET. She completed her PhD from the University of California, Riverside, USA and was recipient of Dean's Distinguished Fellowship.

Her field of specialization is electrical and electronic engineering, more specifically, her research interests include modeling of thermal and electronic transport in nanoscale materials, study of thermal and electronic transport characteristics in nanoscale devices, modeling of optoelectronic devices, device and material characterization and renewable energy. The research work has been published in Nature Materials, Nature Sci. Report, RSC Advances, PCCP, J. of Appl. Phys.,

Appl. Phys. Lett., IEEE Elec. Dev. Lett., IEEE Trans. on Nanotechnology etc.

One dominant research focus of Dr. Subrina is the study of thermal transport in graphene, the latest carbon allotrope with intriguing electronic, thermal and mechanical properties and its application in heat mitigation. Apart from graphene, recently researchers have performed experiments with other two dimensional (2D) materials, such as silicene, germanene, hexagonal boron-nitride (h-BN) and chalcogenides due to their novel properties and broad application prospects that range from next generation energy efficient nanoelectronic devices to aerospace structures. Her current research includes the study of diverse 2D nanomaterials, composites of nanomaterials with the help atomistic simulation which is very essential prior to experimental development. Another focus of study is to minimize the short channel effects arise due to device miniaturization. Analytical models of gate and/or channel engineered various device structures has developed with a view of enhanced suppression of short channel effects.

She has been honoured with a number of awards throughout her career in recognition of her excellent academic performance, active research and contribution to the community while the most recent ones are recognized as Associate Fellow of the Bangladesh Academy of Sciences (BAS); "The Asian Scientist 100" - Asian Scientist Magazine, Singapore, 2020; 2020 OWSD - Elsevier Foundation Awards for Early Career Women Scientists in the Developing World; Best Paper Award, IEEE WIECON-ECE 2018, Invited Future Leader in STS Forum 2017, Bangladesh Academy of Science (BAS) - TWAS Young Scientist Award 2016 and TWAS young affiliates 2015 and Dr. Fatema Rashid Second Best Paper Award, 8th ICECE, 2014.

She has been serving as librarian (additional charge) of Central Library, BUET and contributing successfully by adding new resources. She also served as provost in ladies hall of BUET. She is involved in national level consultancy work and serving as member of selection board of faculty recruitment, advisor of syllabus committee in several universities. She is involved in organizing conferences, workshops and tutorials in different modes such as convener, member of technical and organizing committees, session chair, invited speaker, reviewer, and presenter. She is actively engaged in several national and international professional organizations, namely serves as executive committee member and Chair (2022, 2021, 2017) of IEEE EDS/SSCS Bangladesh Chapter, SRC Vice-Chair of IEEE EDS REGION 10, 2022 and editorial board member of Nature Scientific Report. Her contribution towards creating technological awareness amongst women of Bangladesh in engineering through serving as Affinity Group Treasurer (2015) of WIE (Women in Engineering), IEEE Bangladesh section is of worth mentioning. She is also involved in various kinds of consultancy services in the public and private sectors of Bangladesh. Being a female researcher, her contribution to STEM will intrigue motivation to her fellow mates.