NSF NANOSCALE SCIENCE AND ENGINEERING GRANTEES CONFERENCE, DECEMBER 7-8, 2021-



Bio: Nadia El-Masry is a program director for the Engineering Research Centers (ERC) in the division of Engineering Education and Centers (EEC), joined the EEC division in 2019. El-Masry was a full professor of Materials Science and Engineering at North Carolina State University since 1996. Her research field is in "Spin Electronic" material and devices for memory devices, and "Semiconductor Material and Devices" for light emitting diodes and solar cells. During her tenure at NC State, she served at NSF as a program director (rotator) for the electronic and photonic materials (EPM) in DMR-MPS (2009-2012), and program director for the electronic, photonic, and magnetic devices (EPMD) in ECCS-ENG (2015-2017). El-Masry has published over 212 refereed journal publications, contributed to 75 invited talks and conference presentations, and 6 issued patents.

El-Masry has published 220 peer-reviewed publications, contributed 75 invited talks and conference presentations, and 6 issued patents. As a Professor at North Carolina State University, El-Masry has administered research funds from DOD, DOE, NSF, and DARPA funding agencies. During her tenure at NCSU she has supervised 36 Grdauate students.

El-Masry performed research and development in the growth, fabrication, and characterization of wide range of electronic, magnetic, and photonic materials and devices:

- Magnetic Materials:
 - **Spin Electronics:** Interfacial induced dilute magnetic materials in thin films for spin electronics and memory cells.
 - **Permanent magnets**: Rare-earth permanent magnet materials, and magnetic thin film of metallic alloys for data storage.
- III-Nitride thin films and Nanowires for light emitting diodes (solid-state lighting).
- **III-V heterostructures for solar cell applications**: GaAs and related compounds for Solar cell absorbers.