# Sajid Ali

*PhD Candidate*
*Applied Physics*
*Northwestern University*

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## Education

2016–Present **Northwestern University**, *Evanston, IL*,
Ph.D., Applied Physics,
Computational x-ray optics, Technique development for X-ray Microscopy.

2011–2016 **IIT Madras**, *Chennai, India*,
Masters of Tech. in Microelectronics and VLSI Design Electrical Engg.,
Master's Thesis : Impurity induced magnetism in Graphene.

2011–2016 **IIT Madras**, *Chennai, India*,
Bachelors of Technology, Electrical Engg.,
Minor: Physics.

## Research Experience

2018–Present **X-Ray Wave Propagation**,
*X-Ray Microscopy Group*, Northwestern University, PI: Prof Chris Jacobsen.
- Developing parallelized computer codes for large scale wave propagation.
- Implemented finite difference based wave propagation in PETSc.

2016–2019 **Zone Plate Testing**,
*X-Ray Microscopy Group*, Northwestern University, PI: Prof Chris Jacobsen.
- Tested high aspect ratio zone plates for efficiency and tilt tolerance at APS and NSLS.
- Developed code to simluate the effect of tilt misalignment.

2015–2016 **Magnetism in Graphene**,
*Computaional Condensed Matter Group*, IIT Madras, PI: Prof Ranjit Nanda.
- Investigated the magnetic properties of ntercalated bilayer graphene using DFT.
- Performed stability analysis for those which exhibited a non-trivial magnetic moment.

Summer 2015 **A preliminary DFT Study on the stability of cathode materials**,
*Center for Automotive Energy Materials*, ARCI IITM Research Park, PI: Dr Sahana MB.
- Studied the relative stability of three structural phases of a novel cathode material for Li-ion batteries.
- Created complex heterostructures and studied their electronic structure using DFT.

## Publications

2018 **Zone Plate Performance as a Function of Tilt Analyzed via Multislice Simulations** Syed Sajid Ali, Kenan Li, Michael Wojcik and Chris Jacobsen *Vol 24, Suppl. S2 (Proc. of the 14th Intl. Conf. on X-ray Microsc. 2018) pp. 298-299*

2016 **Magnetism in intercalated graphene** Sajid Ali, BRK Nanda *AIP Conference Proceedings 1731, 130040*