



**NAME:** MILIND JAGOTA

**SCHOOL:** Liberty High School, Bethlehem, Pa.

**YEAR:** Senior

**HOMETOWN:** Bethlehem, Pa.

**PROJECT:** Computational Study of Random Nanowire Networks:  
Optimization of Conductivity through Orientation

**FIELD:** Materials Science

**MENTORS:** Dr. Nelson Tansu, Daniel E. '39 and Patricia M. Smith Endowed  
Chair Professor; Director, Center for Photonics and Nanoelectronics (CPN),  
Lehigh University

*“As I saw smartphones and tablets becoming ubiquitous in daily life, I began to wonder about the touch screen technology that made them possible.”*

Milind Jagota’s project identifies a way to increase the performance of an electronic material. The material could be used in electronic devices from solar panels to smartphones, and increasing its performance can foster innovation in those areas. As he saw smartphones and tablets becoming ubiquitous in daily life, Milind began to wonder about the “magic” behind the touch screen technology that made them possible. His research made apparent the critical role of transparent conductors in touchscreens and their broader use case scenarios.

Far more advanced than his early memories of rock candy crystal experiments, Milind pursued this project because he has a passion for electronics and the potential for Indium Tin Oxide to have a broad societal impact. His favorite subjects in school are physics and computer science. Milind’s favorite part about STEM is the interdisciplinary exchange of ideas between historically distinct fields.

Milind aspires to be an electronics engineer and is interested in both consumer electronics and medical technology. To date, his proudest accomplishments are publishing this research project in the Nature Publishing Group’s Scientific Reports Journal, as well as participating in the Pennsylvania Governor’s School for the Sciences. Milind anticipates majoring in engineering physics or electrical engineering in college. He is interested in attending Stanford University, the Massachusetts Institute of Technology, Cornell University, the University of Pennsylvania, Princeton University, Columbia University, Northwestern University or Lehigh University.

Outside of the classroom, Milind plays varsity tennis, volunteers at the DaVinci Science Center and is a member of the Liberty High School Marching Band. If he could meet any historical figure, it would be Aristotle because of the philosopher’s far-reaching interdisciplinary impact on ideas even into the 21st century.