

Manav Malhotra

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EDUCATION

Columbia University, Fu Foundation School of Engineering and Applied Science

Senior

New York, NY

2004 – Expected 2008

- Bachelor of Science in Applied Physics
- Bachelor of Science in Applied Mathematics
- Dean's List every semester

Pocono Mountain West High School

Graduate

Pocono Summit, PA

2000 – 2004

- Cumulative GPA: 4.0+/4.0
- Vice-President and Treasurer of Student Council, Varsity member of Scholastic Scrimmage
- Junior Academy of Science Director's Award of Mathematics, Sons of the American Revolution Good Citizen Medal

RESEARCH EXPERIENCE

Columbia University Department of Applied Physics and Applied Mathematics

Research Assistant under Professor Irving P. Herman

New York, NY

Winter 2005-Present

- Currently modeling for an optimal geometry of photovoltaic cells using thin films of different band gaps in series
- Studied dielectrophoresis as a method of creating functional electrical devices through the optimization of applied voltage, applied frequency, electrode gap size, and concentration of nanowire solution
- Studied the electrical properties of Cadmium Selenide nanoparticles and Vanadium Oxide nanowires
- Gained experience using lab equipment such as the Scanning Electron Microscope, working in a clean room, and probing techniques to measure transport properties of nanostructures

Lehigh University Department of Physics

Research Assistant under Professor Slava V. Rotkin

Bethlehem, PA

Summer 2006

- Developed a model for the capacitance of carbon nanotube systems in different geometries, both analytically and numerically
- Created an electromagnetic shielding device to block interference from external electric fields while taking I-V and photoelectric measurements of carbon nanotube systems

HONORS & ACHIEVEMENTS

- A talk based on my research on dielectrophoretic alignment of Vanadium Oxide nanowires was presented by Professor Sarbajit Banerjee at the 2007 American Physical Society March Meeting in Denver, Colorado
- Named Wayne K. Kao Scholar for achievements in engineering for the 2005-06, 2006-07, and 2007-08 school year

LEADERSHIP & EXTRACURRICULAR ACTIVITIES

Ferris Reel Film Society

Vice-President

New York, NY

May 2007 – Present

Webmaster/Art Director

May 2006 - Present

Treasurer

January 2006 – May 2006

Public Relations Chairman

May 2005 – May 2006

Society of Physics Students

Member

New York, NY

September 2004- Present

Treasurer

September 2005- May 2006

SKILLS

- Trained Scanning Electron Microscope Technician
- Proficient programming in Mathematica, Matlab, Java, and HTML
- Practiced in Microsoft Office (Word, Excel, PowerPoint)
- Experienced using Windows, Mac OS X, and Unix