The SEAS Office of Undergraduate Student Affairs and Global Programs in partnership with the Engineering Student Council will be holding an Undergraduate Summer Research Symposium and Fair on September 27, 2012 from 5-8 pm in 555 Lerner. The event will have two components: 1) a presentation by SEAS faculty to promote undergraduate research opportunities in their labs (5-6:15 pm); and 2) a poster presentation at which 21 SEAS students will showcase their summer research (6:15-7:45 pm), undertaken at Columbia, and other universities both domestic and international. Light refreshments will be served.

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Three Dimensional Microtubule Assembly in the Presence of Poly-L-Lysine
Megan Armstrong, SEAS '13, Biomedical Engineering; Ruchir Khaitan, SEAS '15, Computer Engineering; Hari Raman, SEAS '14, Biomedical Engineering; Veronica Reynolds, SEAS '14, Materials Science and Engineering; Elyse Shapiro, BC '14, Biology

Research Undertaken at the Venkataraman Lab in Single Molecular Circuits
Tanay Doctor, SEAS '15, Earth and Environmental Engineering

Lightweight, Inexpensive, and Human-Friendly Methods for Design in Assistive Robotics
Haris Durrani, SEAS '15, Applied Physics; Brendan Chamberlain-Simon, SEAS '15, Mechanical Engineering; Angel Say, SEAS '13, Mechanical Engineering

Plasmid Constructions for Analysis of CRISPR-Cas System in *Escherichia coli*
Claire Duvallet, SEAS '13, Biomedical Engineering

Classification of Heart Enhancers in Drosophila
Julian Haimovich, SEAS '13, Applied Mathematics

Hydrology Simulations on Basalt Soil for the Landscape Evolution Observatory (LEO)
Christina Hernandez, SEAS '14, Earth and Environmental Engineering

Effect of the Use of Recycled Concrete Aggregate on the Mechanical Properties of Concrete
Kenneth Ho, SEAS '13, Civil Engineering, et al.

Optimizing the Conductivity of Textiles via Atomic Layer Deposition for Pressure Sensitivity
Jeremy Jones, SEAS '14, Chemical Engineering

CAD Modeling of Tall Building Structural Systems for use in FEM Simulations
Claire Kao, SEAS '14, Civil Engineering; et al.

On-chip Security Test for High-Dimensional Quantum Key Distribution
Prashanta Kharel, SEAS '13, Department of Electrical Engineering; et al.

Identification of a Novel Long Non-coding RNA in Cardiac Differentiation
N.H. Diane Kim, SEAS '14, Biomedical Engineering

Q-Potts Simulation of Breast Cancer Cell Morphologies
Esha Maharishi, SEAS '15, Computer Science

Projecting Future Farm Distribution
Andrew Mercer-Taylor, SEAS '15, Computer Science

Microalgae Preconcentration by Sedimentation and by Addition of Montmorillonite Clay Coagulant
Elizabeth T. Murray, SEAS '13, Chemical Engineering; et al.

Novel Efficient Microbial Fuel Cell Anodes Using Activated Carbon Nanofiber Nonwoven
Radhe Patel, SEAS '15, Chemical Engineering; et al.

Effect of Thermal Cycling on Barrier Layers for Environmental Protection of Nickel-Based Alloy 617
Connie Phung, SEAS '15, Mechanical Engineering; et al.

Mediated Reality for the Masses: An Investigation into the Viability of a Low Cost Mediated Reality System
Andrew E. Pope, SEAS '15, Computer Science

Electronics for the Vertical Slice Test of the MicroBooNE Light Collection System
Kathleen Tatem, SEAS '13, Applied Physics

Conductance of Nickel and Iron Mononuclear Complexes in Methyl-Sulfide Linked Single-Molecule Junctions
Ari B. Turkiewicz, SEAS '15, Chemical Engineering

Diagnosis of Osteoarthritis via Laser Speckle Rheology
Kapil Wattamwar, SEAS '13, Department of Biomedical Engineering; et al.

Pickering Emulsion Optimization Using Silica Nanoparticles
Kendra Windsor, SEAS '13, Chemical Engineering; et al.