

# KRISTA M. DURNEY

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## EDUCATION

- 2012 – 2018 **Columbia University** (*New York, NY*)  
PhD, Biomedical Engineering (degree completed: July 2018; degree conferred: October 2018)  
Emphasis: Knee articular cartilage biomechanics and cartilage tissue engineering
- 2005 – 2011 **The Cooper Union for the Advancement of Science and Art** (*New York, NY*)  
ME, Master's Degree of Mechanical Engineering, May 2011 (*full-tuition scholarship*)  
BE, Bachelor's Degree of Engineering, Inter-Disciplinary Engineering, May 2009 (*full-tuition scholarship*)

## EXPERIENCE

- July 2018 – present **Goldman Sachs** (*New York, NY*)  
Fellow, Global Investment Research Division  
○ Conducting research into biotechnology companies in order to provide investment recommendations
- Sept. 2012 – July 2018 **Columbia University** (*New York, NY*)  
Graduate research assistant; Musculoskeletal Biomechanics Laboratory, P.I. Gerard A. Ateshian, PhD  
○ Investigated modes of (human and bovine) articular cartilage tissue failure and novel repair strategies  
○ Contributed to 7 peer-reviewed journal publications, 3 patents, delivered 7 podium presentations and contributed to 20+ posters at academic conferences  
○ Advisor and project manager to 20+ undergraduate and graduate students
- Sept. 2015 – May 2018 Teaching Assistant; Graduate Biomedical Device Design (year-long course), Katie Reuther, PhD, MBA  
○ Advised 80+ students on product design, prototyping, and commercialization strategy, including regulatory and reimbursement
- May 2015 – May 2016 **Columbia Technology Ventures** (*New York, NY*)  
Tech Transfer Fellow; a competitive internship for PhDs to help translate technologies out of the university  
○ Assessed emerging science and engineering technologies from various Columbia laboratories  
○ Wrote detailed scientific descriptions and non-scientific marketing descriptions of technologies  
○ Envisioned future applications for technologies to drive licensing outreach efforts
- Jan. 2011 – May 2012 **National Institute of Health and Medical Research of France (INSERM)** (*Paris, FR*)  
Visiting Fellow; Cellular Signaling and Pharmacology of Cartilage Lab, P.I. François Rannou, MD, PhD  
○ Investigated intervertebral disc mechanobiology in a large animal model of adolescent scoliosis  
○ Correlated biochemical tissue changes with *in vivo* mechanical loading condition  
○ Acquired 18 months of funding: Whitaker Foundation International Fellowship in Biomedical Eng.
- June 2008 – Aug. 2008 **University of Texas San Antonio** (*San Antonio, TX*)  
Undergraduate Research Assistant; Cardiovascular Biomechanics Lab; P.I. Hai-Chao Han, PhD  
○ Investigated collagen contributions to residual stress in carotid arteries  
○ Acquired NSF-REU funding and this research yielded a poster at an academic conference
- Dec. 2006 – Feb. 2007 **NYU Hospital for Joint Diseases & The Veterans Affairs Medical Center** (*New York, NY*)  
Undergraduate Research Assistant; Laboratory for Minimally Invasive Surgery; P.I. Peter S. Walker, PhD  
○ Performed CAD modeling of a device that orients instruments during minimally invasive knee surgery

## LEADERSHIP & AWARDS

- May 2018 ■ **Inclusive Teaching and Learning Certificate Program**, Columbia University, Spring 2018
- Aug. 2017 ■ **Cisco Global Problem Solver's Challenge**, Third Runner Up: Baby Bloom Inc. - \$10,000 cash prize
- Nov. 2016 ■ **Columbia Engineering Fast Pitch Competition**, Grand Prize, Boost Smart Bottle (*New York, NY*)
- July 2016 ■ **SB<sup>3</sup>C PhD student paper competition**, 2<sup>nd</sup> place: Biomechanics of Injury (*National Harbor, MD*)
- July 2005 ■ **Wendy's Heisman Scholar-Athlete Scholarship**
- June 2005 ■ **St. John's University Women in Engineering Scholarship**
- 2003-2005 ■ **High School Captain – Three Varsity Sports**: Volleyball, Swimming & Softball, Bishop Kearney (*Bklyn, NY*)

## SKILLS

- **Mechanics**: CAD, FEA, Fabrication (machining, 3-D printing, laser cutting), Controls, Data Acquisition, & Statistics
- **Biology**: Varied skills spanning Gene, Protein, Cell, Tissue, and Organ level: qRT-PCR, Western Blot, Cell Culture, Organ Culture, bioreactors, Fluorescent and Colormetric Assays, Histology, Immunohistochemistry, ELISA, & Genetic Eng.
- **Imaging**: Confocal Microscopy, SEM, AFM, FTIR and Raman Spectroscopy
- **Software**: SolidWorks, ANSYS suite, FEBio, MATLAB, LabView, ImageJ, Vic2D, R, LaTeX, Basic Programming Skills (Python), Microsoft Office Suite (Excel, PowerPoint, Word) & Adobe Creative Suite
- Certified Emergency Medical Technician, New York State, 2010