

SANDRA CHEN

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Education:

Massachusetts Institute of Technology

June 2012 Cambridge, MA

Candidate for Bachelor of Science in Mechanical Engineering, minor in Economics and Management Science GPA: 4.6/5.0

Relevant Coursework: Controls, Dynamics, Design & Manufacturing I, Thermal Fluids Engineering, Differential Equations, Engineering Management, Corporate Financial Accounting, Microeconomics, Macroeconomics, Finance Theory I, Probability & Statistics

Experiences:

BNP Paribas

January 2011

New York, New York

Fixed Income Extern

- structuring and analysis of trade and product ideas, and creation of marketing materials and presentations, work closely with senior sales representatives on covering hedge funds, asset managers, and pension funds
- perform quantitative and qualitative analysis of different trading strategies, assisting senior traders with position tracking responsibilities, and creation and maintenance of trading tools
- developing investment ideas, modeled transactions, selling and cross-selling BNP Paribas' products, managing portfolios and communicating with clients

IMS Gear, German manufacturer for automotive, aircraft, and electronics industry

June 2010—August 2010

Taicang/Shanghai, PRC

Design and Manufacturing Intern

- Assisted senior management with the audit process of the company and with the product production approval process and increased efficiency by 5%
- Worked directly with the customer to design product fabrication processes, cost and benefit analysis, packaging and delivery schemes, and S.W.O.T analysis.
- Conducted testing with quality management department to ensure products are created according to protocol by calculating cpk values, evaluated the cause and effect of faulty products, and improved current products in the market.

MIT Design and Manufacturing I: Project-Based Course

February 2010 --- May 2010

Cambridge, MA

Competition participant

- Designed and fabricated robotic system that can overcome competition challenge in mock playing field: score codices on pyramid, and push spring-loaded lever system to a maximum of 20 degrees
- Built own motor to run robot, solid designed through SolidWorks, and used simple electronics and machines to build functional parts.

JET Injector: MIT Bioinstrumentation Laboratory

November 2009—Present Cambridge, MA

Undergraduate Researcher,

- Engineered an improved injector to deliver drugs that are composed of large molecules and proteins by looking at decreasing the initial high throughput pressure, creating a new piston system, and the design of the insulin pen.
- Quantified the amount of active drug injected to predict the appropriate amount of drug delivery.

CombinatoRx, Inc: Drug Discovery

June—August 2009

Cambridge, MA

Process Development Intern

- Engineered a cell migration assay for wound healing using a REIC-6 model
- Conducted high throughput screening of drug combination orders on human keratinocyte cell line HaCat, and 8 colorectal cell lines to discover drug synergies for potential novel drugs
- Programmed laboratory robots to maximize the efficiency of the above and for large scale production.

Skills:

Biomedical: Performed cell culture, high-throughput screening, bacterial genetic transformation, protein purification via column chromatography (HIC) and size exclusion chromatography (SEC), DNA restriction analysis, protein electrophoresis, ELISA, PCR, Microarrays, RNAi, gene splicing, northern, southern and western blots, *mass* spectroscopy, layer-by-layer thin films

Mechanical and electrical: basic electronics, cnc machining, structural and materials analysis, welding

Computer: MatLab, SolidWorks, Excel, Adobe Photoshop, Dreamweaver, Flash CS3, Mac/Windows/Linux OS

Language: Fluent in Cantonese, Proficient in Spanish, Beginner Mandarin

Leadership and Activities:

MIT Career Fair 2009 Executive Committee

May 2009—September 2009

Communications Director

- Conceptualized and implemented the mass promotion of the MIT Career Week and the Career Fair to 4,000 undergraduates and 6,000 graduates on campus and recruited 280+ companies to participate.

MIT Alumni Association Student Ambassador Program

September 2008—Present

President

- Showcase the opportunities and news at MIT through a students' perspective to 5,000+ alumni, parents, prospective students, and honored guests through tours and welcome receptions. Active volunteer for Tech Reunions, Alumni Leadership Conference, Campaign for Students, and the MIT150 Kickoff

Society of Women Engineers

September 2008—Present

Career Development Chair, Vice President of Membership & Information, Region F Collegiate Communications Editor, Outreach Mentor

- Coordinate and lead weekly professional workshops, company tours, and networking events for undergraduates and graduates to connect with engineering leaders in corporate industry and academia; Recruit new SWE members, organize biweekly board meetings, and communicate monthly with SWE National chapter