

# Yuliya Preger

450 Memorial Drive Cambridge, MA 02139 ♦ (818) 274-6600 ♦ [ypreger@mit.edu](mailto:ypreger@mit.edu)

## EDUCATION

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### Massachusetts Institute of Technology

Candidate for Bachelor of Science in Chemical Engineering

GPA: 4.6/5.0

Relevant Coursework: Introduction to Chemical Engineering, Fluid Mechanics, Chemical Engineering Thermodynamics

Expected Coursework (by summer 2012): Separation Processes, Chemical Kinetics and Reactor Design

Cambridge, MA

June 2013

## RESEARCH EXPERIENCE

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### Biomaterials Science and Engineering Laboratory

Undergraduate Research Opportunities Program (UROP)

- Performing bench-scale experiments to determine the optimal solvent purification and extraction process for various compounds in palm oil effluent (process will ultimately be raised to plant level)
- Created procedures for the analysis and quantification of compounds of interest using high performance liquid chromatography
- Investigated the micellization of compounds of interest using HPLC, spectroscopy and drop shape analysis

Cambridge, MA

October 2010-present

### Jet Propulsion Laboratory

Summer Research Intern

- Worked as part of a team of summer students to characterize various Pt-alloy thin films for use as catalysts in fuel cells
- Analyzed pre/post corrosion data by SEM, XRD and profilometer to identify the most stable alloy and composition

Pasadena, CA

June-August 2009

## LEADERSHIP & MANAGEMENT

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### KEYs to Empowering Youth

Co-Chair

- Working with a co-chair to coordinate all aspects (marketing, logistics, program agenda, volunteer recruitment) of a Society of Women Engineers STEM outreach program for middle school girls
- Organize lectures, hands-on projects and lab tours for thirty girls several times a semester.

Cambridge, MA

February 2010 – present

### MIT Career Fair

Director: Day-of Logistics

- Worked with a team of six other students to plan and coordinate all aspects of the MIT Career Fair and associated info sessions
- Negotiated contracts amounting to ~\$70,000 with external vendors for venue preparation
- Arranged all details in venue (booth set-up, catering, etc.) for the day of the Career Fair for 300+ companies and ~5000 students
- Communicated extensively with company representatives, students, school administration and external vendors to ensure their needs were met.

Cambridge, MA

May 2010 – May 2011

### George Keverian and Sumner G. Whittier Schools

Science Content Specialist

- Researched and prepared lesson plans on various science topics for four classes of students in grades 1-5
- Taught classes and guided 80+ students through projects related to the topics

Everett, MA

July-August 2010

## INTERESTS/ACTIVITIES

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Gordon-MIT Engineering Leadership Program, FIRST Robotics, STEM K-12 Education