VAHID FAZEL-REZAI

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229 Vassar St., Cambridge, MA 02139

Education

Massachusetts Institute of Technology June 2018 (expected)
– Relevant classes: Mechanics; Electricity and Magnetism; Intro. EECS (current); Atmosphere, Ocean, and Climate Dynamics (current); Differential Equations (current) *Cambridge, MA*

Phillips Exeter Academy June 2014
– Graduated with High Honors *Exeter, NH*
– Relevant classes: Linear Algebra, Electronics, Intro. Real Analysis, Game Theory, Cryptography

Research Experience

Space Systems Lab 9/14–present
– Working on satellites with Undergraduate Research Opportunities Program *Mass. Institute of Tech.*
– Developing algorithms to integrate cameras, analyzing images from SPHERES reduced gravity flight test

Genetics Research 3/14–6/14
– Crossed *Drosophila* to create stable lines with gene inserted for fluorescence *Phillips Exeter Academy*
– Dissected flies to identify regions of gene expression collaborating with Seung Kim Lab at Stanford Univ.

Independent Math Research 2/13–9/13
– MIT Program for Research In Mathematics, Engineering and Science *Mass. Institute of Tech.*
– Identified useful methods and classified families of permutations according to novel set of relations
– Presented at 2014 MAA Undergraduate Student Poster Session

Published: Vahid Fazel-Rezai. Equivalence Classes of Permutations Modulo Replacements Between 123 and Two-Integer Patterns. *Electronic Journal of Combinatorics*, 21(2):#P47, 2014.

Computational Biochemistry Lab 10/11–3/12
– Worked in Linux and C for 65 hours alongside graduate students *Univ. of North Dakota*
– Simulated peptide structure with developing software and compared results with experimental data

Independent Math Research 1/11–5/11
– Examined sets of intersections points of polygon diagonals using MATLAB *Grand Forks, ND*
– Identified geometric patterns of interest and generalized to continuous sets of points
– Presented at Intel International Science and Engineering Fair 2011

Work Experience

Product Innovation Specialist 12/14–1/15 (expected)
– Researching products with potential for small-scale solar electricity in Nepal *Recharge Labs*

Grader 9/14–present
– Grading and giving feedback for online programming and math problems *Art of Problem Solving*

Problem Director 8/13–1/14
– One of three Problem Directors for 2014 Exeter Math Club Competition *Phillips Exeter Academy*
– Oversaw a committee that wrote 67 problems and solutions, supervised grading for 180 participants

Activities and Skills

MIT Men's Ultimate Frisbee Team 2014

Phillips Exeter Academy Science Bowl Team, co-founder and captain 2013-2014

Experience with Python, C, Java, MATLAB, LaTeX, Linux, HTML, CSS, BASIC, Lego NXT

Awards

Bronze Medal, Asian Pacific Math Olympiad 2014

Semifinalist, Intel Science Talent Search 2014

Honorable Mention, Canadian Math Olympiad (7th place) 2014

Siemens Award for Advanced Placement 2012

Fourth Award in Mathematics, Intel International Science and Engineering Fair 2011

Winner, USA Junior Math Olympiad (6th place) 2011