

**ANA BELL
(formerly POP)**

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Lecturer

Electrical Engineering and Computer Science Department, MIT

CAREER OBJECTIVE

I am interested in teaching introductory computer science and integrating online learning with the conventional classroom for a more interactive and instant-feedback driven experience.

EDUCATION

May 2009 – Oct 2013
Sept. 2007 – May 2009
Sept. 2002 – May 2007

Degree: PhD in Computer Science (Computational Biology) from Princeton University
Degree: MA from Princeton University, Department of Computer Science
B.A.Sc from University of British Columbia
Major: Computer Engineering (Honours Mathematics Option)
Degree Conferred: May 2007 with Distinction, First Class standing

TEACHING

Sept 2013 – present

Position: Lecturer at Massachusetts Institute of Technology (Cambridge, MA)

Duties: run and teach 6.0001, and manage 6.0002 in front of 450 students, write class exams, manage 10+ TAs

August 2013 – present

Position: Instructor for MITx (Cambridge, MA)

Duties: run online courses 6.00.1x and 6.00.2x, offered on the edX platform, course development (adding exercises, lecture videos, exam questions), answer student questions on forum, enhance learner experience

July 2012 – Aug. 2012

Position: Professor for W.E.B. DuBois Scholars Institute (Princeton, NJ)

July 2009 – Aug. 2009

Duties: to create the curriculum for a university-level introductory computer science course for gifted minority students, to teach 4 hours per week

June 2009 – July 2009

Position: Advisor for Princeton University Summer Programming Experience (Princeton, NJ)

June 2008 – July 2008

Duties: to advise and supervise a rising sophomore student in a student initiated programming project

Sept. 2009 – Dec. 2009

Position: Assistant in Instruction for ISC 234 at Princeton University (Princeton, NJ)

Duties: to hold weekly tutorial sessions, to grade assignments and tests, to hold office hours and assist students in understanding material taught, to make up assignments and final project

Sept. 2008 – Dec. 2008

Position: Assistant in Instruction for COS 126 at Princeton University (Princeton, NJ)

Duties: to hold weekly tutorial sessions, to grade assignments and tests, to hold office hours and assist students in understanding material taught

SUPERVISING EXPERIENCE

Sept 2018 – May 2019

MEng Advisor (Cambridge MA)

Advise student on thesis progress

Sept 2016 – present

Codelt Curriculum Advisor (Cambridge MA)

Duties: Advise Codelt mentors on Scratch and Applinventor curriculum for middle school girls, run a hardware disassembly activity once a semester

Sept 2016 – May 2017

MIT SuperUROP (Undergraduate Research Opportunity) Advisor: (Cambridge MA)

Duties: follow the progress of a computational biology project for an EECS undergraduate student

RESEARCH EXPERIENCE

Sept 2007 – Oct 2013

Position: Graduate student at Princeton University (Princeton, NJ)

Supervisor: Dr. Olga Troyanskaya

Duties: Work on projects in the field of functional genomics, predicting protein-protein interactions and drug-protein interactions in various model organisms

May – Aug. 2006

Position: Undergraduate Researcher at the UBC under Natural Sciences and Engineering Research Council of Canada (Vancouver, BC, Canada)

Supervisor: Dr. Anne Condon

Duties: to help design, implement, and test an algorithm that models the secondary structure of RNA

May – Aug. 2005

Position: Undergraduate Researcher at the UBC under Natural Sciences and Engineering Research Council of Canada (Vancouver, BC, Canada)

May – Aug. 2004

Supervisor: Dr. Joel Friedman

Duties: to write computer programs, to study and model a discrete mathematics problem in graph theory using that computer software

PROFESSIONAL EXPERIENCE

May 2006 – 2012

Position: Founder at Rithmware Technologies Inc. (Vancouver, BC, Canada)

Duties: to work on the GUI implementation, file persistence module, and security features of a CAD software product in chemical engineering process simulation

Sept. – Dec. 2006

Position: Website Developer for Department of Computer Science, UBC (Vancouver, BC, Canada)

Supervisor: Dr. Anne Condon

Duties: to administer a website for a MITACS project “Improving Genome Annotation, Molecular Structure and Interaction Prediction: An Algorithmic Study of Biomolecular Functions”

Aug. – Dec. 2006

Position: Website Developer at Cielo Systems Inc. (Vancouver, BC, Canada)

Supervisor: Djun Kim

Duties: to update a Drupal module for a client’s website

HONORS AND AWARDS

2018

Managing 6.00.1x on edX, which reached over 1 million enrolled learners

- 2008 Princeton University Fellowship – awarded to incoming graduate students (\$21,000 stipend, tuition and health fee coverage)
- 2008 NSERC Canada Graduate Scholarship - Master’s (declined) – awarded to top-ranked PGS-M applicants based on academic, research, research abilities
- 2007 Computing Research Association Outstanding Undergraduate Awards Program Runner-Up – awarded to undergraduate students in North America who show outstanding research potential in the area of computing research
- 2005 General Motors of Canada Ltd. Scholarship in Electrical and Computer Engineering (\$5,000 CAD) – awarded to 1 female student in Electrical and Computer Engineering based on the recommendation of the department
- 2005 EECE412 Introduction to Security “Best Analysis Project” Award
- 2004 Student Feature in the UBC Faculty of Applied Science publication Ingenuity, Fall/Winter 2004, “Applied Science’s bright young stars”
- 2004 UBC Thomas Beeching Scholarship (\$500 CAD) – awarded to engineering students based on the recommendation of the Faculty of Applied Science
- 2003 – 2006 UBC Dean’s Honour List – distinction made for students whose average is >80%
- 2002 – 2006 UBC Undergraduate Scholar Program (\$10,000 CAD) – awarded to all undergraduates who maintain a yearly average >85% in the best 27 credits
- 2002 – 2006 IBM Canada Limited Pacific Development Centre Scholarship (\$10,000 CAD) – awarded to 10 students entering a BC university in the IT sector

PUBLICATIONS

- 2010 **A. Pop**, C. Huttenhower, A. Iyer-Pascuzzi, P. Benfey, O. Troyanskaya; Integrated functional networks of process, tissue, and developmental stage specific interactions in Arabidopsis thaliana; BMC Systems Biology
- 2007 H. Jabbari, A. Condon, **A. Pop**, C. Pop, and Y. Zhao.; HFold: RNA pseudoknotted secondary structure prediction using hierarchical folding; Algorithms in Bioinformatics: 5th International Workshop
- 2007 Ana Pop, Eigenvalues of Non-backtracking Walks in a Cycle with Random Self-Loops; RHIT Mathematics Journal

POSTERS AND TALKS

- MITx SIG 2018 Leveraging the MITx Platform to Improve the Residential Introductory Computer Science Course (6.00)
- MITx SIG 2015 Evolution of 6.0001 and 6.0001 Exams after Integrating MITx platform in the courses
- MITx SIG 2014 How 6.0001 Uses the MITx Platform
- July 2010 Poster: Incorporating developmental information in functional networks for Arabidopsis thaliana
Ana Pop, Curtis Huttenhower, Olga Troyanskaya
ISMB 2010 Conference, Boston, MA
- April 2010 Talk: Presentation Skills
Sandhya Dwarkadas and Ana Pop
CRA-W Grad Cohort 2010, Bellevue, WA
- Oct. 2006 UBC/CS Bioinformatics-Industry Day, Vancouver, BC
- July 2006 Poster: Hierarchical model for Pseudoknotted RNA Secondary Structure Prediction
Anne Condon, Hosna Jabbari, Ana Pop, Cristina Pop, Yinglei Shelly Zhao
RiboWest 2006 Conference, Prince George, BC
- April 2006 Talk: Security Analysis of an RF Biometric Fingerprint Scanner
Kit Mun Chan, Ana Pop, Gurpreet Viridi
BC.NET/Netera Advanced Networks Conference, Vancouver, BC
- March 2006 Poster: Security Analysis of a Biometric Fingerprint Scanner
Kit Mun Chan, Ana Pop, Gurpreet Viridi
University of British Columbia Multidisciplinary Undergraduate Research Conference, Vancouver, BC

ASSOCIATIONS AND SERVICE

- 2014 – present Undergraduate Advisor at MIT
- 2013 Microsoft Hackathon first place Windows 8 Phone App, search for words in an image
- 2012 Microsoft Hackathon first place, developed a Windows Phone app where users swap “cutties”
- 2011 – 2012 Princeton University Data Privacy Campaign Committee member
- 2010 – 2013 Troyanskaya Lab Manager
- 2009 - 2013 Princeton Computer Science Graduate Council Member
- 2007 - 2013 Graduate Women in Science and Engineering (Princeton Division) Member
- 2005 - 2007 Division for the Advancement of Women in Engineering and Geoscience (DAWEG) Member
- 2003 – 2014 Golden Key International Honour Society Member
- 2003 – 2007 Microsoft Student Community Program Member
- 2003 – 2007 Association of Professional Engineers and Geoscientists of BC – Career Awareness Committee Member
- 2002 – 2007 Association of Professional Engineers and Geoscientists of BC – Member Advantage Program
- 2002 – 2007 UBC Electrical and Computer Engineering Club Member