# Curriculum Vitae

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### **Personal** 1 Oxford Street, Room 431d

Cambridge, MA 02138, USA

Canadian Citizen, born in Seoul, South Korea, on January 3, 1992.

Phone: (617) 631-2811

### **Education**

- · Harvard University, Ph.D., August 2014 May 2019,
- · University of Toronto, H.B.Sc., September 2010 June 2014.

### **Publications**

- 1. (with Ethan Cotterill and Ignacio Darago) Arithmetic inflection points of arithmetic linear series on hyperelliptic curves (temporary title), in preparation
- 2. (with Jun-Yong Park) Arithmetic of the moduli of (un)stable elliptic surfaces (temporary title), in preparation
- 3. (with Anand Deopurkar) Stable log quadrics (temporary title), in preparation
- 4. (with Anand Deopurkar) Stable log surfaces, admissible covers, and canonical curves of genus 4, arXiv:1807.08413 (2018)
- 5. (with Jun-Yong Park) *Arithmetic of the moduli of semistable elliptic surfaces*, arXiv:1607.03187 (To Appear at Math. Ann.)

#### **Awards**

- · NSERC Postgraduate Scholarships-Doctoral Program, May 2016 April 2019
- · The Norman Stuart Robertson Scholarship in Mathematics, 2013
- · NSERC Undergraduate Student Research Awards, May 2012 August 2012
- · The Coxeter Scholarship in Mathematics, 2012
- · Queen Elizabeth II Aiming for Top Scholarship, 2010 2014

#### Research

Algebraic geometry, moduli spaces/stacks, KSBA compactifications, Hassett-Keel program, minimal model program,  $\mathbb{A}^1$ -enumerative geometry, rational points on varieties, deformation theory, degenerations, and Grothendieck ring of varieties/stacks.

#### **Recent Talks**

#### **Spring 2019**

- Mar Harvard/MIT Algebraic Geometry Seminar, Harvard University, Cambridge, MA.
  - 'Almost K3' stable log surfaces and curves of genus 4.
- **Feb** *BC NT & AG Seminar*, Boston College, Chestnut Hill, MA. 'Almost K3' stable log surfaces and curves of genus 4.
- Jan Pick My Brain Seminar, Northeastern University, Boston, MA.
  Modular compactifications of moduli spaces in algebraic geometry.

### Spring 2018

• **Feb** *Algebraic Geometry Seminar*, Brown University, Providence, RI. A birational model of moduli of genus 4 curves using stable log surfaces.

### **Spring 2017**

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- · May AMS graduate student conference in algebra and number theory, Brown University, Providence, RI.
  - Compactifying moduli of genus four curves using moduli of log surfaces.
- · Jan Algebraic Geometry Seminar, University of Georgia, Athens, GA. KSBA compactifications of smooth quadrics and trigonal genus four curves.

- **Conferences** March 2019, Arizona Winter School 2019: Topology and Arithmetic, University of Arizona, Tucson, AZ
  - **December 2018**, FRG Workshop on Moduli Spaces of sheaves and Bridgeland Stability, UIC, Chicago, IL
  - November 2018, D-Modules and Hodge Theory, UIC, Chicago, IL
  - October 2018, Moduli Spaces: Birational Geometry and Wall Crossings, BIRS, Banff, AB, Canada
  - October 2018, Western Algebraic Geometry Symposium, University of Oregon, Eugene, OR
  - September 2018, Algebraic Geometry Northeastern Series, Brown University, Providence, RI
  - July 2018, Moduli Spaces in Algebraic Geometry and Applications, satellite conference of ICM, Campinas, Brazil
  - June ~July 2018, Summer Graduate School on Derived Categories, MSRI, Berkeley, CA
  - January 2018, Korean-Italian Meeting on Algebraic Geometry, KIAS, Seoul, South Korea
  - October 2017, Algebraic Geometry Northeastern Series, Northeastern University, Boston, MA
  - August 2017, Conference on Birational Geometry, Simons Foundation, New York,
  - June 2017, Géométrie Algébrique en Liberté XXV, University of Bath, Bath, UK
  - June 2017, Linear Systems on Irregular Varieties, Como, Italy
  - May 2017, Geometry of Moduli Spaces, UCSD, La Jolla, CA
  - May 2017, Mini-workshop in Birational Geometry and Hodge Theory, Northwestern University, Evanston, IL
  - December 2016, Workshop on Combinatorial Moduli Spaces and Intersection Theory, Fields Institute, Toronto, ON, Canada
  - August 2016, Introductory Workshop on Combinatorial Algebraic Geometry, Fields Institute, Toronto, ON, Canada
  - July 2016, Higher Dimensional Algebraic Geometry, University of Utah, Salt Lake
  - July 2015, AMS Summer Institute on Algebraic Geometry, University of Utah, Salt Lake City, UT

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 April 2015, New Techniques in Birational Geometry, Stony Brook University, Stony Brook, NY

#### Service

- · Organized two student algebraic geometry seminars (BAGS and AGLS) at Harvard, Spring 2015  $\sim$  Fall 2017
- $\cdot$  Co-organized undergraduate math seminars at University of Toronto, Fall 2012  $\sim$  Spring 2013

### Teaching

### **Harvard University**

- · Coaching Fellow for Math 1b (Calculus, Series, and Differential Equations), Spring 2019. {Responsible for taking care of students who need extra help to succeed.}
- Teaching Fellow for Math 1b (Calculus, Series, and Differential Equations), Fall 2017. {Responsible for planning and giving lectures to 20 students, holding office hours, and grading exams.}
- · Teaching Fellow for Math 21b (Linear Algebra and Differential Equations), Spring 2017
- · Graduate Course Assistant for Math 258Y (degenerations in algebraic geometry), Fall 2016. {Responsible for planning and running sessions that complement the lectures, grading homeworks.}
- Teaching Fellow for Math 1b (Calculus, Series, and Differential Equations), Fall 2015

### **University of Toronto**

- · Teaching Assistant for MAT136H1 (Calculus 1(B)), Spring 2014. {Responsible for running tutorials and grading a midterm.}
- · Teaching Assistant for MAT135H1 (Calculus 1(A)), Fall 2013
- · Teaching Assistant for MAT136H1 (Calculus 1(B)), Spring 2013
- Teaching Assistant for MAT135H1 (Calculus 1(A)), Fall 2012

### References

# Curriculum Vitae

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### **Joseph Harris**

Harvard University 1 Oxford Street Cambridge, MA 02138, USA harris@math.harvard.edu

### **Paul Hacking**

University of Massachusetts Amherst Lederle Graduate Research Tower, Box 34515 Amherst, MA 01003-9305, USA hacking@math.umass.edu

**Cliff Taubes** (Teaching)

Harvard University 1 Oxford Street Cambridge, MA 02138, USA chtaubes@math.harvard.edu

### **Anand Deopurkar**

Australian National University Hanna Neumann Building #145, Science Road Canberra ACT 2601, Australia anand.deopurkar@anu.edu.au

### **Barry Mazur**

Harvard University 1 Oxford Street Cambridge, MA 02138, USA mazur@math.harvard.edu