## Laura P. Schaposnik M. (February 6, 2023)

PERSONAL INFORMATION	Department of Mathematics, University of Illinois, Chicago, IL 60607, USA	Born: 20 July, 1985 in La Plata, Argentin Email: lauraschaposnik@gmail.com https://schapos.people.uic.edu	1a
EMPLOYMENT	Professor, University of Illinois at Chica	go, USA.	$since\ 2022$
	Associate Professor, University of Illino	ois at Chicago, USA.	2018-2022
	Assistant Professor, University of Illino	ois at Chicago, USA.	2015-2018
	L.Doob. Research Assistant Prof., Ur	niversity of Illinois at Urbana-Champaign, U	SA. 2013-2015
	Wissenschaftlicher Assistent, Heidelb	erg University, Heidelberg, Germany	2012-2013
	Stipendiary Lecturer in Mathematic	s, Trinity & Magdalen College, Oxford, UK	. 2011-2012
	Retained Lecturer in Mathematics,		2010-2011
EDUCATION	University of Oxford. New College, Ox D.Phil. in Mathematics, Advisor: Prof. N		2008-2013
	National University of La Plata. La Lic. en Matematica (MMath equiv.). Gra	Plata, Argentina. de: 10/10. Advisor: Prof. Jorge Solomin.	2004-2008
	Conservatory Gilardo Gilardi. Music	Conservatory, La Plata, Argentina.	2003-2007
VISITING POSITIONS	9. Visiting Fellow, All Souls College, U	University of Oxford, UK.	Spring 2023
	8. Visiting professor, Mathematical Ins	stitute, University of Oxford, UK.	Spring 2023
	7. Research Professor, Mathematical S	ciences Research Institute, USA.	Fall 2022
	6. Research Member, Mathematical Sc	iences Research Institute, USA.	Fall 2019
	5. Alexander von Humboldt fellow, Fre	eie Universität Berlin, Germany.	Summer 2019
	4. Visiting Associate Professor, Simons	s Center for Geometry and Physics, USA.	Spring 2019
	3. Visiting Fellow, New College, Unive	* .	Fall 2018
	2. Visiting professor, Mathematical Ins	stitute, University of Oxford, UK.	Fall 2018
	1. Alexander von Humboldt Fellow, Fr		Fall 2017
SELECTED	10. NSF FRG Award DMS 215210	7 (PI, w/ Mulase, Sawon, Dumitrescu).	2022-2025
GRANTS AND	9. RTG: Algebra, Geometry, and		2021-2026
FELLOWSHIPS SINCE 2015	(Key Personnel, w/ (PI) Coskun et.	al.)	2022 2022
5M(02 <b>2</b> 010	8. Simons Fellowship. 7. MSPI Somester (Co Pl. w/ Fred)	rickson, Mazzeo, Mrowka, (PI) Walpuski).	2022-2023 2022
	6. NSF CAREER Award DMS 17	, , , , , , , , , , , , , , , , , , , ,	2018-2023
	5. NSF Conference Award – "Uni	* /	2021
	4. <b>NSF DMS 1929915</b> (PI, w/ L. A	• /	2019
	3. Simons Center for Geometry a	nd Physics Semester, (PI, w/ L. Anders	on). 2019
	2. Alexander von Humboldt Fellow	- · · · /	2017-2019
	1. NSF DMS 1509693 and DMS	<b>1611835</b> (PI).	2015-2019
Memberships	10. Fellow of UIC Honors College.		since 2021
	9. Member of the American Mathema	atical Society (AMS).	$since\ 2017$
	8. Member of the Unión Matemática	_ ,	$since\ 2017$
	7. Faculty member of the GEAR Ne		since 2015
	•	, Massachusetts Institute of Technology.	since 2014
	<ul><li>5. Member of the AWM Gweneth Hu</li><li>4. Member of the Hitchin-Ngo Lab. I</li></ul>	_ ·	2022-2025 2021-2023

	<ol> <li>Member of the AWM Joan &amp; Joseph Birman Prize Committee.</li> <li>Co-Chair of the AMS Joint Committee on Women in Maths. (JCW).</li> <li>Representative of the Association of Women in Mathematics (AWM) at JCW.</li> </ol>	2019-2023 2017-2018 2015-2018
SUPERVISION OF PHD STUDENTS		pected 2024 nuary 2022
PHD AND MASTER THESIS COMMITTEES	<ol> <li>Fabiola Cordero, PUC-Rio, Brazil.</li> <li>Juan Sebastián Numpaque, Universidad de los Andes, Colombia.</li> <li>Keaton Quinn and Charles Alley, University of Illinois at Chicago, USA.</li> <li>Thesis reviewer, Roma Tre University, Italy</li> </ol>	2021 2021 2019-2020 2019
SUPERVISION OF RESEARCH PROJECTS	<ol> <li>Raina Wu, Supervised through MIT PRIMES-USA.</li> <li>Varun Mittal, Chicagoland High school student.</li> <li>Grace Wang, Supervised through MIT PRIMES-USA (joining MIT).</li> <li>Sheryl Hsu, Supervised through MIT PRIMES-USA (now at Stanford).         Regeneron Science Scholar 2021; JMM MAA Undergraduate Poster Session present.</li> <li>Vishaal Ram, Supervised through MIT PRIMES-USA (now at MIT).         Regeneron Science Scholar 2020; 2020 ST. Yau High School Science Bronze Award.</li> <li>Yuyuan Luo, Supervised through MIT PRIMES-USA (now at MIT).         JMM Outstanding Poster Presentation Award.</li> <li>Rinni Bhansali, Supervised through MIT PRIMES-USA (now at Stanford).         Regeneron Scholar 2019JHSH National Finalist 2019; JMM MAA session speaker.</li> <li>Rachana Madhukara, Kevin Ren, Anlin Zhang (High School, California).         Group National Finalist in the 2017 Siemens Competition.</li> <li>Anlin Shang, Supervised through MIT PRIMES-USA (now at Princeton).</li> <li>Kai-Siang Ang, Supervised through MIT PRIMES-USA (now at Stanford).         Regeneron Science Talent Search Scholar 2017.</li> <li>Jessica Li, Supervised through IGL and MIT PRIMES-USA (now at Harvard).         Semifinalist in the 2014 Siemens Competition and Intel Competition (among other).</li> <li>C. Da, M. Zosky, J. Li, C. Formosa (Supervised through IGL).</li> </ol>	2020 d. 2019 2018 2017 2017 2016 2014
Awards and Grants 2014 - present (~ US\$ 3.2m)	<ol> <li>NSF FRG Award DMS 2152107 (w/ Mulase, Sawon, Dumitrescu) (US\$ 1.4m).</li> <li>UIC Start-up Package (US\$ 365k).</li> <li>Heilbronn Conference grant, PI.</li> <li>BIRS Conference grant, PI, w/ Anderson, Rayan and Schafer-Nameki.</li> <li>BIRS Conference grant, co-PI, w/ Dumitrescu, Failde, Morales and PI Mulase.</li> <li>IHP: Research in Pairs (with Steven Rayan and Emanuele Macri)</li> <li>Simons Fellowship (PI) (US\$ 100k).</li> <li>NSF CAREER Award DMS 1749013: (PI) (US\$ 400k).</li> <li>UIC Visitor's fund award (To host 7 visitors), (US\$10k).</li> <li>NSF DMS 1929915 (PI, L. Anderson Co-PI) (US\$ 9k).</li> <li>Simons Center for Geometry and Physics (~US\$ 300k),</li> <li>SCGP, Conference Grants (PI w/ L. Anderson, US\$ 35k ×2).</li> <li>Oberwolfach Conference grant (PI, w/ Anderon, Hausel and Mazzeo)</li> <li>Alexander von Humboldt Fellowship (US\$ 40k)</li> <li>NSF Research grant DMS 1509693 and DMS 1611835 (PI) (US\$ 144k)</li> <li>UIC Research Award, through UFRP program (US\$ 30k).</li> <li>Conference grant via NSF RTG grant DMS-1246844 (PI: L. Ein). (US\$ 45k)</li> </ol>	2015-2025 2023 2023

8. UIUC Math Department Conference grant (US\$ 5k).	2017
7. NSF Conference grants through GEAR Network (PI), (US\$ 90k).	2015-2017
6. American Institute of Mathematics (PI), Conference Grant (US\$ 35k x2 ).	2015-2017
5. Long & Short visit grants via GEAR Network (US\$ 30k),	2014-2017
4. <b>SCGP</b> (PI w/Anderson), Conference Grant (US\$ 30k).	2016
3. <i>IHP trimester participant support</i> (×2), Institut Henri Poincaré (US\$ 4k)	2012-2016
2. AMS Simons Travel Grant (US\$ 4k)	2014-2015
1. Public Engagement Grant, UIUC w./ Delcourt (PI) & Kedem.	2014-2015
5. European Science Foundation short visit Grant via "ITGP".	2012-2013
4. QGM 6 months research grant, QGM, Aarhus and Oxford.	2012

SELECTED UNDERGRADUATE & GRADUATE PRIZES, AWARDS, AND GRANTS 2006-2013

INTERNATIONAL MEETINGS ORGANIZED 39. Co-Organizer, with Mulase, Dumitrescu, Cruz Morales & Garcia Failde October 2023 BANFF: "Complex Lagrangians, Mirror Symmetry, and Quantization" BANFF, Canada.

2. National Government and Santander Bank and Joaquín V González Prize.

1. Argentinian Mathematical Olympiads, 3rd place, w/R. Lafuente (×2)

3. Clarendon Award and New College Scholarship.

- 38. **Organizer**, University of Oxford, UK

  "Workshop and school on Complex Lagrangians, Integrable Systems, and Quantization".
- 37. **Co-Organizer**, with Anderson, Rayan and Schafer-Nameki May 2023 BIRS: "The Geometry, Algebra, and Physics of Higgs Bundles" BIRS-Okanagan, Canada.
- 36. **Co-Organizer**, with Fredrickson, Mazzeo, Mrowka and Walposki Fall 2022 MSRI: "Analytic and geometric aspects of gauge theory", 1-semester program. MSRI, USA.
- 35. Co-Organizer, with Lara Anderson.

  MSRI: "Connections for Women Woorkshop", MSRI, USA

  August 2022
- 34. Co-Organizer, with Brian Collier
  UIC: "Geometric structures (re)United", UIC, USA.

  June 2022
- 33. Co-Organizer, international conference in Sir Michael Atiyah's memory September 2021 Newton Institute: "Unity of Mathematics", Newton Institute, Cambridge, UK
- 32. Co-Organizer, w/ James Unwin. Second in a series of workshops "SIDE Math". June 2021 UIC: "Selected Interdisciplinary Directions of Entertaining Mathematics 2021", UIC, USA.
- 31. Co-Organizer, w/ James Unwin. First in a series of workshops "SIDE Math". June 2020 UIC: "Selected Interdisciplinary Directions of Entertaining Mathematics 2020", UIC, USA.
- 30. Co-Organizer, w/ Athreya, Bradlow, Gukov, Neitzke, Zorich, Weitze-S. November 2019 MSRI: "Holomorphic Differentials in Mathematics and Physics", MSRI, USA.
- 29. **Co-Organizer**, with A. Mandini, M. Verbitsky, and A. Zorich. June 2019 IMPA: "Teichmüller Theory, Hyperbolicity and Dynamics", IMPA, Brazil.
- 28. Co-Organizer (chair), with L. Anderson, T. Hausel, and R. Mazzeo. May 2019 Oberwolfach: "Geometry and Physics of Higgs bundles", Oberwolfach (MFO), Germany.
- 27. **Co-Organizer** with L. Anderson, 1-semester program. Spring 2019 SCGP: "Geometry and Physics of Hitchin Systems", SCGP, USA.
- 26. Co-Organizer (chair) with L. Anderson. Fifth in a series of workshops. May 2019 SCGP: "Current trends in spectral data for Higgs bundle V", SCGP, USA.
- 25. Co-Organizer (chair) with L. Anderson, R. Mazzeo, and T. Pantev. March 2019 SCGP: "Challenges at the Interface of Hitchin Systems and String Theory", SCGP, USA.
- 24. Co-Organizer (chair), with R. Arroyo, B. Davison, M. Logares, M. Mereb. December 2018 UBA: "Current Trends on Hitchin Systems", UBA, Argentina.
- 23. **Organizer**, Fourth of a series of Two-day workshops. November 2018 Oxford: "Current trends in spectral data for Higgs bundle IV", Oxford, UK.

2008-2011

2009

2007-08

- 22. **Organizer**, Third of a series of Two-day workshops. November 2017 UIC: "Current trends in spectral data for Higgs bundle III", UIC, USA.
- 21. Co-Organizer (chair), with L.B. Anderson, J.M. Esole and L. Fredrickson October 2017 AIM: "Singular Geometry and Higgs Bundles in String Theory", AIM Workshop.
- 20. Co-Organizer with Florent Schaffhauser and Richard Wentworth July 2017 MCA: "Geometry and Physics of Higgs bundles". Special Session, MCA2017, Canada.
- 19. Co-Organizer (chair), with B. Collier and G. Daskalopoulos May 2017 Allerton: "Geometry and Physics of Augmented Bundles". Allerton, Illinois, USA.
- 18. Co-Organizer, with D. Dumas, A. Furman, D. Groves, and K. Whyte February 2017 UIC: "Chicago Action Now II", UIC, USA.
- 17. Co-Organizer with Bernardo Uribe et. al. July 2016 CLAM: "Fifth Latin American Congress of Mathematics", Barranquilla, Colombia.
- 16. Co-Organizer with Florent Schaffhauser and Richard Wentworth. July 2016 CLAM: "Higgs bundles and real character varieties", Special Session, CLAM V, Colombia.
- 15. Co-Organizer (chair), with L. B. Anderson, D. Baraglia and V. Shende June 2016 SCGP: "New perspectives on Higgs bundles, branes and quantization", SCGP, USA.
- 14. Co-Organizer (chair), with Lara B. Anderson June 2016 SCGP: "Current trends on spectral data for Higgs bundle II", SCGP, USA.
- 13. Co-Organizer (chair), with J. Andersen, D. Baraglia, P. Boalch September 2015 AIM: "Spectral data for Higgs bundles", AIM Workshop.
- 12. **Organizer**, Weekend workshop. October 2015 AIM: "Current trends on spectral data for Higgs bundles I", AIM, USA.

11. Co-Organizer. UIC, USA. with Ross, Sinapova, Perkins, et. al. October 2021 UIC: "GROW 2021: Graduate Research Opportunities for Women".

- 10. Co-Organizer. UChicago, USA. with Corlette, Masur, May, Calegari, et. al. October 2020 UChicago: "GROW 2020: Graduate Research Opportunities for Women".
- 9. Co-Organizer (chair) with L. Anderson, S. Katz and J. Teschner. May 2019 SCGP: "Graduate Summer School on Hitchin systems", SCGP, USA.
- 8. Co-Organizer (chair) with L. Anderson; Series of Two-day workshops. March 2019 SCGP: "Workshop on the geometry and physics of Higgs bundles IV'. SCGP, USA.
- 7. Co-Organizer, with Steve Rayan. Prince Albert National Park, Canada. August 2018 PANP: "Geometry and Physics of Gauge Theories".
- 6. Organizer, Graduate students' workshop. UIC, USA. June 2018 UIC: "RTG Workshop on the geometry and physics of Higgs bundles III".
- 5. Organizer, Graduate students' workshop. UIC, USA. Nov. 2017 UIC: "RTG Workshop on the geometry and physics of Higgs bundles II".
- 4. Organizer, One day graduate workshop for students of UIC, USA. May 2017 UIC: "Graduate day on Geometry and Topology II".
- 3. Organizer, One day graduate workshop for students of UIC, USA. November 2016 UIC: "Graduate day on Geometry and Topology' I'.
- 2. Organizer, Graduate students' workshop. UIC, USA. October 2016 UIC: "RTG Workshop on the geometry and physics of Higgs bundles I"
- 1. Co-Organizer (with Andy Sanders, Michelle Lee and Sara Maloni), May 2014 GEAR: GEAR Junior Retreat (10 days - 150 participants, US\$ 300 k budget).

## Mini-Courses

**MEETINGS** 

ORGANIZED

FOR GRADUATE STUDENTS

AND POST-DOCS

- 12. Universidad Nacional de La Plata, La Plata, Argentina.
- 3 Hrs Lectures on percolation theory.
- 11. University of Oxford, Oxford, UK. 3 Hrs - Masterclass on knot theory.
- 10. Universidad Nacional de La Plata, La Plata, Argentina. November 2022 3 Hrs - Lectures on knot theory.

April 2023

March 2023

9.	Undergraduate geometry & topology workshop, Notre Dame, USA.	August 2022
8.	3 Hrs - Lectures on knot theory.  IAS/Park City Mathematics Institute (PCMI) 2019 Program, Park City,	USA. August 2019
7.	4 Hrs - Lectures on Gauge theories intended for $\sim 150$ participants. Junior GEAR Retreat 2017, Stanford University, USA.	August 2017
	3 Hrs - Lectures on Higgs bundles intended for $\sim 100$ participants. Summer program for undergraduate women, UBC, Vancouver, Canada.	Ţ.
	$16~\mathrm{Hrs}$ - Lectures on Knot theory intended for undergraduate students.	August 2016
5.	School on Higgs bundles, ICTS, Bangalore, India. 4 Hrs - Lectures on Higgs bundles intended for graduate students and fa	March 2016 culty.
4.	Pohang Mathematics Institute, Pohang, Korea. 3 Hrs - Lectures on Higgs bundles intended for graduate students and fa	November 2014
3.	Summer School on the moduli space of Higgs bundles, NUS, Singapore.	July 2014
2.	2 Hrs - Lectures on Higgs bundles.  University of California at Davis, California, USA.	January 2014
1	3 Hrs - Lectures on Higgs bundles intended for graduate students and fa Faculté des Sciences d'Orsay, Université Paris-Sud, France	culty. April 2013
1.	2 Hrs - Lectures on Higgs bundles intended for undergraduate and gradu	_
	All Souls College evening series, Oxford, UK.	January 2023
	Heilbronn Annual Meeting *, Bristol, UK.	September 2022
	YSP at UIC*, Chicago, USA.	June 2021
	Real Sociedad Matemática Española *, Spain (Online).	May 2021
24.	Cibercoloquio Latinoamericano de Matemáticas, Brazil (Online).	April 2021
23.	Unión Matemática Argentina *, Annual meeting, Argentina (online).	September 2020
22.	(×2) University of Illinois at Chicago, USA. Marc	ch 2016, March 2020
21.	Rutgers University - Newark Campus, USA.	April 2019
20.	Stony Brook University, Stony Brook, USA.	March 2019
19.	Simons Center for Geometry and Physics, Stony Brook, USA.	February 2019
18.	${\it Iberoamerican~Congress~on~Geometry~^*,~Valladolid,~Spain.}$	January 2018
17.	Northeastern University, Boston, USA.	January 2018
16.	University of Utah, Salt Lake City, USA.	January 2018
15.	University of Washington, Seattle, USA.	January 2018
14.	University of Notre Dame, South Bend, USA.	January 2018
13.	Center for Mathematical Physics, Hamburg, Germany.	June 2017
12.	Universidad Nacional de La Plata, Argentina.	May 2017
11.	Indiana University-Purdue University Indianapolis, USA.	November 2016
10.	String-Maths 2016 *, Collège de France, Paris, France.	July 2016
9.	† Colorado State niversity, Denver, USA.	February 2015
8.	University of North Carolina at Chapel Hill, USA.	January 2015
7.	University of Boston, Massachusetts, USA.	January 2015
6.	University of Minnesota, Minneapolis, USA.	January 2015
5.	Purdue University, West Lafayette, USA.	December 2014
4.	University of Illinois at Chicago, Chicago, USA.	December 2014
3.	Boston College, Boston, USA.	November 2014

 $2.\ Pohang\ Mathematics\ Institute,\ Pohang,\ Korea.$ 

Colloquia and Plenary talks (\*)

November 2014

CONFERENCE AND WORKSHOP TALKS: LIST SINCE 2012 (5 BEFORE THAT)

53.	Brussels-London Geometry day, London, UK.	April	2023
52.	Analytic and Geometric Aspects of Gauge Theory, MSRI, USA.	August	2022
51.	Latin American and Caribbean Workshop on Mathematics and Gender, BIRS	. May	2022
50.	Mirror symmetry in Latin America, (Online).	July	2021
49.	OLGA 2021 - Oxford-London Gauge Assembly, (Online) Oxford, UK.	June	2021
48.	Women at the intersection of math and theoretical physics, (Online) Canada.	Feb.	2021
47.	XII Festival de Matemática, (online) Argentina.	September	2020
46.	Qolloquium: Quivers, Representations, Resolutions, (online) Canada.	June	2020
45.	Higgs bundles & related topics, (online) Toronto, Canada.	May	2020
44.	Connections for Women: Holomorphic Differentials, MSRI, USA.	August	2019
43.	2019 Workshop by Moira Chas, Stony Brook, USA.	June	2019
42.	Holomorphic Differentials in Mathematics and Physics, SCGP, USA.	February	2019
41.	RTG Workshop on the Geometry and Physics of Higgs bundles III, UIC, USA	L. June	2018
40.	Southeastern regional mathematical string theory meeting, Duke University, U	SA. April	2018
39.	The Analysis of Gauge-Theoretic Moduli Spaces, Banff, Canada.	August	2017
38.	Harmonic Maps, Higgs Bundles and Integrable Systems, Hannover, Germany.	August	2017
37.	GEOQUANT Conference, Jutland, Denmark.	August	2017
36.	Topological and Algebraic Advances in QFT, Varese, Italy.	August	
35.	Gauge theory and special geometry (Special Session, MCA 2017), Canada.		2017
	Workshop on Moduli theory and Derived category, Seoul, South Korea.	June	
	Higgs bundles and related topics, Nice, France.	•	2017
	Mirror Symmetry Conference for Young Mathematicians, Ann Arbor, USA.	May	
	British Isles Graduate Workshop Higgs bundles, Isle of Wight, UK.	April	
	BUNDLES, TIFR, Mumbai, India.	March	
	School on Geometry and Physics, Bangalore, India.	March	
	Fifth Annual Midwest Women in Math. Symp. (WIMS), Indianapolis, USA.	February	
	Encuentro Rioplatense de Álgebra y Geometría, La Plata, Argentina.	December	
	Workshop on the Geometry and Physics of Higgs bundles I, Chicago, USA.	October	
	the state of the s	September	
	New Perspectives on Moduli Spaces in Gauge Theory, NUS, Singapore.	August	
	Rep. Theory, Integrable Systems and QFT, Northwestern University, USA.	April	
	Higgs Bundles in Geometry and Physics, University of Heidelberg, Germany.	February	
	Higgs bundles and Hitchin system, Centre Bernoulli, Switzerland.	January	
	Workshop on Holomorphic differentials, Cape Town, South Africa.	January	
	50 years of the Narasimhan–Seshadri Theorem, Chennai, India.	October	
	Spectral data for Higgs bundles, AIM, San Jose, USA.	August	
17.	3	August	
	Differentialgeometrie im Großen, Oberwolfach, Germany.		2015
	2015 Joint International Meeting with the AMS, Porto, Portugal.		2015
	Langlands workshop, UIUC, USA.	November	
	•	November	
		September	
	Workshop on the moduli space of Higgs bundles, NUS, Singapore.		2014
	Workshop on the Geometry and Physics of Moduli Spaces, Miraflores, Spain.		2014
	Character Varieties & Geometric Structures, Howard University, USA.	December	
	9th International ISAAC Congress, Krakow, Poland.	August	
	Topology of moduli spaces of representations, Miraflores, Spain.	March	2013

 $6.\ \ \textit{Workshop on Geometry of Surface Group Representations}, \ \text{CRM}, \ \text{Spain}.$ 

 $\mathrm{May}\ 2012$ 

SEMINARS SINCE 2015 (22 BEFORE THEN)

62.	Analysis and Geometry seminar, Oxford, UK	June	2023
61.	King's College London's Geometry Seminar, London, UK	May	2023
60.	Centre for Topological Data Analysis weekly meeting, Oxford, UK	January	2023
59.	De La Plata por el Mundo, (Online) La Plata, Argentina	March	2022
58.	ZAG seminar, (Online).	December	2021
	Geometric analysis seminar, (Online) Rutgers, USA.	October	2021
	Mathematical Physics seminar, (Online) Perimeter Institute, Canada.	October	2021
	Geometry Seminar, (Online) Lisbon, Portugal.	April	2021
	LAGOON: Leicester Algebra and Geometry Open ONline Seminar, (Online)	_	
53.	Algebraic geometry seminar, Stony Brook University, USA.	May	2019
52.	Geometry and Physics, Rutgers New Brunswick, USA.	April	2019
51.	Algebraic geometry seminar, Imperial College, UK.	November	2018
50.	Algebraic geometry seminar, University of Oxford, UK.	November	2018
49.	String Theory Seminar, University of Oxford, UK.	October	2018
48.	Mathematical seminar/interview, University of Oxford, UK.	May	2018
47.	Séminaire de Géométrie et Quantification, Institut Henri Poincaré, France.	May	2018
46.	$Geometry\ seminar,\ University\ College\ London/King's\ College\ London,\ UK.$	April	2018
45.	DAMPT & DPMMS seminar/interview, University of Cambridge, UK	March	2018
44.	Max Dehn Seminar, University of Utah, USA	January	2018
43.	GEAR seminar, University of Illinois at Urbana Champaign, USA.	November	2017
42.	Felix Klein seminar, University of Notre Dame, USA.	November	2017
41.	(×2) Geometry Seminar, ITS, Vienna, Austria.	October	2017
40.	Mathematical Physics Seminar, University of Heidelberg, Germany.	October	2017
39.	Higher Differential Geometry seminar, MPI, Bonn, Germany.	Oct.	2017
38.	Algebraic Geometry Seminar, FU Berlin, Germany.	July	2017
37.	Mathematical Physics Seminar, IPMU, Japan.	June	2017
36.	Topology Seminar, Northwestern University, USA.	May	2017
35.	Mathematical Physics Seminar, IMPA, Rio de Janeiro, Brazil.	February	2017
34.	Geometric Analysis Seminar, University of Chicago, USA.	January	2017
33.	Mathematical Physics Seminar, Perdue University, West Lafayette, USA.	January	2017
32.	Algebraic Geometry Seminar, University of Chicago, USA.	January	2017
31.	Geometry and Physics Seminar ( $\times 2$ ), Northwestern University,	Spring	2017
30.	Algebraic Geometry Seminar, U. of Buenos Aires, Argentina. June	e 2012, May	2016
29.	Geometry Seminar, University of Texas at Austin, USA.	April	2016
28.	Geometry and Analysis Seminar, University of Oxford, UK.	January	2016
27.	(×2) Geometry seminar, EPFL, Lausanne, Switzerland.	June	2015
26.		May	2015
25.	Differential Geometry Seminar, Harvard University, USA.	March	
24.	Geometry Seminar, UNC at Chapel Hill, USA.	January	2015
23.	Geometry Seminar, University of Minnesota, Minneapolis, USA.	January	2015

SELECTED	7. Mathematical Institute, University of	Oxford, UK. $(3 + 6 \text{ months})$	s) 2018, <i>2023</i>
Research Visits	6. IHP, Paris, France (1+1+1 (Research	in pairs) months)	2012, 2016, 2023
	5. Mathematical Sciences Research Institution	itute (MSRI), Berkeley, USA	(6+6  months) 2019, 2022
	4. Freie Universität Berlin, Germany. (2	2 + 5  months	2017, 2019
	3. Simons Center for Geometry and Phy	vsics, Stony Brook, USA. (5	months) 2019
	2. IMPA, Rio de Janeiro, Brazil. (4.5 me	onths)	2006,2008,2017
	1. National University of Singapore, Sing	gapore. (2.5 months)	2013, 2014, 2016
EDITORIAL	• Editorial Board Member, Geometri	criae Dedicata.	since 2019
BOARDS	• Guest Editor. SIGMA special issue	"Geometry and Physics of	Hitchin systems". 2017-2019
	• Editorial Board. New Collection, U	University of Oxford, ISSN:	1757-2541. 2010-2011
University and	• Senator of the <i>UIC Senate</i> and Fellow	w of the <i>Honors college</i> .	since 2020
DEPARTMENT	• Co-Organiser, Geometry, Topology an		$since\ 2016$
SERVICE AT UIC	• Research Assistant Professor Search C	*	2015-2020
	• Admissions, Fellowships, Assistantship	, ,	2015-2019, 2021
	• Salary (× 1); Visitor (× 2); Faculty S	Search ( $\times$ 1); Mathematics	Club (× 1) . $2017-2018$
OTHER	Alexander von Humboldt Founda	ation, external reviewer.	since 2020
PROFESSIONAL	National Science Centre Poland	,	2020
SERVICE ACTIVITIES	• Behavioural Science Referee: J. o	·	; since 2020
	• NSF Reviewer (× 5).	· -	2016, 2017, 2019, 2021, 2022
	• WMC SheSource Expert, for Won		
	• Co-Organizer of Research semina	ars, University of Heidelberg	g, Germany. 2012-2013
	• MathSciNet Reviewer (accept duti	ties $\sim 2$ times per year).	$since\ 2014$
	• Admissions Interviewer. Magdaler	n and St Peter's Colleges, O	xford. 2009-2011
	• Mathematics Journal Referee (ac	ecept duties $\sim~5$ times per y	vear). since 2012
	Commun. Math. Phys.; Pac. Int. J. Math. & PRE; Revi	r. Geo.; & J. Top.; . J. Math. & Geo. Ded.; ista Mat. Comp.; Pure Appl. Algebra;	Diff. Geom. and its App.; SIGMA & Q. J. Math; Annals of he ENS; J. LMS and J. Geom. Phys.
University	University Instructor, University of Illin	nois at Chicago, USA	
LARGE CLASS	• Math 300: Writing for Mathematics.	$(\times 14)$ Spring 2	2020, 2022 & Fall 2020, 2021
TEACHING	• Math 215: Introduction to advanced a	mathematics. $(\times 4)$ Fa	all 2015, 2016 & Spring 2018
	$\bullet$ Math 596: Independent study. (×6) (	(graduate course) Fall 201	5, 2016, 2017 & Spring 2017
	• Math 547: Algebraic Topology I. (×1)	.) (graduate course)	Fall 2016
	• Math 549: Differentiable Manifolds I.	$(\times 2)$ (graduate course)	Fall 2015 & Spring 2017
	University Instructor, University of Illin		
	• Fundamental Mathematics. Math 348	(×4) and Math 341 (×2)	2013-2015
University	College lectureship, University of Oxford	d, UK.	2010-2012

 $\bullet \ 3D \ Calculus; \ Calculus \ of \ Variations; \ Linear \ Algebra \ I, II; \ Groups, \ Rings \ and \ Fields.$ 

2 to 1

Teaching

Teaching
ASSISTANTSHIPS

Programs &

HIGH SCHOOL

TEACHING

OUTREACH

ACTIVITIES

IN THE MEDIA

Teaching Assistant, Mathematical Institute, University of Oxford. 2009-2010 • B9. Algebraic Number Theory; B3. Geometry of Surfaces; C9.1 Elliptic Curves. Teaching Assistant, National University of La Plata, Argentina. 2006-2008 • Analysis (Mathematics dept.); Probabilities and Statistics (Engineering dept.). International • OPUS Tutor & WISC Tutor, University of Oxford Programs. 2010-2012 • CIE Tutor & Summer Lecturer, Center for International Education, Oxford. 2009-2011 • Junior Lecturer, Colegio Nacional Rafael Hernandez (High School) Argentina. 2007 • Tutor and Mentor online, *Tutor.com*, New York City, US. (through Latinhire). 2005-2008 • Speaker: It All Adds Up, University of Oxford, UK. January 2023 • Speaker: Undergraduate summer workshop, (career talk) Notre Dame, USA. August 2022 • Panelist: NSF REU Women in Science and Technology panel, DePaul U., USA. July 2022 • Speaker: Harvard-MIT Math Tournament, (career talk) HMMT, USA. November 2021 • Reader: Guidepost Montessori, Nido & Toddler room Book reading. July & June 2021 • Speaker: UIC AWM Chapter, Stanford Math Organization, New College Oxford 2021 • Speaker: Stanford Women in Math Mentoring, UChicago Women in STEM club 2021 • Co-Organizer (w. James Unwin): SIDE MATH 2020 2020 • Co-Organizer (w. James Unwin): 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>, 4<sup>th</sup>, 5<sup>th</sup> Sonia day at UIC, 2015-2019 • Connections for Women Panelist, MSRI, Berkeley, USA. 2019 • Volunteer: Sonia Maths day for Girls and UIUC GEMS program 2013-2015 • Co-Organizer (with Jayadev Athreya et al.) MoSAIC Festival, UIUC. 2014 • Panel speaker: Graduate College Career Development, UIUC, USA 2014 • Teacher: Urbana High School & Garden Hills Elementary School. 2013 • (×4) About Children Books Notices of the AMS, Illinois Conn.; Block Club Chicago; UIC Today. 2021-2022 •  $(\times 5)$  About math life / women in math / activities 2019-2022 UIC Today; Wiaarkhu Magazine;: Interview for "2020 Lathisms"; Interview about organizing workshops at MFO, LaPlata1.com. • (× 5) About Gossip spread – A trust model for spreading of gossip, with Bhansali. 2019 ZAP.aeiou; UIC News; Phys.org; Tech Explorist; NewsWise. • (×14) **About Phone-Walkers** – behavioural study done with James Unwin. 2018 The Atlantic; The Chicago Tribune; The Süddeutsche Zeitung; The Times of India; MIT Tech. Rev.; Cronica Global; The Week; Co-Design; UIC LAS; Workplace Insight; Nextbigwhat; Xuehua; Marketingoops - Thailand; Cromo - Uruguay. • (×2) About projects I mentored. Business Wire, Kusi News. 2017 (× 3) Sonia Kovalevsky Days – with J. Unwin. 2016-2019 AWM Newsletter, 49 (5); UIC News; AWM Newsletter, 46 (6).

• (× 1) About Humboldt Fellowship – awards to J. Unwin and myself. UIC Today.

• (× 3) About being top undergraduate student. La Nación, Clarín, El Día.

• (× 2) About workshops co-organized. SCGP News; AIMatters 2016.

Class Tutor, Mathematical Institute, Oxford, UK.

• B9. Algebraic Number Theory (& Revision Classes).

2017

2016 2009

2010

## Additional EXPERIENCE

• Spanish: Native; English and French: Fluent; German: A2

• Choir Singer, Oratorio Society, UIUC, USA. 2013 -- 20152010 - 2011

• Treasurer, Middle Common Room, New College, University of Oxford.

• Conference Assistant, and IT Assistant, New College, University of Oxford. 2010 - 2011

Work In progress	60. Minimal surfaces and orthogonal Higgs bundles, with Ian McIntosh.	
(*= STUDENT)	59. Building a group, with Steve Rayan.	
( 2-2)	$58.\ Differential\ operator\ aspects\ of\ branched\ SL-opers,$ with Indranil Biswas and Sebastian $100$	Heller.
CHILDREN BOOKS	57. Ene and the Steps: a scientific adventure, ISBN: 978-1-7370584-4-1, with Cecilia La Rosa (Illustrator).	2023
	56. The potential to inspire: Sonia Kovalevsky's journey to become a scientist. ISBN: 979-8-9859682-2-4.	2023
	55. Roku Raccoon's difficult day, ISBN: 979-8-9859682-0-0, with Martina Peškar-Rusznák (Illustrator).	2023
	54. Ene and the Magic Tree: a mathematical adventure, ISBN: 978-17370584-1-0, with Cecilia La Rosa (Illustrator).	2021
	53. Ene and the Magic Boxes: an odyssey through the world of artisans, ISBN: 978-17370584-5-8, with Cecilia La Rosa (Illustrator).	2021
Mathematics Volumes	52. Writing for Mathematics, ISBN 979-8-7814575-9-5.	2021
& Books	51. Geometry and Physics of Hitchin Systems, edited with Lara B. Anderson Symmetry, Integrability and Geometry: Methods and Applications (SIGMA).	2019
	50. Geometry and Physics of Higgs Bundles, edited with Anderson, Hausel, Mazzeo Oberwolfach Reports, Vol. 16, N. 2, 2019, pp. 1357–1417 DOI: 10.4171/OWR/2019/23	2019
Preprints (*= student)	49. Animal Synchrony and agents' segregation, with Robin I.M. Dunbar and Sheryl Hsu*.  ArXiv:2212.07505	2022
· · · · ·	48. Real slices of SL-opers, with Indranil Biswas and Sebastian Heller. ArXiv:2212.01695	2022
Publications (*= student)	47. Understanding Zillow's dataset via stock market indicators, with Varun Mittal*.  Heliyon, Cell Press, to appear.	2023
,	46. Correlations between COVID-19 and Dengue, with Paula Bergero and Grace Wang*.  Nature Scientific Reports, volume 13, 1525 (2023).	2023
	45. Focus on a Scientist: Rafe Mazzeo, with Laura Fredrickson Emissary, MSRI Fall 2022.	2022
	44. Generalized Hyperpolygons and applications, <b>ZAG's Handbook of MAG</b> , CRC press.	2022
	43. The Power of Many: A Physarum Swarm Steiner Tree Algorithm, with Sheryl Hsu* and Fidel I. Schaposnik Massolo.  Nature Scientific Reports, volume 12, 14536 (2022).	2022
	42. Cell fusion through slime mold network dynamics, with Sheryl Hsu*.  Journal of the Royal Society Interface, J. R. Soc. Interface 19: 20220054.	2022
	41. Triality for homogeneous polynomials, with Sebastian Schulz*.  SIGMA, 17 (2021), 079, 14 pages.	2021
	40. Branes and moduli spaces of Higgs bundles on smooth projective varieties. with Indranil Biswas and Sebastian Heller.	2021
	Research in the Mathematical Science, Vol. 8, No. 52 (2021)  39. A modified age-structured SIR model for COVID-19 type viruses, with Vishaal Ram*.  Nature Scientific Reports, 11, 15194 (2021).	2021
	38. On the generalized $SO(2n, \mathbb{C})$ -opers, with Indranil Biswas and Mengxue Yang*.  Annals of Global Analysis and Geometry, 60, pages 539 – 557 (2021)	2021
	37. Advanced topics in gauge theory: geometry and physics of Higgs bundles.  Park City Mathematics Series, Volume 28, pp. 201-252, 2021.	2021

36.	Entendiendo la P y el Intervalo de confianza 95, w/ Paula Caporal & Daniela Bozzacchi. Editorial Médica Panamericana, PROTIPED, pp.75-90; ISSN: 2362-3942.	2021
35.	What is a hyperpolygon, with Steve Rayan.  Notices of the AMS, Vol. 68, N. 1, January 2021.	2021
34.	Moduli spaces of generalized hyperpolygons, with Steve Rayan.  The Quarterly Journal of Mathematics, Vol 72 (2021), 1–25;.	2021
33.	Extrapolating continuous color emotions through deep learning, with Vishaal Ram*, and Konstantinou, Volkan, Papadatou-Pastou, Manav, Jonauskaite, Mohr.  Physical Review Research, Vol. 2, No. 3, (2020).	2020
32.	Orthogonal Higgs bundles with singular spectral curves, with Bradlow and Branco*. Communications in Analysis and Geometry, Vol. 28, N. 8, 1895–1931, 2020.	2020
31.	Generalized B-opers, with Indranil Biswas and Mengxue Yang*. SIGMA 16 (2020), 041, 28 pages.	2020
30.	Minimal percolating sets for mutating infectious diseases, with Yuyuan Luo*. <b>Physical Review Research</b> , Vol. 2, No. 2 (2020).	2020
29.	Higgs bundles without geometry, with Steve Rayan.  Snapshots of modern mathematics, DOI 10.14760/SNAP-2020-008-EN.	2020
28.	Higgs bundles – recent applications, Notices of the AMS, Vol. 67 No. 5 (May 2020)	2020
27.	A trust model for bootstrap percolation, with Rinni Bhansali*.  Proc. R. Soc. A 476: 20190826 (2020).	2020
26.	Cayley and Langlands type correspondences for orthogonal Higgs bundles, with David Baraglia. Transactions of the AMS, Vol. 371, Num. 10 (2019) 41 pages.	2019
25.	A geometric approach to orthogonal Higgs bundles,  European Journal of Mathematics, Vol. 4, Num. 4, pp 1390-1411 (2018).	2018
24.	Singular geometry and Higgs bundles in string theory, with L. B. Anderson, M. Esole and L. Fredrickson. <b>SIGMA</b> , 14 (2018), 037, 27 pages	2018
23.	Branes through finite group actions, with Sebastian Heller.  Journal of Geometry and Physics, Vol. 129 (2018) 279-293.	2018
22.	Brauer group of Moduli of Higgs bundles and connections, with Baraglia and Biswas.  A Festschrift in Honour of Nigel Hitchin, Vol. 2, Oxford University Press.	2018
21.	Modeling epidemics on d-cliqued graphs, with Anlin Zhang*. Letters in Biomathematics, Volume 5, Number 1 (2018), p. 49-69.	2018
20.	The phone walkers: A study of human dependance on inactive mobile devices, with James Unwin. <b>Behaviour</b> , (2018) Volume 155, Issue 5, p. 389 - 414.	2018
19.	On the geometry of regular icosahedral capsids containing disymmetrons, with K-S. Ang*. <b>Journal of Structural Biology</b> , Volume 197, Issue 3 (2017), p. 340-349.	2017
18.	T-Branes at Limits of Geometry, with L.B. Anderson, J.J. Heckman, and S. Katz. J. High Energ. Phys. (2017) 2017: 58.	2017
17.	An introduction to spectral data for Higgs bundles Lecture Note Series, IMS LNS Vol 65 (2017), 38 pages.	2017
16.	Monodromy of rank 2 twisted Hitchin systems and real character varieties, with David Baraglia. <b>Transactions of the AMS</b> , Vol. 370, Num. 8, (2018).	2017
15.	Automorphisms of $\mathbb{C}^*$ moduli spaces associated to a Riemann surface, with David Baraglia and Indranil Biswas. <b>SIGMA</b> 12 (2016), 007, 14 pages.	2016
14.	Higgs bundles and exceptional isogenies, with Steve Bradlow. Res. Math. Sci. (2016) 3:14 DOI 10.1186/s40687-016-0062-0.	2016
13.	Interface control and snow crystal growth, with Jessica Li*. <b>Phys. Rev. E</b> , 93, 023302, 2016.	2016
12.	Real structures on moduli spaces of Higgs bundles, with David Baraglia. Adv. Theor. Math. Phys., Vol. 20, N. 3 (2016), 525-551.	2016

	11. Higgs bundles and applications.	2015
	Oberwolfach Reports, Report No. 31 (2015), 31-33.	
	10. Spectral data for $U(m,m)$ -Higgs bundles.	2015
	Int. Math. Res. Notices, Vol. 2015 no. 11.	
	9. Nonabelianization of Higgs bundles, with Nigel Hitchin.	2014
	J. Differential Geom. Volume 97, Number 1 (2014), 79-89.	
	8. Higgs bundles and $(A, B, A)$ -branes, with David Baraglia.	2014
	Communications in Mathematical Physics, Vol. 331 No. 3.	
	7. Spectral data for G-Higgs bundles.	2013
	<b>DPhil Thesis</b> , University of Oxford, 170 p.	
	6. Monodromy of the $SL_2$ Hitchin fibration.	2013
	Int. J. Math. Vol. 24, 1350013 (2013)	
POPULAR PRESS	5. Working from Home. 4 Months and Still Counting, with A. Frabetti, V. Salnikov	2020
ARTICLES	<i>EMS Newsletter</i> , 9 (117), 38-41, September 2020.	
	4. Mathematics in the sea, with James Unwin. AWM Newsletter, Vol.49, No.6.	2019
	3. Sonia Kovalevsky Days, the potential to inspire, with James Unwin.	2019
	AWM Newsletter. Vol.49, No.5.	
	2. Bridges between worlds, from past to present.	2016
	AIMatters 2016, Newsletter of the American Institute of Mathematics.	
	1. Sonia Kovalevsky Days in Chicago, with J. Unwin. AWM Newsletter, Vol. 46, No.6.	2016