

Arielle Leitner
CURRICULUM VITAE

CONTACT INFORMATION Department of Mathematics
Amado Building *Dept. Phone:* 04-829-4272
Technion, Israel Institute of Technology *E-mail:* [eleitner\[at\]tx.technion.ac.il](mailto:eleitner@tx.technion.ac.il)
Haifa, Israel *WWW:* <http://technion.ac.il/~eleitner>

RESEARCH INTERESTS

- Geometric Structures, Geometric Transitions, and Convex Projective Structures
- Symmetric Spaces, Buildings, and Compactifications
- Dessin d'Enfant
- Quadratic Forms, Brauer Groups, and Milnor K-theory in odd characteristic

EDUCATION

University of California, Santa Barbara, Santa Barbara, CA USA

- Ph.D., Mathematics June 2015
 - Thesis: *Geometric Transitions of the Cartan Subgroup in $SL(n, \mathbb{R})$*
 - Advisor: Daryl Cooper
- Certificate in College and University Teaching April 2014
- M.A., Mathematics June 2011

California State University, Chico, Chico, CA USA

- B.S., Mathematics May 2009

EMPLOYMENT

- Postdoctoral Research Fellow, Technion, Israel Institute of Technology Sept 2015–
- Teaching Assistant, UC Santa Barbara Sept 2009– June 2015
- Graduate Student Researcher, UC Santa Barbara Spring 2013, Winter 2014, Spring 2014, Winter 2015
- Graduate Student Researcher, ICERM: Institute for Computational and Experimental Research in Mathematics Fall 2013

FELLOWSHIPS, AWARDS, & GRANTS

Technion Israel Institute of Technology

- Returning Scientists Grant from Israeli Government Sept 2015, Sept 2016
- GEAR Travel Grant to Italy September 2017
- GEAR Travel Grant to Singapore June 2016
- GEAR Travel Grant to Santa Barbara February 2016

University of California, Santa Barbara

- Graduate Merit Fellowship Summer 2012, 2014
- Campus Wide Teaching Assistant Award June 2012
- Mathematics Department Outstanding Teaching Assistant June 2014
- AWM Travel Grant January 2015
- University of California Chancellor's Postdoctoral Fellowship (declined) May 2015

California State University, Chico

- President's Scholarship May 2006
- Floyd L. English Scholarship May 2006, May 2007
- Rawlins Award May 2008
- Research and Creativity Grant Nov. 2007, Nov. 2008

PUBLICATIONS &
PREPRINTS

- “Generalized Cusps on Convex Projective Manifolds: Classification” submitted, joint with S. Ballas and D. Cooper <https://arxiv.org/pdf/1710.03132.pdf>
- “ Almost Regular Dessins d’Enfants on a Torus and a Sphere” submitted, joint with J. König and D. Neftin <https://arxiv.org/abs/1709.06869>
- “ A Classification of subgroups of $SL(4, \mathbb{R})$ Isomorphic to \mathbb{R}^3 and Generalized Cusps in Projective 3 Manifolds” *Topology and its Applications* 206, (2016), 241-254
<http://arxiv.org/pdf/1507.04724v1.pdf>
- “ Limits Under Conjugacy of the Diagonal Subgroup in $SL_n(\mathbb{R})$ ” *Proc. Amer. Math. Soc.* 144 (2016) 3243-3254. <http://arxiv.org/pdf/1412.5523.pdf>
- “ Conjugacy Limits of the Cartan Subgroup in $SL_3(\mathbb{R})$ ” *Geom Dedicata* (2016) 180: 135. <http://arxiv.org/pdf/1406.4534.pdf>
- “Universal Cycles of Restricted Classes of Words ” with Anant Godbole, *Discrete Math.* 310 (2010), no. 23.

INVITED TALKS

- Israel Mathematical Union, Acre, Israel. May 2017.
“Buildings, Group Actions, and Compactifications ”
- Department Lunch Seminar, Technion, Haifa, Israel. March 2017.
“A Virtual Tour of Geometry”
- Asymptotic Geometry of Groups and Spaces, Heidelberg, Germany. February 2017.
“ Generalized Cusps on Convex Projective Manifolds ”
- University Paris Sud, Orsay, France. February 2017.
“Conjugacy Limits of the Diagonal Cartan Subgroup in $SL_n(\mathbb{R})$ ”
- Institute des Hautes Etudes Scientifiques, Bures sur Yvette, France. February 2017.
“ Generalized Cusps on Convex Projective Manifolds ”
- Ben Gurion Topology Seminar, Ber Sheva, Israel. January 2017
“Conjugacy Limits of the Diagonal Cartan Subgroup in $SL_n(\mathbb{R})$ ”
- Midrasha Mathematica, Weizmann Institute, Rehovot, Israel. Decemeber 2016
“Conjugacy Limits of the Diagonal Cartan Subgroup in $SL_n(\mathbb{R})$ ”
- Hebrew University Topology Seminar, Jerusalem, Israel. December 2016
“ Generalized Cusps on Convex Projective Manifolds ”
- Bar Ilan Topology Seminar, Bne Berak, Israel. November 2016
“ Generalized Cusps on Convex Projective Manifolds ”
- Technion Geometry and Topology Seminar, Haifa, Israel. November 2016
“ Generalized Cusps on Convex Projective Manifolds ”
- Current Trends for Spectral Data of Higgs Bundles II, Simons Center for Geometry and Physics, Stony Brook, NY. June 2016
“ Generalized Cusps on Convex Projective Manifolds ”
- Young Action Now, Weizmann Institute of Science, Rehovot, Israel. April 2016
“Convex Projective Structures and Generalized Cusps”
- Geometry and Topology Seminar, University of Haifa, Israel. December 2015
“Conjugacy Limits of the Diagonal Cartan Subgroup in $SL_n(\mathbb{R})$ ”
- Geometry and Topology Seminar, and Groups, Dynamics and Related Topics Seminar. Technion, Israel Institute of Technology, Haifa Israel. November 2015
“Conjugacy Limits of the Diagonal Cartan Subgroup in $SL_n(\mathbb{R})$ ”
- Korean Institute for Advanced Study, Seoul, Korea. October 2015
“Conjugacy Limits of the Diagonal Cartan Subgroup in $SL_n(\mathbb{R})$ and Generalized Cusps on Convex Projective Manifolds”
- Tel Aviv University, Tel Aviv, Israel. September 2015
“An Introduction to Geometric Structures on Manifolds, and Geometric Transitions Between Them”
- California State University, Chico, Colloquium. Chico, CA. March 2015
“Conjugacy Limits of the Diagonal Subgroup in $SL_n(\mathbb{R})$ ”
- Arizona State University Geometry Seminar, Phoenix, AZ. February 2015
“Conjugacy Limits of the Diagonal Subgroup in $SL_n(\mathbb{R})$ ”

	Pitzer College Topology Seminar, Claremont, CA.	October 2014
	“Geometric Transitions of the Cartan Subgroup in $SL_n(\mathbb{R})$ ”	
	Technion- Israel Institute of Technology, Haifa, Israel.	July 2014
	“Conjugacy Limits of the Cartan Subgroup in $SL_3(\mathbb{R})$ ”	
	California State University, Chico, math colloquium, Chico, CA.	March 2014
	“ An Overview of the Classical Groups”	
	Algebra Seminar, Bar Ilan University, Bene Berak, Israel	August 2011
	“Some Open Problems in the Theory of Abstract Witt Rings”	
	Ph.D. Student Seminar, Tel Aviv Univeristy, Tel Aviv, Israel	July 2009
	“Universal Cycles of Restricted Classes of Words”	
TALKS	Joint Mathematics Meetings, San Antonio, TX.	January 2015
	UCSB Topology Seminar, Santa Barbara, CA.	October 2014
	GEAR Junior Retreat , University of Michigan, Ann Arbor, MI.	May 2014
	Graduate Student Geometry and Topology Conference, University of Texas, Austin.	April 2014
	UCSB Discrete Geometry Seminar, Santa Barbara, CA.	January 2014
	ICERM Graduate Student and Postdoc Seminar, Providence, RI.	October 2013
	UCSB Topology Seminar, Santa Barbara, CA.	May 2013
	Under-represented Students in Topology and Algebra Research Symposium, Purdue University, IN.	April 2013
	3rd Annual Southern California Women in Mathematics Symposium, Pomona College, CA.	November 2010
	CSU, Chico math seminar, Chico, CA.	May 2009
	Joint Math Meetings, Washington D.C.	January 2009
	Nebraska Conference for Undergraduate Women in Mathematics (NCUWM), Lincoln, Nebraska.	February 2008
	Joint Math Meetings, San Diego, CA.	January 2008
	Center for Excellence in Learning and Teaching Conference, California State University, Chico.	October 2007
CONFERENCES	Moduli Spaces, Ventotene, Italy.	September 2017
ATTENDED	GEAR senior retreat, Stanford, CA, USA	August 2017
	Geometric Topology in Cortona, Cortona, Italy.	June 2017
	Israel Mathematical Union, Acre, Israel.	May 2017
	Asymptotic Geometry of Groups and Spaces, Heidelberg, Germany.	February 2017
	Workshop on Group Theory (Juhasz Birthday). Technion, Haifa, Israel.	January 2017
	60 Faces to Groups (Lubotzky Birthday). Institute of Advanced Study, Hebrew University, Jerusalem, Israel.	November 2016
	Geometry, Topology, and Dynamics of Moduli Spaces. National University of Singapore, Singapore.	August 2016
	Algebraic, Topological, and Combinatorial Approaches to $\text{Aut}(F_n)$. Technion. Haifa, Israel.	July 2016
	New Perspectives on Higgs Bundles, Branes, and Quantization. Simons Center for Geometry and Physics, Stony Brook, NY.	June 2016
	Current Trends in for Spectral Data of Higgs Bundles. Simons Center for Geometry and Physics, Stony Brook, NY.	June 2016
	Advanced School on Geometric Group Theory and Low Dimensional Topology, International Center for Theoretical Physics, Trieste, Italy.	May 2016
	Young Geometric Group Theory V. Karlsruhe, Germany.	February 2016
	Workshop on Geometric Structures, Hitchin Components, and Representation Varieties. Korea Institute for Advanced Study, Seoul, Korea.	October 2015

Ergodic Theory, Fractals, and Groups. Israel Institute for Advanced Study, Jerusalem, Israel. October 2015

First Israeli Conference for Women in Mathematics. Tel Aviv University, Tel Aviv, Israel. August 2015

Classical and Quantum Hyperbolic Geometry and Topology (in honor of Francis Bonahon). Orsay, France. July 2015

Generalizations of Symmetric Spaces. Nahsholim, Israel. June 2015

Groups, Geometries and 3-Manifolds (Cooperfest). Berkeley, CA. May 2015

Dynamics on Moduli Space. MSRI, Berkeley, CA. April 2015

Introductory Workshop: Dynamics on Moduli Spaces of Geometric Structures. MSRI, Berkeley, CA. January 2015

Connections for Women: Dynamics on Moduli Spaces of Geometric Structures. MSRI, Berkeley, CA. January 2015

“What’s Next?” The Mathematical Legacy of Bill Thurston. Cornell University, Ithaca, NY. June 2014

GEAR Junior Retreat, University of Michigan, Ann Arbor. May 2014

Graduate Student Geometry and Topology Conference, University of Texas, Austin. April 2014

Workshop on Inquiry Based Learning, Westmont College, Santa Barbara, CA. March 2014

ICERM Semester Workshop on Geometric Structures in Low Dimensional Dynamics, ICERM, Providence, RI. November 2013

ICERM Semester Workshop on Geometry, Topology, and Group Theory, Informed by Experiment, ICERM, Providence, RI. October 2013

ICERM Semester Workshop on Exotic Geometric Structures, ICERM, Providence, RI. September 2013

Under-represented Students in Topology and Algebra Research Symposium, Purdue University, IN. April 2013

10th Pingree Park Brauer Groups Meeting, Pingree Park, Colorado, August 2012

19th Amitsur Symposium, Tel Aviv, Israel, June 2012

3rd Annual Women in Mathematics Symposium, Claremont-McKenna College, CA, November 2010

Joint Mathematics Meetings: 2008, 2009, 2013, 2015

Mathfest: 2007, 2008

SERVICE,
MENTORING, &
LEADERSHIP

Founded Association for Women in Mathematics at the Technion (WoMathTech) October 2016

Duties: Organize weekly exercise sessions and invited female speaker monthly TA for Fanny Kassel’s Mini Course “Geometric Structures and Representations of Discrete Groups ” at ICTP May 2016

Duties: Help write exercises and lead problem sessions

Helped found first Israel Student Chapter of the Association of Women in Mathematics (AWM) August 2015

TA for Yael Algom Kfir’s mini course on $Out(F_n)$ at the first conference for Israeli Women in Mathematics August 2015

Conference Organizer for Cooperfest: Groups Geometries and 3-Manifolds 2015

Organized Student Algebra Seminar, UCSB 2011–2013

Organized Hypatian Seminar, UCSB 2010-2015

Duties: organized panels/talks on: choosing an adviser, making a website, passing qualifying exams, etc, and hosted an invited female speaker quarterly.

Organized Sessions at Math Circle, UCSB 2011-2015

Mentor in STEEM (program for under privileged transfer students), UCSB 2011-2012

Organized mentor network for incoming first years (and mentored), UCSB Math 2011-2015

	Member of Women in Science and Engineering (WiSE)	2009-2015
	Mentee/mentor in AWM mentor network	2007-
INSTRUCTIONAL DEVELOPMENT	Evaluated videos for Online Mathlab , UCSB	Summer 2011
	Ran math department TA training	Fall 2012
	Workshop host at campus wide TA training, UC Santa Barbara	Fall 2012
	Participated in Lead Teaching Assistant Institute	Summer 2012
	Participated in Summer Teaching Institute for Associates	Summer 2013
UNDERGRADUATE RESEARCH	Summer Projects in Mathematics at the Technion	September 2016
	Mentored week long summer research project on Dessin d'Enfants	
TEACHING	Technion (Instructor of Record)	
	• Linear Algebra (in HEBREW)	Winter 2017
	Technion (Teaching Assistant)	
	• Linear Algebra (in HEBREW) , Instructor Adi Wolf	Spring 2017
	UCSB (Instructor of Record)	
	• Math 3B: Integral Calculus for Majors	Summer 2013
	• Math 3A : Differential Calculus for Majors	Summer 2014
	UCSB (Course Facillitator)	
	• Math 100AB: Math for Future Elementary School Teachers, Taught with Bill Jacob using inquiry based methods.	Winter and Spring 2012.
	• Math 501: Teaching Assistant Training, Taught with Chuck Ackemann and Maree Afaga-Jaramillo. Emphasis on active teaching techniques.	Fall 2012.
	• Graduate Peer Facilitator, Summer Teaching Institute for Associates	Summer 2014
	Duties: Gave feedback online for course syllabi/ exams/ teaching statements, and ran teaching workshops for graduate student instructors	
	UCSB (Teaching Assistant)	
	• Math 3A Diff. Calc. for majors, Prof. Chuck Akemann,	Fall 2009
	• Math 34A Diff. Calc. for life and social sciences, Prof. Daryl Cooper,	Winter 2010
	• Math 3A, Instructor Julia Galstad,	Spring 2010
	• Math 3B Integral Calc. for majors, Instructor Rob Ackermann,	Summer 2010
	• Math 8 Introduction to Proofs, Dr. Ryan Ottman,	Fall 2010
	• Math 3B, Dr. Karel Casteels,	Winter 2011
	• Math 8, Prof. Adbesi Agboola,	Spring 2011
	• Math 100A, Dr. Kyunghhee Moon,	Summer 2011
	• Math 100B, Instructor Sonja Mitchell,	Summer 2011
	• Math 111A, Group Theory, Prof. Bill Jacob,	Fall 2011
	• Math 108A, Linear Algebra with proof, Prof Mihai Putinar,	Fall 2012
	• Math 4BI, Inquiry Differential Equations, Dr Elizabeth Thoren,	Winter 2013
	• Math 4AI, Inquiry Linear Algebra, Dr Elizabeth Thoren,	Fall 2014
	• Math 3B, Integral Calc. for majors, Profs Agboola and Akemann	Spring 2015
PERSONAL	Languages: English, French, Hebrew	
	Computer Skills: SAGE, GP PARI, GAP, Mathematica, HTML, LaTeX	
	Citizenship: USA, Israel	