

Jemma Lorenat  
Simon Fraser University and Université Pierre et Marie Curie  
SFU Department of Mathematics  
[jlorenat@sfu.ca](mailto:jlorenat@sfu.ca)

## **EDUCATION**

PhD Candidate, Mathematics (2010--2015)

Simon Fraser University (Burnaby, Canada) and Université Pierre et Marie Curie (Paris, France)

Doctoral programs in mathematics at the Department of Mathematics at SFU and at the Institut de mathématiques de Jussieu, Paris Rive Gauche at UPMC

Thesis: “Die Freude an der Gestalt: Geometries, Figures, and Practices in Early Nineteenth Century Mathematics.”

Advisors: Prof. Thomas Archibald and Prof. Catherine Goldstein

Qualifying comprehensive examinations in pure mathematics

MA, Liberal Studies (2008 – May 2010)

City University of New York Graduate Center

Thesis: “The development and reception of Leopold Kronecker’s philosophy of mathematics”

BA (Summa Cum Laude), Mathematics (2005 – May 2007)

San Francisco State University

Undergraduate Studies (2004–2005)

University of St Andrews, St Andrews, Scotland

## **EMPLOYMENT**

2013—Present, Pratt Institute (Brooklyn), Visiting Instructor, 16 weekly 3-hour meetings

- Led instruction for construction management and architecture majors on Calculus I (Fall 2013, 2014) and Calculus II (Spring 2014, 2015). Connected technical technique with professional studies through interdisciplinary projects.
- Designed elective course introducing geometries to art and design students. Combined mathematical problem solving and proofs, with independent research on the confluence of art and geometry (Spring 2014, Fall 2014).

2013—Present, St Joseph’s College (Brooklyn), Instructor, 30 biweekly 1.5-hour meetings

- Working with fellow SJC faculty, developed lectures, exams, data analysis projects, and Maple labs for science students on Pre-Calculus (Fall 2014), Calculus I (Fall 2013) and II (Spring 2014, 2015), and Foundational Mathematics (Spring 2014).

2010–2012, Simon Fraser University, Teaching Assistant, 15 weekly one-hour tutorials

- Developed supplemental tutorials, graded papers, examinations, and weekly assignments for History of Mathematics (Spring 2012, two sessions), Analysis I (Fall 2011, two sessions), and Non-Euclidean Geometry (Spring 2011).
- Conducted lectures to assist struggling calculus students with pre-requisite material in algebra and trigonometry (Fall 2011).
- Provided homework and exam preparation assistance for students in remedial mathematics and mathematics for teachers (Fall 2010, Spring 2011).

2009—2010, College Now, Hunter College (New York), Instructor

- Produced innovative elective summer courses in mathematics for low-income New York City high school students transitioning to college.

2007—2010, Middle Grades Initiative, City University of New York

- Collaborated with Henry Street School of International Studies to improve student interest and capabilities through in-class tutoring, project design, and extracurricular mathematics courses.

## PUBLICATIONS

1. “Not set in stone: nineteenth century geometrical constructions and the Malfatti Problem.” *BSHM Bulletin: Journal of the British Society for the History of Mathematics* 27(3), 2012, 169–180.

<http://www.tandfonline.com/doi/full/10.1080/17498430.2012.676962>

2. “Figures real, imagined and missing in Poncelet, Plücker, and Gergonne.” *Historia Mathematica*, in press: DOI 10.1016/j.hm.2014.06.005

<http://www.sciencedirect.com/science/article/pii/S0315086014000767>

3. “Polemics in public: Controversies around the principle of duality in early nineteenth century geometry.” (in submission)

## ILLUSTRATIONS

Series of mathematicians’ portraits drawn for the presentation, “How Kroneckerian Became an Adjective,” for the AMS/MAA Joint Meeting (2011).

Mathematician Portrait Gallery, MAA Mathematical Sciences Digital Library

<http://www.maa.org/publications/periodicals/convergence/portrait-gallery>

## CONFERENCE PAPERS

- AMS/MAA Joint Meeting, San Antonio, January 2015 (Invited session on the history of mathematics): “Polemics in public: Controversies around the principle of duality in early nineteenth century geometry.”

- HSS Annual Meeting, Chicago, November 2014. Session Organizer jointly with Abram Kaplan on Evidence in Mathematics: “The figure and other forms of geometric evidence.”

- AMS/MAA Joint Meeting, Baltimore 2014 (Invited session on the history of mathematics: “Julius Plücker’s Pure Geometry.”

- CMS Winter Meeting, Ottawa, Canada 2013: “Julius Plücker’s Pure Geometry.”

- Algèbre, géométrie et théorie des nombres aux XVIIIe et XIXe siècles, Université de Nantes, France 2013: “Concentric circles’ common chord at infinity.”

- Séminaire d'histoire des sciences mathématiques de l'Institut de mathématiques de Jussieu, Paris, France 2013: "Conic sections and polygons in the *Annales de Gergonne*."
- Novembertagung on the history of mathematics, Wuppertal, Germany 2012: "A geometry by any other name."
- Séminaire d'histoire des mathématiques d'Institut Henri Poincaré, Paris, France 2012: "Posed problems and solutions in Gergonne's *Annales* and Crelle's *Journal*."
- Three-Society History of Science Meeting, Philadelphia, 2012: "From research to recreation, posed problems in 19th century journals."
- International Conference on the History of Modern Mathematics, Xi'an, China 2012: "From research to recreation, posed problems in 19th century journals."
- AMS/MAA Joint Meeting, Boston 2012 (Invited paper, Special session in the history of mathematics): "Not set in stone: 19th century geometrical constructions and the Malfatti Problem."
- CMS Winter Meeting, Toronto, Canada 2011: "Not set in stone: 19th century geometrical constructions and the Malfatti Problem."
- Novembertagung on the history of mathematics, Paris, France 2011: "Poor Steiner's Porism."
- Association for the Philosophy of Mathematical Practice Symposia, Nancy, France 2011: "Kronecker's Constructs."
- AMS/MAA Joint Meeting, New Orleans 2011: "How Kroneckerian Became an Adjective."
- Novembertagung on the history of mathematics, Mainz, Germany 2010: "How Kroneckerian Became an Adjective."

## **AWARDS**

- Graduate International Research Award, Simon Fraser University (2012)
- Leibniz Scholar, Mathematisches Forschungsinstitut Oberwolfach (2012)
- Graduate Fellowship, Simon Fraser University (2011, 2012)
- Mathematics Student Teaching Award, Simon Fraser University (2011)
- Philip Morrison Fellow, American Assoc. for the Advancement of Science (2011)
- Department Graduate Entrance Scholarship, Simon Fraser University (2010)
- Mathematics Departmental Honoree, San Francisco State University (2007)