

Caterina Consani

CONTACT AND PERSONAL INFORMATION

Johns Hopkins University
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Citizenship: United States, Italy.

RESEARCH INTERESTS

Arithmetic and Noncommutative Geometry, Algebraic Geometry, Number Theory.

ACADEMIC APPOINTMENTS

Johns Hopkins University, Baltimore, MD

Professor, July 2008-Present
Associate Professor (tenured), 2005-2008

University of Toronto, Toronto, ON (Canada)

Associate Professor of Mathematics (tenured), 2003-2005
Assistant Professor of Mathematics, 2000-2003

Institute for Advanced Study, Princeton, NJ

Member of the School of Mathematics, 1999-2000
Mentor: Prof. Pierre Deligne

Cambridge University Cambridge (UK)

Research Associate, January-June 1998

Massachusetts Institute of Technology, Cambridge, MA

C.L.E. Moore Instructor, 1996-1999
Mentor: Prof. Alexander Goncharov

EDUCATION

The University of Chicago, Chicago, IL

Ph.D., Mathematics, September 1993–June 1996
Advisor: Prof. Spencer Bloch
Thesis: *Double Complexes and Euler L-Factors on Degenerations of Algebraic Varieties*

Universities of Genoa and Turin, Italy

Ph.D., Mathematics, 1988–1993
Advisor: Prof. Claudio Pedrini
Thesis: *Intersection Theories and K-Theory on Singular Varieties*

Scuola Nazionale di Alta Matematica (F. Severi), Italy

Postdoctoral fellow (Rome La Sapienza and U. Florence), October 1986-June 1988

University of Genoa, Italy

BS in Mathematics *cum laude*, October 1981-June 1986

GRANTS

(Last 15 years)

PI Simons Foundation, Collaboration Grant for Mathematicians n. 691493 (2020-2025)
Co-PI NSF-DMS-1854546 Special Meetings Grant (2019-2020)
Co-PI NSF-DMS-1701934 Special Meetings Grant (2017-2018)
PI Simons Foundation, Collaboration Grant for Mathematicians n. 353677 (2015-2020)
PI NSF DMS-1069218 (2011-2015)
PI NSF FRG-0652431 (2007-2011)

HONORS

Fellow of the American Mathematical Society (2024).

SYNERGISTIC ACTIVITIES

(Last 15 years)

Co-Organizer of a Jami Conference at the University of Bologna & JHU-SAIS Europe (Italy), June 2024

Noncommutativity and the Interface of Analysis, Geometry and Topology

Co-Organizer of a Virtual Zoom-Conference at the Fields Institute, Toronto (Canada), September 2021

Cyclic cohomology at 40: achievements and future prospects

Co-Organizer of a Virtual Zoom-Seminar in Noncommutative Geometry, October 2020–Present

Global Noncommutative Geometry Seminar: <https://globalncgseminar.org/>

Co-Organizer of the 2019 Jami Program at Johns Hopkins U.

Riemann-Roch in characteristic 1 and related topics

Co-Organizer of a Conference in Como, Villa del Grumello (Italy), June 2018

Toposes in Como: <https://tcsc.lakecomoschool.org>

Co-Organizer of the Conference in honor of A. Connes 70th Birthday, Fundan University, Shanghai (China), May 2017

Section: *Noncommutative Geometry and Number Theory*

Co-Organizer of the Conference in honor of H. Moscovici 70th Birthday, U. of Texas A&M, April-May 2014

Noncommutative Geometry - Festival

Co-Organizer of the 2013 Jami Program at Johns Hopkins U. (in honor of T. Ono)

Number-Theory and Related Topic

VISITING POSITIONS

(Last 15 years)

Fields Institute Toronto (Canada), December 2023.

Lagrange Research Center, Paris (France), January 2023.

MFO Oberwolfach (Germany), Several visits 2011-2022.

Ohio State University, Columbus OH, Several visits: 2013-2019.

Shanghai Center for Mathematical Sciences (China), April-May 2017.

IHES, France, November 2015

Hausdorff Center for Mathematics, Bonn (Germany), November 2014.

EDITORIAL WORK AND REVIEWER SERVICE

Member of the Editorial Board of the *Journal de Mathématiques de l'Institut de Mathématiques de Jussieu*

Member of the Editorial Board of the *Journal of Noncommutative Geometry*

Member of the Editorial Board of the *Journal of Number Theory*

Member of the Editorial Board of the *Rendiconti Seminario Matematico della Università di Padova*

Co-Editor of the Proceedings of Symposia in Pure Mathematics, AMS (2023)

Cyclic cohomology at 40: achievements and future prospects

Co-Editor of the Proceedings *Advances in Noncommutative Geometry. On the Occasion of Alain Connes' 70th Birthday*, Springer (2019)

Co-Editor of the Proceedings *Proceedings of the 21st JAMI Conference*, Baltimore 2009, JHUP (2012)

Co-Editor of the book *Noncommutative geometry and number theory: where arithmetic meets geometry and physics*, Aspects of Mathematics E 37, Vieweg-Verlag (2006)

Referee Work (selected): NSF, NSERC, Canadian Mathematical Society, American Mathematical Society, Royal Society URF (UK), High Council for the Evaluation of Research (France), Math. Rev., Zentralblatt Math., Banff International Research Station, Algebra and Number Theory, Canadian Journal of Mathematics, International Mathematics Research Notices, Journal of Number Theory, Journal of Algebraic Geometry, Journal für die reine und angewandte Mathematik, American Journal of Mathematics, Journal of Pure and Applied Algebra, Pacific Journal of Mathematics, Selecta Mathematica, Advances in Mathematics, Journal of Homotopy and Related Structures, Bulletin des Sciences Mathématiques, Journal of Mathematical Analysis and Applications, Annals of Functional Analysis.

MEETINGS AND SEMINARS

(Last 15 years)

Colloquium Talk at U. of Pittsburg, November 2024.

Invited talk at the Conference Regulators V, University of Pisa (Pisa, Italy) June 3-13 2024.

Invited talk at the North Atlantic Non-Commutative-Geometry Seminar, April 2024 (Zoom).

Invited talk at the Workshop on Operator Algebras and Applications: Non-Commutative Geometry, Fields Institute Toronto (Canada), December 4-8 2023.

Invited talk at the Conference “Noncommutative Geometry Festival”, Washington University in St. Louis, June 12-16, 2023.

Invited plenary talk at the 51st annual Canadian Operator Symposium (COSy), University of Western Ontario May 22-26, 2023.

Invited presentation at 2023 Great Plains Operator Theory Symposium, Ohio State University, May 15-19, 2023.

Invited research talk at the Universidad Nacional de Colombia (Bogotá, Colombia), December 2021, (Zoom)

Invited research talk at the Fields Institute (Toronto, Canada), September 2021, (Zoom)

Invited research talk at the Yorkshire and Midlands Category Seminar (UK), September 2021, (Zoom)

Colloquium Talk at Western University (London, Canada), December 2020, (Zoom)

Invited research talk at Texas A&M University, September 2019

Invited research talks at Ohio State University, 2014–2019

Invited research talk at the Shanghai Center for Mathematical Sciences (China), May 2017

Plenary Talk at the Conference: *Topos à l'IHES*, November 2015

Invited research talk at the Meeting: *Trimester Program in Noncommutative Geometry and its Applications*, Hausdorff Center for Mathematics (Bonn, Germany), November 2014

Plenary Talk at the XIII Meeting of the Canadian Number Theory Association, Carleton University (Ottawa, Canada), July 2014

Colloquium talk at the University of Washington St. Louis, April 2014

Invited research talk at the Université Paris VII (Paris, France), April 2014

Invited research talk at the Université de Strasbourg (France), January 2014

STUDENTS

❑ Luqiao Xu Ph.D. student JHU 2020–

❑ Sean Owen Ph.D. student JHU 2018–2024

Thesis title: *On Absolute Riemann-Roch and Rings of μ -Polynomials*

❑ Benjamin Diamond Ph.D. student JHU 2016–2017

Thesis title: *Smooth Surfaces in Smooth Fourfolds with Vanishing First Chern Class*

❑ Kalina Mincheva Ph.D. student JHU 2011–2016

Thesis title: *Semiring congruences and tropical geometry*

❑ JaiUng Jun Ph.D. student JHU 2010–2015

Thesis title: *Algebraic geometry over semistructures and hyperstructures in characteristic one*

❑ Jeffrey Tolliver Ph.D. student JHU 2010–2015

Thesis title: *Hyperstructures and idempotent semistructures*

❑ Abhishek Banerjee Ph.D. student JHU 2005–2009

Thesis title: *Nearby Cycles and Periodicity in Cyclic Homology*

❑ Geoffrey Lynch Ph.D. student U. of Toronto 2002–2007

Thesis title: *The Local Monodromy Operator as an Algebraic Cycle*

POSTDOCTORAL FELLOWS

(Last 15 years)

Aurélien Sagnier J.J. Sylvester Assistant Professor JHU 2019–2022

Snigdhasan Mahanta J.J. Sylvester Assistant Professor JHU 2008–2010