

Ahmad Reza Haj Saeedi Sadegh

School Address

Department of Mathematics
Pennsylvania State University
State College, Pennsylvania 16801
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Local Address

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State College, Pennsylvania 16802
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EDUCATION

- *Ph.D.*, Mathematics, Pennsylvania State University, State College, PA 2021
- *Master of Science*, Mathematics, Sharif University of Technology, Tehran, Iran February 2015
- *Bachelor of Science*, Mathematics, Sharif University of Technology, Tehran, Iran July 2013

RESEARCH INTERESTS

Differential Geometry, Index Theory, Non-commutative Geometry,, Representation Theory, Operator Algebras, Spin Geometry, Deformation to the Normal Cone, Tangent Groupoid

PUBLICATIONS

- Sadegh, Ahmad Reza Haj Saeedi, and Nigel Higson. “Euler-like vector fields, deformation spaces and manifolds with filtered structure.” *Documenta Mathematica* 23 (2018): 293-325.
<https://www.elibm.org/article/10011753>
- Sadegh, Ahmad Reza Haj Saeedi, Jesus Sanchez, Yiannis Loizides. “Connes-Moscovici Residue Cocycle For Some Dirac-Type Operators.” arXiv:2105.10091
- Karami, M., M. E. Zadeh, and A. Sadegh. “A coarse relative-partitioned index theorem.” *Bulletin des Sciences Mathématiques* 153 (2019): 57-71.
<https://www.sciencedirect.com/science/article/abs/pii/S0007449719300181>

GRANTS AND HONORS

- Grant for Undergraduate Studies, National Elite Foundation, Iran, 2009
- Dean’s List, Sharif University, Iran, 2013
- Second Prize, International Mathematical Competition for University Students(IMC),Blagoevgrad, 2012
- Silver Medal, National Mathematical Olympiad, Tehran, Iran, Summer 2008
- Silver Medal, National Mathematical Olympiad, Tehran, Iran, Summer 2007

TALKS

- (Invited Talk) Boston University Geometry and Physics Seminar , 2021
- (Invited Talk) Euler-like vector fields and deformation to the normal cone, Göttingen Mathematics Colloquium, 2021
- (Invited Talk) Euler-like vector fields and deformation to the normal cone, Cornell-PSU Joint Symplectic Seminar, 2016

- Tangent groupoids and Ambrose-Singer-type theorem for spin bundles, Student-Directed NCG Seminars, 2020
- Deformation to the normal cone. What is it good for?, Noncommutative Geometry Seminars, Penn State, 2020
- Tangent groupoids and deformation quantization, Student-Directed NCG Seminars, 2020
- Spinor representation and Clifford algebras, Noncommutative Geometry Seminars, Penn State, 2020
- Berline-Vergne proof of the index theorem, Student-directed NCG Seminars, Penn State, 2020
- Berline-Vergne proof of the index theorem, Student-directed NCG Seminars, Penn State, 2020
- Euler-like vector fields and Moser-type proofs, Noncommutative Geometry Seminars, Penn State, 2018
- The local index formula in non-commutative geometry, Hypoelliptic Laplacian Seminar, Penn State, 2017

CONFERENCES/WORKSHOPS ATTENDED

- Modern trends in non-commutative geometry, Northwestern University, Spring, 2019
- Noncommutative geometry and index theory for group actions and singular spaces, at Texas AM University, Spring, 2018
- Cornell-PSU joint symplectic seminar, Spring 2018
- Cornell-PSU joint symplectic seminar, Fall 2017
- Cornell-PSU joint symplectic seminar, Spring 2016

Teaching

- Head of departmental group for the linear algebra qualifying examination preparation, Fall 2021
- Head of departmental group for the complex analysis qualifying examination preparation, Fall 2020
- Mentorship program for incoming Ph.D. students, Penn State, 2019, 2020.
- Ordinary and Partial Differential Equations, Penn State University, Fall 2020
- Elementary Linear Algebra, Penn State University, Fall 2019
- Multi-variable Calculus, Penn State University, Summer 2019
- Vector Calculus, Penn State University, Spring 2019
- Multi-variable Calculus, Penn State University, Fall 2018
- Multi-variable Calculus, Penn State University, Spring 2018
- Multi-variable Calculus, Penn State University, Fall 2017
- Plane Trigonometry, Penn State University, Summer 2017
- College Algebra II, Penn State University, Fall 2016