

# Jonathan Belcher

*Doctoral Candidate, CU Boulder*

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## Research Interests

noncommutative geometry, Hochschild and cyclic cohomologies, and index theorems on manifolds with boundary, quantum field theory

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## Education

May, 2019 **Ph.D. Mathematics**, *University of Colorado, Boulder.*  
May, 2016 **M.A. Mathematics**, *University of Colorado, Boulder.*  
June, 2009 **B.S. Mathematics**, *The Ohio State University.*  
June, 2009 **B.S. Physics**, *The Ohio State University.*

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## Ph.D. Thesis

*Title* Bridge Cohomology: Generalizing Hochschild and Cyclic Cohomologies and applications to Chern-Weil Theory

*Supervisor* Markus Pflaum

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## History

2012-Present **Graduate student in mathematics**, *University of Colorado, Boulder.*  
Sept. 2011 - June 2012 **Assistant editor**, *McGraw-Hill Education.*  
Nov. 2009 - Sept. 2011 **Self Employed**, *Publishing and Editorial contractor.*  
Feb. 2009 - Nov. 2009 **Actuarial Contractor**, *Nationwide Insurance.*

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## Awards and Honors

*Talks* **Bridge Cohomology: A generalization of Hochschild and Cyclic cohomologies.**

AMS Fall Western Sectional. October 2018

K-Theory Conference, Argentina. July 2018

Texas A&M Noncommutative Geometry Conference. May 2018

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## Publications

*Invited paper in preparation* **Bridge Cohomology: A generalization of Hochschild and cyclic cohomologies with applications to manifolds with boundary**, *Proceedings of the K-Theory Conference Argentina 2018*, Jon Belcher and Markus Pflaum, December 2018.

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## Service

*Mathematical Community Contributions* **The Geometry of Classical and Quantum Fields**, *Liber Mathematicae*, Markus Pflaum, Jon Belcher (Contributing Author), [www.libermath.org/GeometryClassicalAndQuantumFields/](http://www.libermath.org/GeometryClassicalAndQuantumFields/).  
Fall 2017

**Gone Fishing: Conference on Poisson Geometry**, *Assistant Organizer*, March 10-13, 2016.

**The Serre-Swan Theorem**, *expository paper contributed to The CRing Project*, Akhil Mathew, M. Pflaum, et al., Spring 2016.

*Volunteering* Boulder Committee on Rights and Compensation - Board Member, Database and Membership Records Manager, March 2018 - present  
Andy 24 Memorial Charity Event, Volunteer 2008 - 2010