

# Zhen Huan

---

CONTACT INFORMATION	School of Mathematics Sun Yat-sen University Xingangxi Road 135, Haizhu, Guangzhou, Guangdong, 510275, China	Email: <a href="mailto:huanzhen2016@gmail.com">huanzhen2016@gmail.com</a> Webpage: <a href="https://huanzhen84.github.io/zhenhuan/">https://huanzhen84.github.io/zhenhuan/</a>
RESEARCH INTERESTS	Algebraic topology, algebraic geometry and mathematical physics.	
POSITION	<b>Sun Yat-sen University</b> , Guangzhou, China Research Associate, August 2017-present	
VISITING POSITION	<b>Universität Duisburg-Essen</b> , Essen, Germany Research Assistant, April 2018-July 2018. Supervisor: Marc N. Levine.	
EDUCATION	<b>University of Illinois at Urbana-Champaign</b> Ph.D. in Mathematics, May 2017 <sup>1</sup> <ul style="list-style-type: none"><li>• Dissertation Defense Date: May 5th 2016</li><li>• Dissertation Title: Quasi-Elliptic Cohomology</li><li>• Advisor: Charles Rezk</li></ul> <b>Indiana University Bloomington</b> M.A. in Mathematics, October 2009 <sup>2</sup>  <b>Peking University</b> B.A. in Mathematics, May 2006 <ul style="list-style-type: none"><li>• Thesis Title: Morse Theory and Bott Periodicity</li><li>• Advisor: Houhong Fan</li></ul>	
PUBLICATION	<ul style="list-style-type: none"><li>• Zhen Huan, <i>Quasi-Elliptic Cohomology and its Power Operations</i>, J. Homotopy Relat. Struct. (2018). <a href="https://doi.org/10.1007/s40062-018-0201-y">https://doi.org/10.1007/s40062-018-0201-y</a>.</li><li>• Zhen Huan, <i>Quasi-elliptic cohomology</i>, Thesis (Ph.D.)–University of Illinois at Urbana-Champaign. 2017. 290 pp. <a href="http://hdl.handle.net/2142/97268">http://hdl.handle.net/2142/97268</a>.</li></ul>	
PREPRINT	<ul style="list-style-type: none"><li>• Zhen Huan, <i>Quasi-Elliptic Cohomology and its Spectrum</i>, available at arXiv:1703.06562. Submitted for publication.</li><li>• Zhen Huan, <i>Universal Finite Subgroup of Tate Curve</i>, available at arXiv:1708.08637. Submitted for publication.</li><li>• Zhen Huan, <i>Quasi-Elliptic Cohomology I.</i> available at arXiv:1805.06305. Submitted for publication.</li></ul>	

---

<sup>1</sup>My PhD thesis is 290 pages long. After my defense, I revised the paper for one year to make it more readable and classy under Charles Rezk and Matthew Ando's advice.

<sup>2</sup>During the phase of doctoral research, my research interest switched to algebraic topology and I transferred to UIUC in 2010 whose algebraic topology group was much larger.

- WORK IN PROGRESS
- Zhen Huan and Nathaniel Stapleton, *Level Structures, Loop Spaces, and Morava E-theory*. In Preparation.
  - Zhen Huan, *Almost Global Homotopy Theory*. In Preparation.
- PRESENTATIONS
- Poster Session, Homotopy Theory Summer Berlin 2018, *Quasi-elliptic cohomology*, June 20 and 26, 2018.
  - Georg-August-Universität Göttingen Seminar, *Quasi-elliptic cohomology*, June 6, 2018.
  - The University of Duisburg-Essen Research Seminar Arithmetic Geometry, *Quasi-elliptic cohomology*, May 17, 2018.
  - Chinese Academy of Sciences Topology Seminar, *Quasi-elliptic cohomology*, March 29, 2018.
  - Sun Yat-sen University, Zhuhai Campus, *Quasi-elliptic cohomology*, January 12, 2018.
  - Peking University Geometry and Topology Seminar, *Quasi-elliptic cohomology*, November 30, 2017.
  - South China Normal University Topology Seminar, *Quasi-elliptic cohomology*, November 16, 2017.
  - Southern University of Science and Technology Topology Seminar, *Quasi-elliptic cohomology*, November 14, 2017.
  - Poster Session, Schubert Calculus International Festival, *Quasi-elliptic cohomology*, November 9, 2017.
  - AMS Special Session on Homotopy Theory, *Quasi-elliptic cohomology*, November 5, 2017.
  - Nankai University Algebraic Topology Seminar, *Quasi-elliptic cohomology*, October 10, 2017.
  - Parallel Session, Conference "Homotopy theory: tools and applications", *Quasi-elliptic cohomology*, July 17, 2017.
  - Informal Session, Conference on invertible objects and duality in derived algebraic geometry and homotopy theory, the University of Regensburg, Germany, *Quasi-elliptic cohomology*, April 3, 2017.
  - AMS Special Session on Homotopy Theory, *Quasi-elliptic cohomology*, April 1, 2017.
  - AMS Special Session on Topology and Arithmetic, *Quasi-elliptic cohomology*, October 30, 2016.
  - University of Chicago Algebraic Topology Seminar, *Quasi-elliptic cohomology*, November 25 2014.
  - Northwestern University Algebraic Topology Seminar, *Quasi-elliptic cohomology*, November 24 2014.

TEACHING  
EXPERIENCE

**University of Illinois at Urbana-Champaign**

Main instructor of

- NetMath MATH 231-Calculus II, Summer 2016.
- MATH 124-Finite Mathematics, Spring 2016.
- MATH 124-Finite Mathematics, Fall 2015.
- MATH 124-Finite Mathematics, Spring 2015.
- MATH 119-Ideas in Geometry, Fall 2013.

Led discussion sessions for

- MATH 221-Calculus I, Fall 2016.
- MATH 231-Calculus II, Fall 2012.
- MATH 234-Calculus for Business I, Spring 2012.
- MATH 231-Calculus II, Fall 2011.

FELLOWSHIP AND  
AWARDS

- James P. Williams Memorial Award in recognition of outstanding scholastic achievement in the first year of graduate studies, from Department of Mathematics, Indiana University, Bloomington, 2007.

SERVICE

- Co-organizer of the conference "International Workshop on Algebraic Topology" at Southern University of Science and Technology, June 6-9, 2018.

REFERENCES

*Doctoral Supervisor*

**Charles Rezk**, University of Illinois at Urbana-Champaign, `rezk@math.uiuc.edu`  
1(217) 265-6309.

*Dissertation Committee Member*

**Matthew Ando**, University of Illinois at Urbana-Champaign, `mando@illinois.edu`  
1(217) 244-2846.

*Host*

**Thomas Schick**, Georg-August-Universität Gottingen, `thomas.schick@math.uni-goettingen.de`  
49(551)39-7766.

*Host*

**Chenchang Zhu**, Georg-August-Universität Gottingen, `zhu@uni-math.gwdg.de` 49(551)39-7799.