## Zhen Huan

Contact Information School of Mathematics Email:

Sun Yat-sen University huanzhen2016@gmail.com

Xingangxi Road 135, Haizhu, Webpage:

Guangzhou, Guangdong, 510275, China https://huanzhen84.github.

io/zhenhuan/

Research

Algebraic topology, algebraic geometry and mathematical physics.

Interests Position

Sun Yat-sen University, Guangzhou, China

Research Associate, August 2017-present

VISITING POSITION Universität Duisburg-Essen, Essen, Germany

Research Assistant, April 2018-July 2018.

Supervisor: Marc N. Levine.

EDUCATION

# University of Illinois at Urbana-Champaign

Ph.D. in Mathematics, May 2017 <sup>1</sup>

• Dissertation Defense Date: May 5th 2016

• Dissertation Title: Quasi-Elliptic Cohomology

• Advisor: Charles Rezk

## **Indiana University Bloomington**

M.A. in Mathematics, October 2009 <sup>2</sup>

## **Peking University**

B.A. in Mathematics, May 2006

• Thesis Title: Morse Theory and Bott Periodicity

• Advisor: Houhong Fan

Publication

- Zhen Huan, Quasi-Elliptic Cohomology and its Power Operations, J. Homotopy Relat. Struct. (2018). https://doi.org/10.1007/s40062-018-0201-y.
- Zhen Huan, Quasi-elliptic cohomology, Thesis (Ph.D.)-University of Illinois at Urbana-Champaign. 2017. 290 pp. http://hdl.handle.net/2142/97268.

Preprint

- Zhen Huan, Quasi-Elliptic Cohomology and its Spectrum, available at arXiv:1703.06562. Submitted for publication.
- Zhen Huan, Universal Finite Subgroup of Tate Curve, available at arXiv:1708.08637. Submitted for publication.
- Zhen Huan, Quasi-Elliptic Cohomology I.. available at arXiv:1805.06305. Submitted for publication.

<sup>&</sup>lt;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>&</sup>lt;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, Unstable Almost Global Homotopy Theory. In Preparation.
- Zhen Huan, Stable Almost Global Homotopy Theory. In Preparation.
- Zhen Huan, Global Quasi-Elliptic Cohomology. 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 Techonology 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", *Quasielliptic cohomology*, July 17, 2017.
- Informal Session, Conference on invertible objects and duality in derived algebraic geometry and homotopy theory, the University of Regensburg, Germany, *Quasielliptic 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.