

Zhenhua Wang

Curriculum Vitae

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Employment

- 08/2023– **Assistant Professor/Tenure-Track**, *Alabama A&M University*, Huntsville, Alabama.
08/2022– **Limited Term Lecturer**, *The University of Georgia*, Athens, Georgia.
07/2023
08/2019– **Limited Term Assistant Professor**, *The University of Georgia*, Athens, Georgia.
07/2022

Education

- 09/2013– **Ph.D. in Mathematics**, *The University of Houston*, Houston, Texas.
05/2019 Under supervision of David Blecher
09/2010– **M.S. in Mathematics**, *Jilin University*, Changchun, China.
06/2013
09/2006– **B.S. in Mathematics and Applied Mathematics**, *Jilin University*, Changchun, China.
07/2010

Research Interest

Jordan operator algebra, operator algebra, operator theory, functional analysis, quantum information theory and quantum computing.

Refereed Journal Publications

1. **Suzuki Type Estimates for Exponentiated Sums and Generalized Lie-Trotter Formulas in Banach Algebras** Preprint, <https://doi.org/10.48550/arXiv.2306.13791>.
2. **Suzuki Type Estimates for Exponentiated Sums and Generalized Lie-Trotter Formulas in Banach Algebras** (with S. Chehade and S. Wang) Preprint, <https://doi.org/10.48550/arXiv.2306.13168>.
3. **Relative operator entropies and Tsallis relative operator entropies in JB-algebras** (with S. Wang), *Rocky Mountain Journal of Mathematics*, **52(3)** (2022) 1073–1087.
4. **Refined operator inequalities for relative operator entropies** (with S. Wang), *Analysis Mathematica*, **48(1)** (2022) 185–198.
5. **Operator means in JB-algebras** (with S. Wang), *Reports on Mathematical Physics*, **88** (2021) 383–398.
6. **Involutive operator algebras** (with D. P. Blecher), *Positivity*, **24** (2020) 13–53.
7. **Jordan operator algebras revisited** (with D. P. Blecher), *Math. Nachr.* **292** (2019), 2129–2136.
8. **Breathers of discrete one-dimensional nonlinear Schrödinger equations in inhomogeneous media** (with S. Ji), *Taiwanese J. Math.* **23** (2019), no. 3, 675–690.
9. **Jordan operator algebras: basic theory** (with D. P. Blecher), *Math. Nachr.* **291** (2018), 1629–1654.
10. **Roots in Banach and operator algebras** (with D. P. Blecher), *J. Integral Equations Operator Theory* **85** (2016), 63–90.

Presentations and Talks

- 10/2022 **Relative operator entropies in Jordan algebras**, *University of Houston*, Houston, TX.
Analysis Seminar
- 08/2022 **Jordan operator algebras and quantum information theory**, *Jilin University*, Changchun, China.
Workshop in Frontier Problems in Mathematics
- 04/2022 **Relative operator entropies in Jordan algebras**, *Minnesota State University at Mankato*, Mankato, MN.
Virtual Departmental Colloquium
- 04/2022 **Relative operator entropies in Jordan algebras**, *Alabama A&M University*, Huntsville, AL.
Virtual Departmental Colloquium
- 04/2022 **Relative operator entropies in Jordan algebras**, *Savannah State University*, Savannah, GA.
Virtual Departmental Colloquium
- 01/2022 **Relative operator entropies in Jordan algebras**, *Sam Houston State University*, Huntsville, TX.
Departmental Colloquium
- 05/2021 **Relative operator entropies in Jordan operator algebras**, *Washington University in St. Louis*, St. Louis, MI.
Great Plains Operator Theory Symposium
- 7/2019 **Dimension theory and Jordan operator algebra**, *Texas A& M University*, College Station, TX.
Workshop in Analysis and Probability
- 5/2019 **Dimension theory**, *University of Houston*, Houston, TX.
Analysis Seminar
- 10/2018 **Noncommuative topology and operator \ast -algebra**, *Texas A&M University*, College Station, TX.
Noncommutative geometry seminar
- 10/2018 **Noncommuative topology and operator \ast -algebra**, *Baylor University*, Waco, TX.
The Texas Analysis and Mathematical Physics Symposium
- 07/2018 **Real positivity in Jordan operator algebras**, *East China Normal University*, Shanghai, China.
International Workshop on Operator Theory and its Applications
- 05/2018 **Introduction to operator \ast -algebras**, *Miami University*, Oxford, OH.
Great Plains Operator Theory Symposium
- 03/2018 **Introduction to Jordan operator algebras**, *Baylor University*, Waco, TX.
Brazos Analysis Seminar
- 10/2017 **Introduction to Jordan operator algebras**, *University of Houston*, Houston, TX.
Analysis Seminar
- 04/2017 **Jordan operator algebras with contractive approximate identities**, *University of Houston*, Houston, TX.
Graduate Students Paper Presentations

Journal Referee

- Contemporary Mathematics
- Communications of the Korean Mathematical Society
- Houston Journal of Mathematics
- International Mathematics Research Notices
- Journal of Mathematical Analysis and Applications
- Journal of Mathematical Physics

Teaching Experience

University of Georgia

8/19–now **Instructor for Calculus I, Calculus III and Pre-Calculus.**

Carried full responsibility of teaching fully online Calculus I, face to face Calculus I, Calculus III and Pre-Calculus courses.

University of Houston

01/19–05/19 **Temporary Teaching Assistant for graduate level of functional analysis course.**

Taught some special topics in functional analysis class.

01/19–05/19 **Teaching Assistant for graduate level of real analysis.**

Took full responsibility of teaching graduate level of real analysis problem session.

08/17–12/18 **Instructor of Record for Calculus for Business and the Life Sciences.**

Carried full responsibility of teaching Calculus for Business and the Life Sciences.

09/13–05/17 **Teaching Assistant for Calculus I, II and III, Differential Equations, Linear Algebra, Complex Analysis, Probability, and Statistics.**

Held recitation sessions and provided one-on-one tutoring to students for the following entry-level to advanced math courses: Calculus I, II, III, Differential Equations, Linear Algebra, Complex Analysis, Probability, and Statistics.

Awards

2019–2022 Franklin College of Arts and Sciences at UGA Travel Grant

2019 Michael L. McLellan Scholarship

2013–2019 Doctoral Student Tuition Fellowship

2019 Travel Grant for International Workshop on Operator Theory and its Applications

2010–2013 Graduate Student Scholarship

2009 First Prize in Mathematical Contest in Modeling of Jilin University

2009 Outstanding Undergraduate Student Scholarship

2008 Outstanding Undergraduate Student Scholarship

Service

University of Georgia

2022– **Volunteer for UGA High School Math Tournament.**

2020– **Undergraduate research mentor.**

2020– **Organizer of functional analysis seminar .**

2019– **Member of Mathematics Active Learning Team.**

Develop active learning techniques, Student Learning Outcomes, Assessment, Equity and Inclusion, Course mapping, etc.

University of Houston

2017–2019 **Treasurer of UH SIAM Graduate Student Chapter**, <http://www.math.uh.edu/uhsiam/>.
Monitor budget. Keep a record of all transactions. Construct industrial and academic seminars to students.

2015–2018 **President of Chinese Christian Fellowship at UH**.
Preside over meetings of the organization. Develop and organize events.

Computing skills

R, Matlab, C++, Python(in progress)

Languages

Mandarin **Mother tongue**

English **Fluent with high proficiency**