Curriculum Vitae

Lukun Zheng
Department of Mathematics
Western Kentucky University
Bowling Green, KY 42101

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Professional Experiences

- **Assistant Professor**   2018-present
  Department of Mathematics, *Western Kentucky University*

- **Assistant Professor**   2015-2018
  Department of Mathematics, *Tennessee Technological University*

- **Graduate Teaching Assistant**,   2010-2015
  Department of Mathematics and Statistics, *UNC Charlotte*

Education

- **UNC Charlotte**, PhD in Applied Mathematics   May 2015

- **UNC Charlotte**, MS in Statistics   Dec. 2014

- **SUFE**, MS in Operational Research and Cybernetics   June 2010

  Distinguished Master Thesis Award

- **SUFE**, BA in Mathematics and Economics (double major)   June 2008

Research interests

- **Dependence measurements**,
  Copulas and their applications; mutual information; entropy.

- **Deep Learning**
  Artificial neural network; convolutional neural network; image classification; time series analysis.

- **Bibliographic analysis**
  Co-citation analysis; bibliometric analysis; clustering analysis.

Publications (* denotes works with student co-author(s))

Books:

1. L. Zheng (2020). Introductory Statistics, 1st edition. Kendall Hunt Publishing, Dubuque, IA, 2020 (ISBN: 978-1-7924-2985-9).

Published Papers (peer-reviewed):

12. *Zheng, L., & Jiang, Y. (2022). Combining dissimilarity measures for quantifying changes in research fields. Scientometrics, 1-15.

11. Ozer, A. O., Gerstenschlager, N., & Zheng, L. (2022, April). Transforming College-level Calculus Courses with Cutting-edge Video recording and Editing technologies–A Case Study. In 2022 Virtual Joint Mathematics Meetings (JMM 2022). AMS.

10. *Zheng, L., Zheng, H., & Kundu, C. (2022). Authorship Attribution via Occupancy-problem-type Indices. Journal of Quantitative Linguistics, 1-15.

9. H. Zheng, and L. Zheng (2020). An Investigation on Language Programs in US Higher Institutions—A Case Study on Chinese Language Programs. US-China Education Review, 10(6), 257-265.

8. L. Zheng (2019). Using mutual information as a cocitation similarity measure. *Scientometrics*. DOI https://doi.org/10.1007/s11192-019-03098-9

7. L. Zheng and H. Zheng (2019). Authorship attribution via coupon-collector-type indices. *Journal of Quantitative Linguistics*. DOI: 10.1080/09296174.2019.1577939.

6. S. Molchanov, Z. Zhang, and L. Zheng (2018). Entropic Moments and Domains of Attraction on Countable Alphabets. *Mathematical Methods of Statistics*, **27**(1): 60-70.

5. L. Zheng (2018). A two-step self-evaluation algorithm on imputation methods for missing categorical data. *International Journal of Scientific and Statistical Computing*, **7**(1): 1-12.

4. L. Zheng and J. Jiang (2017). A new diversity estimator. *The Journal of Statistical Distributions and Applications*, **4**(1): 1-13.

3. S. Molchanov, Z. Zhang, and L. Zheng (2017). Central limit theorem of Turing's formula. *ACMPT-2017 proceedings*, UDC 519.214.

2. S. Molchanov and L. Zheng (2017). Cluster expansion of the resolvent for the Schrödinger operator on non-percolating graphs with applications to Simon–Spencer type theorems and localization. *Journal of Spectral Theory*, **7**(3): 733-770.

1. Z. Zhang and L. Zheng (2015). A mutual information estimator with exponentially decaying bias. *Statistical Applications in Genetics and Molecular Biology*, **14**(3):243-252.

Papers Submitted:

1. L. Zheng and N. Nguyen. A goodness-of-fit test for copulas based on energy statistics.

2. *L. Zheng, N. Nguyen, & P. Erslan. A new class of probability distributions via bi-elliptic functions

3. *Jiang, Y., & Zheng, L. (2020). Deep learning for video game genre classification, in revision.

4. Kundu, C., & Zheng, L. (2020). Deep multi-modal networks for book genre classification based on its cover. arXiv preprint arXiv:2011.07658.

Grants

1. **Diabetes Education Project**
   1) **Role**: Co-PI;
   2) **Source of Support**: Tennessee Institute of Public Health, USA;
   3) **Award Amount**: $ 5,000;
   4) **Time Period**: 2016-2017;

Teaching Experience

- **Western Kentucky University**, Instructor   2018-present

  Graduate Courses:

  1. *Math 482G: Probability and Statistics II, 2019S.*
  2. *Math 590: Special Topics in Mathematics: Applied Statistics, 2019S.*
  3. *Math 599: Thesis/Research, 2019S, 2019F, 2020S.*

  Undergraduate Courses:

  1. *STAT 301-001: Introductory Probability and Applied Statistics, 2020S, 2021F.*
  2. *STAT 402: Regression Analysis, 2021S.*
  3. *STAT 401-001: Regression Analysis, 2019F.*
  4. *Math 183: Introductory Statistics, 2019S, 2019F, 2020F,2021S,2021F,2022S.*
  5. *Math 482: Probability and Statistics II, 2019S, 2022S.*
  6. *Math 382: Probability and Statistics I, 2018F, 2021F.*

- **Tennessee Technological University**, Instructor   2015-2018

  Graduate Courses:

  1. *MATH 5480: Probability & statistics II, Spring, 2017;*
  2. *MATH 5470: Probability & statistics I, Fall, 2016;*
  3. *MATH 6180: Experimental design II, Spring 2016;*
  4. *Math 6170: Experimental design I, Fall 2015.*

  Undergraduate Courses:

  1. *MATH 1530: Introductory Statistics, Spring 2018.*
  2. *MATH 4950: Actuarial science I: Mathematical theory of interest, Spring 2018.*
  3. *MATH 3470: Introduction to probability and statistics, Spring 2018.*
  4. *MATH 3070: Statistical Methods I, Fall 2017.*
  5. *MATH 3470: Introduction to probability and statistics, Fall 2017.*
  6. *MATH 1530: Introductory Statistics, Summer 2017.*
  7. *MATH 3470: Introduction to probability and statistics, Spring 2017.*
  8. *MATH 2120: Differential Equations, Spring, 2017;*
  9. *MATH 1920: Calculus II, Fall, 2016;*
  10. *MATH 3070: Statistical Methods I, Summer I, 2016.*
  11. *MATH 2010: Matrix Algebra, Summer I, 2016.*
  12. *MATH 3470: Introduction to probability and statistics, Spring 2016.*
  13. *MATH 3470: Introduction to probability and statistics, Fall 2015.*

- **UNC Charlotte**, Instructor   2011-2015

  1. *MATH 2122: Introduction to probability and statistics, Spring 2015.*
  2. *MATH 2171: Differential Equations, Fall 2014.*
  3. *MATH 2171: Differential Equations, Summer I 2014.*

4. *STAT 2223: Regression analysis, Spring 2014.*
5. *STAT 2122: Introduction to probability and statistics, Fall 2013.*
6. *STAT 3128: Probability and Statistics for Engineers and Scientists, Summer II 2013.*
7. *STAT 2122: Introduction to probability and statistics, Spring 2013.*
8. *MATH 2164: Matrices and linear algebra, Fall 2012.*
9. *MATH 1242: Calculus II, Summer I, 2012.*
10. *MATH 2171: Differential equations, Spring 2012.*
11. *MATH 1103: Precal Math Science and Eng, Fall 2011.*

- **UNC Charlotte**, Teaching Assistant   2010-2011

  Courses: *Complex Analysis; Calculus III; Differential Equations.*

- **Shanghai University of Finance and Economics**, Teaching Assistant   2008-2010

  Courses: *Calculus I; Calculus II; Calculus III; Probability Theory.*

Services

Western Kentucky University

University Level:

- **Strategic Plan Steering Committee**,
  Western Kentucky University,   Feb. 2019-present.

College Level:

- **Awards and Recognition Committee**,
  Ogden College, Western Kentucky University,   Oct. 2019-Aug. 2021.

- **Strategic Planning Committee**,
  Ogden College, Western Kentucky University,   March. 2019-Jan.2022.

Departmental Level:

- **Undergraduate Recruitment Committee**,
  Department of Mathematics, Western Kentucky University,   Aug. 2021-Aug. 2022.

- **Undergraduate Studies committee**,
  Department of Mathematics, Western Kentucky University,   Aug. 2019-present.

- **Statistics & Statistics Education Committee**,
  Department of Mathematics, Western Kentucky University,   Aug. 2018-2019.

- **Undergraduate Student Recruitment Committee**,
  Department of Mathematics, Western Kentucky University,   Aug. 2018-present.

Tennessee Technological University

- **Computer Resources Committee**,
  Department of Mathematics, Tennessee Technological University,   Aug. 2017-2018.

- **Tenure-Tract Position Search Committee**,
  Department of Mathematics, Tennessee Technological University,   Aug. 2017-2018.

- **Curriculum and Co-Curriculum Committee**,
  Department of Mathematics, Tennessee Technological University,   Aug. 2016-2018.

- **Faculty Advisor**,
  Math Club, Tennessee Technological University,   Aug. 2016-2018.

- **Graduate Committee**,
  Tennessee Technological University,   Aug. 2015-2018.

- **Faculty Advisor**,
  Badminton Club, Tennessee Technological University,   Aug. 2015-2018.

- **Undergraduate Academic Audit Committee**,
  Tennessee Technological University,   Aug. 2016-May. 2017.

Scientific programs or software

- L. Zheng and Z. Zhang (2015). Mutual information estimation:
  `http://math.tntech.edu/lzheng/home.html`.

- Lukun Zheng and Luguang Zheng (2010). Optimal Allocation:
  `http://math.tntech.edu/lzheng/home.html`.

Professional Activities

- **Editorial Board**

  1. *Mathematics and Computer Science*   July,2019-present

- **Reviewer**

  1. *American Journal of Applied Mathematics*   May,2019-present
  2. *Journal of Testing and Evaluation,*   Oct,2014-present