

Guangliang Chen

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RESEARCH INTEREST

Machine learning (clustering, classification, and dictionary learning), high dimensional data visualization and modeling, image processing, and documents analysis

EDUCATION

- 7/2009 **Ph.D. in Applied Math**
University of Minnesota, Minneapolis, MN
- Adviser: Gilad Lerman
 - Thesis: *Spectral Curvature Clustering for Hybrid Linear Modeling*
 - Minor: Statistics
- 7/2003 **B.S. in Mathematics**
University of Science & Technology of China (USTC), Hefei
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POSITIONS HELD

- 8/2020- **Associate Professor of Statistics**
Department of Mathematics & Statistics, San Jose State University (SJSU), San Jose, CA
- 8/2014- **Assistant Professor of Statistics**
8/2020 Department of Mathematics & Statistics, San Jose State University (SJSU), San Jose CA
- 7/2013- **Visiting Assistant Professor of Mathematics**
6/2014 Claremont McKenna College, Claremont, CA
- Mentor: Deanna Needell
- 8/2009- **Visiting Assistant Professor**
7/2013 Mathematics Department, Duke University, Durham, NC
- Mentor: Mauro Maggioni
- 8/2003- **Graduate Assistant**
5/2009 School of Mathematics, University of Minnesota, Minneapolis
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GRANTS & AWARDS

- 2020-2026 University Faculty RSCA Assigned Time Award, SJSU
- 2019,Fall Travel fund (\$4,313), National Center for Theoretical Sciences (NCTS), National Science Council (NSC), Taiwan
- 2019,Fall PI (co-PI: Yan Zhang). *CAMCOS Grant* (\$27,791), Intuit Inc.
- 2019,July *Woodward Grant* (summer salary \$6,000). Department of Mathematics and Statistics, SJSU
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- 2018,Fall *College of Science RSCA Award* (course release), SJSU
- 2018,Fall *SJSU Undergraduate Research Grant* (student expenses \$1,000)
- 2018,July *SJSU Central RSCA Grant* (faculty-led student research \$7,400)
- 2018,June *Woodward Grant* (summer salary \$6,000). Department of Mathematics and Statistics, SJSU
- 2018,June *Just-in-Time Fund* (student travel \$1,178), College of Science, SJSU
- 2018, Spring *SJSU Award of Excellence as Distinguished Faculty Mentor*
- 2018, Spring Co-PI (with Slobodan Simic). *CAMCOS Grant* (\$32,940), Verizon Wireless
- 2017,Fall *College of Science RSCA Award* (course release), SJSU
- 2017,Summer *Woodward Grant* (faculty-led student research, \$6,000). Department of Mathematics and Statistics, SJSU
- 2017, Spring Co-PI (PI: Slobodan Simic). *CAMCOS Grant* (\$31,935), Verizon Wireless
- 2017, Spring *Central RSCA Award* (course release), SJSU
- 2016-2019 Participant (PI: Sen Chiao of Meteorology Department). Proposal title: *MRI Acquisition of Hybrid CPU/GPU High-Performance Computing and Storage for STEM Research and Education at San Jose State University*. National Science Foundation (\$900K)
- 2016,Summer *Woodward Grant* (faculty-led student research, \$6,000). Department of Mathematics and Statistics, SJSU
- 2016, Spring *SJSU Award of Excellence as Distinguished Faculty Mentor*
- 2015,Fall *Woodward Grant* (student travel \$838). Department of Mathematics and Statistics, SJSU
- 2015,Fall Co-PI (with Martina Bremer and Slobodan Simic). *Woodward Grant* (CAMCOS). Department of Mathematics and Statistics, SJSU
- 2015, August *ICIAM15 Travel Award* (\$2,000). Society for Industrial and Applied Mathematics (SIAM)
- 2015, Summer *Woodward Grant* (individual research, \$6,000). Department of Mathematics and Statistics, SJSU
- 2015-2020 PI. *Collaboration Grant for Mathematicians* (\$35,000), Simons Foundation
- 2009 *Best Paper Award*. ICCV Workshop on Dynamical Vision, 12th IEEE International Conference on Computer Vision (ICCV), Kyoto, Japan
- 2008 *SIAM Student Travel Award*. Society for Industrial and Applied Mathematics

PUBLICATIONS

Journal Articles

- 2019 G. Chen. "A General Framework for Scalable Spectral Clustering Based on Document Models". *Pattern Recognition Letters*, 125: 488-493. DOI: 10.1016/j.patrec.2019.06.010
- 2016 Y. Wang, G. Chen, and M. Maggioni. "High Dimensional Data Modeling Techniques for Detection of Chemical Plumes and Anomalies in Hyperspectral Images and Movies". *IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing*, 9(9): 4316-4324. DOI: 10.1109/JSTARS.2016.2539968
- 2014 G. Chen, A. Divekar, and D. Needell. "Guaranteed Sparse Signal Recovery with Highly Coherent Sensing Matrices". *SampTA Special Issue of Sampling Theory in Signal and Image Processing*, 13(1): 91-109
- 2012 W.K. Allard, G. Chen and M. Maggioni. "Multiscale Geometric Methods for Data Sets II: Geometric Multi-Resolution Analysis". *Applied and Computational Harmonic Analysis (ACHA)*, 32(3): 435-462. Available online in September 2011. (**Journal's second hottest article in 2011 full year**)

- 2011 E. Arias-Castro, G. Chen, G. Lerman. "Spectral Clustering based on Local Linear Approximations". *Electronic Journal of Statistics*, 5: 1537-1587
- 2009 G. Chen and G. Lerman. "Spectral Curvature Clustering (SCC)". *International Journal of Computer Vision*, 81: 317-330
- 2009 G. Chen and G. Lerman. "Foundations of a Multi-way Spectral Clustering Framework for Hybrid Linear Modeling". *Foundations of Computational Mathematics*, 9: 517-558
- 2006 G. Lerman, J. McQuown, A. Blais, B. Dynlacht, G. Chen and B. Mishra. "Functional Genomics via Multiscale Analysis: Application to Gene Expression and CHIP-on-chip Data". *Bioinformatics*, 23(3): 314 -320

Conference Proceedings

- 2018 G. Chen. "MATLAB Implementation Details of a Scalable Spectral Clustering Algorithm with Cosine Similarity". *The 2nd Workshop on Reproducible Research in Pattern Recognition (RRPR 2018)*, Beijing, China, B. Kerautret et al. (Eds.): RRPR 2018, LNCS 11455, pp. 94–97
- 2018 G. Chen. "A Scalable Spectral Clustering Algorithm based on Landmark Embedding and Cosine Similarity". *IAPR Joint International Workshops on Statistical Techniques in Pattern Recognition (SPR 2018) and Structural and Syntactic Pattern Recognition (SSPR 2018)*, Fragrant Hill, Beijing, China.
- 2018 G. Chen. "Scalable Spectral Clustering with Cosine Similarity". *The 24th International Conference on Pattern Recognition (ICPR)*, pp. 314-319, Beijing, China.
- 2018 Khiem Pham and G. Chen. "Large-scale Spectral Clustering using Diffusion Coordinates on Landmark-based Bipartite Graphs". *The 12th Workshop on Graph-based Natural Language Processing (TextGraphs-12)*, New Orleans, Louisiana
- 2017 G. Chen, W. Florero-Salinas, and D. Li. "Simple, Fast and Accurate Hyper-parameter Tuning in Gaussian-kernel SVM". *International Joint Conference on Neural Networks (IJCNN)*, Anchorage, AK
- 2016 W. Florero-Salinas, D. Li, and G. Chen. "A Nearest Neighbor Approach for Efficient Selection of the Bandwidth Parameter in Gaussian-kernel Support Vector Machines". *Pacific Conference on Statistical Computing and Data Mining*, Palm Springs, CA.
- 2015 Y. Wang, M. Maggioni, and G. Chen. "Enhanced Detection of Chemical Plumes in Hyperspectral Images and Movies through Improved Background Modeling". *The 7th Workshop on Hyperspectral Image and Signal Processing: Evolution in Remote Sensing (WHISPERS)*, University of Tokyo, Japan
- 2015 G. Chen. "A Novel Multiscale Geometric Approach to Structured Dictionary Learning on High Dimensional Data". *The 11th International Conference on Sampling Theory and Applications (SampTA)*, pp. 598-602, DOI: 10.1109/SAMP TA.2015.7148961
- 2012 G. Chen, M. Iwen, S. Chin, and M. Maggioni. "A Fast Multiscale Framework for Data in High Dimensions: Measure Estimation, Anomaly Detection, and Compressive Measurements". *Visual Communications and Image Processing (VCIP)*, 2012 IEEE Pages: 1-6, DOI: 10.1109/VCIP.2012.6410789
- 2011 G. Chen and M. Maggioni. "Multiscale Geometric and Spectral Analysis of Plane Arrangements". *Computer Vision and Pattern Recognition (CVPR)*, 2011 IEEE Conference on. Pages: 2825-2832, DOI: 10.1109/CVPR.2011.5995666

- 2011 G. Chen and M. Maggioni. “Multiscale Geometric Dictionaries for Point-Cloud Data”. *The 9th International Conference on Sampling Theory and Applications (SampTA)*, Singapore
- 2010 E. Monson, G. Chen, R. Brady, and M. Maggioni. “Data representation and exploration with Geometric Wavelets”. *Visual Analytics Science and Technology (VAST), 2010 IEEE Symposium on*. Pages: 243-244, DOI: 10.1109/VAST.2010.5653822
- 2010 G. Chen and M. Maggioni. Multiscale Geometric Wavelets for the Analysis of Point Clouds. *Information Sciences and Systems (CISS), 2010 44th Annual Conference on* Pages: 1-6, DOI: 10.1109/CISS.2010.5464843
- 2009 G. Chen, S. Atev and G. Lerman. Kernel Spectral Curvature Clustering (KSCC). *Computer Vision Workshops (ICCV Workshops), 2009 IEEE 12th International Conference on*. Pages: 765-772, DOI: 10.1109/ICCVW.2009.5457627. **Best Paper Award**
- 2009 G. Chen and G. Lerman. Motion Segmentation for Hopkins 155 Database via SCC. *Computer Vision Workshops (ICCV Workshops), IEEE 12th International Conference on*. Pages: 759-764, DOI: 10.1109/ICCVW.2009.5457626

Book Chapters

- 2020 G. Chen. “Efficient, Geometrically-adaptive Techniques for Multiscale Gaussian-kernel SVM Classification”. Book Title: *Advanced Studies in Classification and Data Science*. Editors: Tadashi Imaizumi, Akinori Okada, Sadaaki Miyamoto, Fumitake Sakaori, Yoshiro Yamamoto and Maurizio Vichi. Publisher: Springer, Japan. To appear.
- 2016 G. Chen and D. Needell. “Compressed Sensing and Dictionary Learning”. *Finite Frame Theory: A Complete Introduction to Overcompleteness*, in *Proceedings of Symposia in Applied Mathematics*, vol. 73, pp. 201-241. Kasso A. Okoudjou (editor). Amer. Math. Soc., Providence, RI
- 2012 G. Chen, A.V. Little, and M. Maggioni. “Multi-Resolution Geometric Analysis for Data in High Dimensions”. *Excursions in Harmonic Analysis, Volume 1*. Applied and Numerical Harmonic Analysis, Travis D. Andrews et al. (eds.), Springer, New York
- 2011 G. Chen, A.V. Little, M. Maggioni and L. Rosasco. “Some Recent Advances in the Geometric Analysis of Point Clouds in High Dimensions”. *Wavelets and Multiscale Analysis: Theory and Applications*, pp. 199-225. Applied and Numerical Harmonic Analysis, Jonathan Cohen and Ahmed I. Zayed (eds.), Springer

Technical Reports

- 2020 Yuwen Luo, Eduardo Gonzalez, Athulya Ganapathi Kandy, Jung-a Kim, Jonathan Schwartz, Kevin Tsai, Mengqi Yin (faculty supervisor: Guangliang Chen). “Finite Rank Deep Kernel Learning”, *CAMCOS Report*, Department of Mathematics & Statistics, San Jose State University
- 2018 Jeffrey Lee, Scott Li, Jiye Ding, Maham Niaz, Khiem Pham, Xin Xu, Zhengxia Yi, and Xin Zhang (faculty supervisor: Guangliang Chen). “Large-Scale Spectral Clustering Methods for Image and Text Data”, *CAMCOS Report*, Department of Mathematics & Statistics, San Jose State University
- 2017 Joey Fitch, Fengmei Liu, Shiou-Shiou Deng, Sonia Kong, Nate Kotila, Rachel Li, Ryan Quigley, and Andrew Zastovnik (faculty supervisor: Guangliang Chen). “Adaptive Spectral Clustering for High-Dimensional Sparse Count Data”, *CAMCOS Report*, Department of Mathematics & Statistics, San Jose State University

- 2016 Wilson Florero-Salinas, Sha Li, Xiaoyan Chong, Dan Li, Minglu Ma, Abhirupa Sen, Carson Sprock, and Yue Wang (faculty supervisor: Guangliang Chen). “On Classification: An Empirical Study of Existing Algorithms Based on Two Kaggle Competitions”, *CAMCOS Report*, Department of Mathematics & Statistics, San Jose State University
- 2006 G. Chen, G. Lerman and R. Chartrand. “Multiscale Analysis for Muon-Scattering Data”. *Technical Report LA-UR 06-7504*, Los Alamos National Laboratory, Los Alamos, NM
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PRESENTATIONS

Talks

- 12/20/2019 *The 11th ICSA International Conference* (Theme: Innovation with Statistics and Data Science), Hangzhou, China. Sponsor: International Chinese Statistical Association (ICSA)
- 10/11/2019 *The 3rd International Conference on Statistical Distributions and Applications* (Session on Big Data and Dimension Reduction), Grand Rapids, MI
- 06/22/2019 *Classification Society Annual Meeting*, Edmonton, Alberta, Canada.
- 03/20/2019 *San Francisco Bay Area Chapter of American Statistical Association Monthly Seminar*, San Jose, CA
- 10/27/2018 *AMS Fall Western Sectional Meeting* (Special Session on Big Data and Statistical Analytics), San Francisco State University, San Francisco, CA
- 08/19/2018 *The 2nd Workshop on Reproducible Research in Pattern Recognition (RRPR)*, Beijing, China
- 08/17/2018 *IAPR Joint International Workshops on Statistical Techniques in Pattern Recognition and Structural and Syntactic Pattern Recognition (S+SSPR)*, Fragrant Hill, Beijing, China
- 06/19/2018 *INFORMS International Meeting* (General Session on Optimization Modeling and Data Analytics), Taipei, Taiwan
- 06/06/2018 *The 12th Workshop on Graph-Based Natural Language Processing (TextGraphs)*, New Orleans, LA
- 05/17/2018 *The 7th International Conference on Computational Harmonic Analysis*, Vanderbilt University, Nashville, TN
- 02/15/2018 *Statistics Seminar*, Department of Statistics, University of California, Davis
- 12/14/2017 *Bay Area Scientific Computing Day (BASCD)*, Lawrence Berkeley National Laboratory, Berkeley, CA
- 08/10/2017 *Conference of the International Federation of Classification Societies (IFCS)*, Tokai University, Tokyo, Japan
- 05/15/2017 *International Joint Conference on Neural Networks (IJCNN)*, Anchorage, AK
- 10/05/2016 *Math & Stat Colloquium*. University of San Francisco.
- 07/11/2016 *SIAM Annual Meeting (AN16), CP5: Machine Learning and Data Science*, Boston, MA
- 06/04/2016 *Southern California Applied Mathematics Symposium (SOCAMS)*. Claremont Graduate University, Claremont, CA
- 06/03/2016 *Classification Society Annual Meeting*, University of Missouri, Columbia
- 10/25/2015 *Special Session on Stochastic Modeling and Statistical Inference*, AMS Fall 2015 Western Sectional Meeting, California State University, Fullerton

- 08/26/2015 *Math/Stat Colloquium*. Department of Mathematics & Statistics, San Jose State University, CA
- 08/14/2015 *ICIAM Mini-symposium: Geometric Understanding of Data in 3D and Higher, the 8th International Congress on Industrial and Applied Mathematics (ICIAM)*, Beijing, China
- 07/02/2015 *Applied Math Seminar*, National Sun Yat-sen University, Kaohsiung, Taiwan
- 06/03/2015 *The 7th IEEE Workshop on Hyperspectral Image and Signal Processing: Evolution in Remote Sensing (WHISPERS)*. Tokyo, Japan
- 05/29/2015 *The 11th International Conference on Sampling Theory and Applications (SampTA)*. American University, Washington, DC
- 12/03/2014 *Math/Stats Colloquium*. Department of Mathematics & Statistics, San Jose State University, CA
- 09/04/2013 *Applied Math Seminar*. Claremont Center for the Mathematical Sciences, Claremont, CA
- 12/02/2011 *Graduate/Faculty Seminar*. Mathematics Department, Duke University, Durham, NC
- 04/29/2011 *3M Corporation*, Maplewood, MN
- 11/13/2010 *Keynote speaker*. AAAI Fall Symposium on Manifold Learning and its Applications, Arlington, VA
- 09/28/2009 *Applied Math Seminar*. Department of Mathematics, Duke University
- 04/29/2008 *Junior Colloquium*. School of Mathematics, University of Minnesota

Posters

- 08/21/2018 *International Conference on Pattern Recognition (ICPR)*, Beijing, China
- 02/05/2018 *New Deep Learning Techniques Workshop*, Institute for Pure and Applied Mathematics (IPAM), University of California, LA
- 02/08/2017 *SAMSI Workshop on the Interface of Statistics and Optimization (WISO)*, Duke University, Durham, NC
- 06/23/2016 *Workshop on Algorithms for Modern Massive Data Sets (MMDS 2016)*. University of California, Berkeley
- 05/06/2016 *Pacific Conference on Statistical Computing and Data Mining*, Palm Springs, CA
- 09/26/2011 *High Dimensional Phenomena Workshop*. Institute for Mathematics & its Applications, University of Minnesota, Minneapolis
- 06/21/2011 *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, Colorado Springs, CO
- 02/17/2011 *February Fourier Talks*, University of Maryland, College Park

TEACHING EXPERIENCE

- San Jose State University**, San Jose, CA
- Fall 2020 Math 251: *Statistical and Machine Learning Classification*
Math 261A: *Regression Theory and Methods*
- Summer 2020 Math 161A: *Applied Probability and Statistics I (Session 1)*
Math 161A: *Applied Probability and Statistics I (Session 2)*
- Spring 2020 Math 250: *Mathematical Methods for Data Visualization*
Math 161A: *Applied Probability and Statistics I (2 sections)*
Math 298: *Writing Project (1)*
- Fall 2019 Math 203: *Applied Math, Computing and Statistics Projects*
Math 261A: *Regression Theory and Methods*

- Spring 2019 Math 297A: *Preparation for Writing Project (1)*
 Math 161A: *Applied Probability and Statistics I*
 Math 263: *Stochastic Processes*
 Math 298: *Writing Project (2)*
 Fall 2018 Math 251: *Statistical and Machine Learning Classification*
 Math 129A: *Linear Algebra I*
 Spring 2018 Math 297A: *Preparation for Writing Project (1)*
 Math 161A: *Applied Probability and Statistics I*
 Math 203: *Applied Math, Computing and Statistics Projects*
 Fall 2017 Math 163: *Probability Theory (2 sections)*
 Spring 2017 Math 203: *Applied Math, Computing and Statistics Projects*
 Math 261B: *Design and Analysis of Experiments*
 Fall 2016 Math 163: *Probability Theory*
 Math 298: *Writing Project (2)*
 Spring 2016 Math 285: *Classification with Handwritten Digits*
 Math 298: *Writing Project (1)*
 Fall 2015 Math 285: *Selected Topics in High Dimensional Data Modeling*
 Math 203: *Applied Math, Computing and Statistics Projects*
 Spring 2015 Math 164: *Mathematical Statistics*
 Math 161A: *Applied Probability and Statistics I*
 Math 42: *Discrete Math*
 Fall 2014 Math 163: *Probability Theory (2 sections)*
 Math 42: *Discrete Math*
 Summer 2014 Math 42: *Discrete Math*

Claremont McKenna College, Claremont, CA

- Spring 2014 Math 52: *Introduction to Statistics*, and
 Math 152: *Statistical Inference*
 Fall 2013 Math 52: *Introduction to Statistics*, and
 Math 31: *Calculus II (2 sections)*

Duke University, Durham, NC

- Spring 2013 *Elementary Differential Equations*
 Fall 2012 *Ordinary and Partial Differential Equations*, and
Multivariable Calculus for Econ
 Spring 2012 **Linear Algebra with Applications (*Course Coordinator)*
 Fall 2011 *Multivariable Calculus for Econ*
 Spring 2011 *Ordinary and Partial Differential Equations*
 Fall 2010 *Intermediate Calculus*

University of Minnesota, Minneapolis, MN

- Spring 2006 Recitation Instructor for *Calculus I (2 sections)*
 Fall 2005 Recitation Instructor for *Short Calculus (2 sections)*
 Spring 2005 Recitation Instructor for *College Algebra & Probability (3 sections)*
 Fall 2004 Recitation Instructor for *Calculus I (2 sections)*

Supervision of Master's Projects

San Jose State University, San Jose, CA

Spring 2017 Dan Li (MS Statistics)

Fall 2017 Xiaohong Liu (MS Statistics),
Yi Xiao (MS Statistics)

Spring 2019 Chia-Chin Wu (MS Statistics),
Thu Huong Vu (MS Statistics)

Fall 2019 Jarrett Jimeno (MS Applied Math),
Felix Mbuga (MS Statistics, co-advised with Tortora)

PROFESSIONAL DEVELOPMENT

Teaching

2020 SJSU Teach Online Summer Certificate Program

2019 SJSU Summer Course Redesign Institute

2016 CSU Teaching and Learning Symposium, SJSU, October 21-22

2015 Workshop on *Strategies for Addressing (and Avoiding) Classroom Management Issues*,
Center for Faculty Development, SJSU

2014 Joint Mathematical Meetings, Baltimore, MD, January 15-18, 2014

- MAA Minicourse #4: *Teaching introductory statistics*
- MAA Minicourse #8: *Directing undergraduate research*

Research

2018 *Workshop on New Deep Learning Techniques*, Institute for Pure and Applied
Mathematics (IPAM), University of California, LA, February 5-9

2016 *New Directions Short Course: Mathematical Optimization*, Institute for Mathematics &
its Applications (IMA), University of Minnesota, Minneapolis, August 1-12

2010 *Graduate Summer School on Image Processing*, IAS/Park City Mathematical Institute
(PCMI), Park City, Utah, June 27-July 17

2006 *Summer Graduate Workshop: Mathematical aspects of computational biology*,
Mathematical Science Research Institute (MSRI), University of Berkeley, June 19-30

2005 *Graduate Summer School: Intelligent Extraction of Information from Graphs and High
Dimensional Data*, Institute for Pure and Applied Mathematics (IPAM), University of
California, LA, July 11-29

PROFESSIONAL SERVICES

Chapter Officer

2020-2021 **co-Director of Continuing Education and Student Affairs**, San Francisco Bay Area
Chapter of the American Statistical Association.

2019-2020 **Director of Continuing Education and Student Affairs**, San Francisco Bay Area
Chapter of the American Statistical Association.

Conference Chair

- 05/17/2018 **Session Chair**, *International Conference on Computational Harmonic Analysis (ICCHA)*, Vanderbilt University, Nashville, TN
- 08/10/2017 **Contributed Session Chair**, *Conference of the International Federation of Classification Societies (IFCS)*, Tokai University, Tokyo, Japan
- 06/05/2015 **Poster Session Chair**, *The 7th IEEE Workshop on Hyperspectral Image and Signal Processing: Evolution in Remote Sensing (WHISPERS)*, University of Tokyo, Japan

Lecturer

- 2019 **Declined an invitation to lecture** for the *Summer Course on Mathematical Signal Processing and Data Analysis*, Institute of Mathematics, Academia Sinica, Taipei, Taiwan
- 07/2018 **Lecturer** for the *Summer Course on Mathematical Signal Processing and Data Analysis*, Institute of Mathematics, Academia Sinica, Taipei, Taiwan
- 08/2017 **Lecturer** for the *Summer Course on Mathematical Signal Processing and Data Analysis*, Institute of Mathematics, Academia Sinica, Taipei, Taiwan
- 07/16/2015 **Guest Lecturer** for the *Summer Course on Mathematical Signal Processing and Data Analysis*, Institute of Mathematics, Academia Sinica, Taipei, Taiwan
- 01/2015 **Lecturer** for *AMS Short Course on Finite Frame Theory: A Complete Introduction to Overcompleteness*, San Antonio, TX
- 07/2012 **Lecturer** for *Summer School on Geometry and Data*, Washington State University, Pullman
- 06/2010 **Consultant** for IMA Special Program: *Interdisciplinary Research Experience for Undergrad (REU)*, Institute for Mathematics and its Applications (IMA), University of Minnesota, Minneapolis

Editorial Position

- 8/2016 - Review Editor in Mathematics of Computation and Data Science for *Frontiers in Applied Mathematics and Statistics*.

Proposal Referee

National Science Foundation (NSF) Panelist
Air Force Office of Scientific Research (AFOSR)

Journal Referee

Computing and Informatics
Entropy
Frontiers of Information Technology & Electronic Engineering
IEEE Access
IEEE Journal of Selected Topics in Signal Processing
IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing
IEEE Signal Processing Letters
IEEE Signal Processing Magazine
IEEE Transactions on Circuits and Systems for Video Technology
IEEE Transactions on Medical Imaging
IEEE Transactions on Neural Networks and Learning Systems

IEEE Transactions on Signal Processing
 International Journal of Pattern Recognition and Artificial Intelligence
 PLOS ONE
 SIAM Journal on Imaging Sciences

Conference Referee

2017 International Conference of Sampling Theory & Applications (SampTA), Tallinn, Estonia

Community Outreach

Fall 2018 Mentored a Monta Vista High School student to conduct a comparative study of different dimensionality reduction methods for high dimensional data
 07/2017 Mentored 1 Gavilan College student doing research through a grant by Elaine Collins
 07/2016 Mentored 2 Gavilan College students doing research through a grant by Elaine Collins
 04/23/2016 Delivered a lecture titled *Classification with Handwritten Digits* in an event – Classes without Quizzes – organized by SJSU Alumni Association

University Service

San Jose State University, San Jose, CA

University-level Committees

2017-2019 MS Data Analytics Curriculum Committee
 2016-2019 Graduate Studies & Research (GS&R) Committee

College-level Service

2020-present Graduate Advisor for MS Data Science (joint degree between Math and CS)

Department-level Committees

2016-present Advisor for B.S. Applied Math - Concentration in Statistics
 2020-2021 MS Data Science (Chair), Advising, Graduate Curriculum, M.S. Statistics, Probability & Statistics, Woodward
 2019-2020 Ad hoc Data Science, Advising, Graduate Curriculum, M.S. Statistics, Probability & Statistics (Chair)
 2018-2019 Ad hoc Data Science (Chair), Advising, Graduate Curriculum (Chair), M.S. Statistics, Probability & Statistics
 2017-2018 Ad hoc Data Science (Chair), Advising, Graduate Curriculum, M.S. Statistics, Probability & Statistics
 2016-2017 Actuarial Science Recruitment, Ad hoc Actuarial Science, Advising, Probability & Statistics
 2015-2016 Probability & Statistics (Chair), Statistics Recruitment
 2014-2015 Emerging Technologies (Chair), Undergraduate Curriculum (Chair), Computing Resources, Probability & Statistics

Master's Project Committees

Spring 2017 Christopher D. Rainey (MS Statistics)
 Fall 2018 Ximan Huang (MS Statistics)
 Spring 2019 Xin Zhang (MS Statistics), Ting Xu (MS Statistics)

Fall 2019 Felix Mbuga (MS Statistics)

Claremont McKenna College, Claremont, CA

2013 Advisor for Zachary Siegel (Pomona College)

Duke University, Mathematics Department, Durham, NC

2012 Linear Algebra Course Committee (Coordinator)

2012 Undergraduate Honors Committee (for Adrian Chan)

Professional Memberships

2019-2020 International Chinese Statistical Association

2017-2019 International Neural Network Society

2018 Association for Computational Linguistics

2017, 2019 The Classification Society

2016-2017 Society for Industrial and Applied Mathematics (SIAM) – Activity Group: *Data Mining and Analytics*