

Chun-Hao Yang

Personal Information

Name: Chun-Hao Yang

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Research Interests

Geometric statistics; Geometric deep learning with applications to medical imaging and computer vision; Bayesian analysis

Education

- 2015 - 2021 (expected) University of Florida, Gainesville, FL, USA
Ph.D candidate in Statistics
Advisors: Dr. Baba C. Vemuri and Dr. Hani Doss
- 2009 - 2013 National Cheng Kung University (NCKU), Tainan, Taiwan.
B.B.A. in Statistics; Minor in Mathematics.

Research

Conference Publications (Peer-Reviewed)

- ✓ **Chun-Hao Yang** and Baba C. Vemuri. *Shrinkage Estimation on the Manifold of Symmetric Positive-Definite Matrices with Applications to Neuroimaging* in International Conference on Information Processing in Medical Imaging (IPMI), 2019, DOI: 10.1007/978-3-030-20351-1_44
- ✓ Rudrasis Chakraborty, **Chun-Hao Yang**, Xingjian Zhen, Monami Banerjee, Derek Archer, David Vaillancourt, Vikas Singh and Baba C. Vemuri. *A Statistical Recurrent Model on the Manifold of Symmetric Positive Definite Matrices* in Advances in Neural Information Processing Systems (NeurIPS), 2018.
- ✓ Rudrasis Chakraborty, **Chun-Hao Yang**, and Baba C. Vemuri, *A Mixture Model for Aggregation of Multiple Pre-trained Weak Classifiers* in 4th International Workshop on Diff-CVML: Differential Geometry in Computer Vision and Machine Learning (CVPR), 2018.

Journal Publications

- ✓ **Chun-Hao Yang**, James V. Zidek, and Samuel W. K. Wong. *Bayesian Analysis of Accumulated Damage Models in Lumber Reliability*. Technometrics 61, no. 2 (2019): 233–245.

- ✓ Ping-Yang Chen, Ching-Chuan Chen, **Chun-Hao Yang**, Sheng-Mao Chang, and Kuo-Jung Lee. *milr: Multiple-Instance Logistic Regression with Lasso Penalty*. R JOURNAL 9, no. 1 (2017): 446–457.

Preprints

- ✓ **Chun-Hao Yang** and Baba C. Vemuri. *Nested Grassmanns for Dimensionality Reduction* (2020+) arXiv:2010.14589 Submitted.
- ✓ **Chun-Hao Yang** and Baba C. Vemuri. *Shrinkage Estimation of the Fréchet Mean in Lie groups*. (2020+) arXiv:2009.13020 Submitted.
- ✓ **Chun-Hao Yang**, Hani Doss, and Baba C. Vemuri. *An Empirical Bayes Approach to Shrinkage Estimation on the Manifold of Symmetric Positive-Definite Matrices*. (2020+) arXiv:2007.02153 Submitted.
- ✓ Jose J. Bouza, **Chun-Hao Yang**, David Vaillancourt, and Baba C. Vemuri. *MVC-Net: A Convolutional Neural Network Architecture for Manifold-Valued Images With Applications*. (2020+)

Teaching Experiences

Teaching Assistant of Intro to Stats, Intro to Probability, Regression Analysis, at the University of Florida

Honor and Awards

- ✓ **Kenneth and Janet Keene Dissertation Fellowship** 2021
- ✓ **Statistics Faculty Award (Best Senior Student)** 2019
- ✓ **Graduate Student Fellow Top-Off Award** 2015-2019
- ✓ **Member of Phi Tau Phi Scholastic Honor Society (Top 1 %)** 2013
- ✓ **Award of Outstanding Student (Top 5 %)**, NCKU 2011–2012

Coursework

- ✓ Statistics: Regression Analysis; Introduction to Theoretical Statistics (I & II); Matrix Algebra and Statistical Computing; Theory of Linear Models; Statistical Inference (I & II); Generalized Linear Models; Probability Theory (I & II); Bayesian Theory Statistics; Stochastic Processes
- ✓ Mathematics: Differential Geometry (I & II)
- ✓ Computer Science: Computer Vision; Advanced Machine Learning