OLIVER YÌ-BĪNG CHÉN
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EDUCATION

2013- **Johns Hopkins University Bloomberg School of Public Health**, Baltimore, MD
Graduate Fellow student in Biostatistics
Advisor: Professor Dr. Martin A. Lindquist and Professor Dr. Elizabeth L. Ogburn

2015 **North Carolina State University**, Raleigh, NC
Visiting Student in Statistics
Advisor: Professor Dr. Luo Xiao

2012 **Washington State University**, Pullman, WA
M.S. in Theoretical Statistics
Advisor: Professor Dr. Michael A. Jacroux

2010 **School of Business, ECUST**, Shanghai
B.S. in Financial Engineering

2009 **Rollins College**, Winter Park, FL
Undergraduate Study in Management

EXTENDED ACADEMIC VISITS

2013, 2015 Department of Statistics, Northwestern University, Evanston, IL.

2015 Department of Mathematics and Statistics, Washington State University, Pullman, WA.

2015 Statistical and Applied Mathematical Sciences Institute (SAMSI), Research Triangle Park, NC.

PUBLICATIONS

*: Corresponding author.

1. **Chén Y.***, Ogburn E., Crainiceanu C., Caffo, B., Wager t., and Lindquist, M. (2015) High-dimensional Multivariate Mediation: the Principal Direction of Mediation. Submitting to *Journal of the American Statistical Association*.
2. **Chén Y.***, Xiao L., Lindquist, M., Schrack J., Ferrucci L., and Crainiceanu C. (2015) A Longitudinal Functional Data Analysis for Underlying Daily Physical Activity Change. To submit to *Biometrics*.
3. **Chén Y.***, Di J., and Xiao L. (In progress 2015 -) Penalised Iterative Sparse Partial Correlation Estimation (II-SPaCE) - with an application to whole-brain graph estimation.
4. **Chén Y.***, Di J., Cohen J., Nebel M.B., and Lindquist M. (In progress 2015-) A Numerical Comparison of Reliability of Different Imaging Methods in Brain Parcellation and Node Identification: with an Application to the Human Connectome Project Data.

5. **Chén Y.***, Ogburn E., Crainiceanu C., Caffo, B., and Lindquist, M. (In progress 2015-) Ultrahigh Dimensional Principal Direction of Mediation in Applications.
6. **Chén Y.**, and Jacroux, M*. (2014) On the Use of Semi-folding in Regular Blocks Two-level Factorial Designs. *Communications in Statistics - Theory and Methods*.
7. Dasgupta, N*., **Chén Y.**, Basu, R., and Daoud S.S. (2013) Comparison of Clustering Algorithms: an Example with Proteomic Data. *Advances and Applications in Statistics*.
8. Dasgupta, N*., **Chén Y.**, Basu, R., and Daoud S.S. (2012) Comparison of Methods for Unsupervised Learning Methods an Applied Study using Proteomic Data from Colon Cancer and Simulations. *2012 Conference on Contemporary Issues and Applications of Statistics (CIAS 2012)*, Indian Statistical Institute.
9. **Chén Y.** (2010) An Introduction and the Application of the Computerized Intelligent Information Analysis and Filter System Model (CIIAFSM).

Books and Book Chapters

1. Dasgupta, N.*, **Chén Y.**, Basu, R., and Daoud S.S. (2013) An Application of Unsupervised Learning Methods to Proteomic Data from Colon Cancer. *Contemporary Topics in Mathematics and Statistics with Applications*, Asian Books, Ch 9 (1): 170-184.

R Package

1. **Chén Y.** (Author and Maintainer). *PDM (Principal Direction of Mediation)*. The package provides functions that calculate the estimates of the Principal Direction of Mediations (PDMs) and corresponding path coefficients of ultra-high dimensional data, provided treatment (e.g. thermal pain), response (e.g. reported pain), and mediation data (e.g. measurements of fMRI data).

Grants Writing

1. Multi-dimensional Geometric Decompositions in Functional and Structural Neuroimaging. NIH-R01 Grant. P.I. Brain Caffo. 2015

Grants Involved

Bill & Melinda Gates Foundation

1. A Longitudinal Functional Data Analysis for Underlying Daily Physical Activity Change. PI: Xiao Luo, 2015

National Institutes of Health (NIH) - R01 Grants

1. PI: Ciprian Crainiceanu, Summer 2015
2. Statistical Methods for Large n and p Problems. 90043445. PI: Brain Caffo, 2014 - 2015
3. Longitudinal Causal Inference for fMRI. 90054807. National Institute of Biomedical Imaging and Bioengineering. PI: Martin Lindquist, 2014

Kennedy Krieger Institute (KKI)

1. Resources for Quantitative Functional MRI. P.I. Peter C. M. van Zijl; Co-PI: Brain Caffo, 2015

EMPLOYMENT

- Co-founder. SMART Inc. 2014 -
- Intern. AXIO Research Corporation, Seattle, WA, USA, 2012
- Statistician. Wyrick Lab, School of Molecular Biosciences, WSU, Pullman, WA, USA, 2011-2012
- Senator. Department of Statistics, Graduate and Professional Student Association, WSU, Pullman, WA, USA, 2010-2012
- Exclusive Agent for Burma, Greater China, Indonesia, Mongolia, Singapore, and Thailand. KLR Industrial Group, Hyderabad, India, 2008-2010
- Global Marketing Manager. Sunway Chemicals, Shanghai, 2006-2010

CONSULTING AND COLLABORATIVE RESEARCH

1. Tropical (Malaria) and Non-communicable Diseases. Ifakara Health Institute (IHI), Tanzania. Tarimo, B. and **Chén Y.** 2015.
2. American College of Surgeons. National Surgical Quality Improvement Program. **Chén Y.**, and Erin Mariel Rada, MD. 2014.
3. Role of the Histone H2B Repression (HBR) Domain in Gene Expression and Chromatin Structure. Wyrick, J., and **Chén Y.** 2011-12.
4. The Study of the Role of Chromatin Structure in Regulating Expression and DNA Repair in Yeast. Morris, R., and **Chén Y.** 2011-12.
5. Modeling Washington Apple Bloom Phenology and Fruit Growth. Schmidt, T. (P.I.), Dasgupta, N. (co-P.I.), and **Chén Y.** 2011-12.
6. Analysis of RNA-Binding Proteins in Developing Rice Seeds. Morris, R., **Chén Y.**, and Wyrick, J. 2011-12.
7. Histone Domains and Modifications that Regulate DNA Repair. Kyriss, M., **Chén Y.**, and Wyrick, J. 2011-12.

TEACHING EXPERIENCE

- Graduate Teaching Assistant, Stat Methods in Public Health IV, Department of Biostatistics, Johns Hopkins Bloomberg School of Public Health, 2015.
- Graduate Teaching Assistant, Principles and Methods of Functional Neuroimaging II, Department of Biostatistics, Johns Hopkins Bloomberg School of Public Health, 2015.
- Graduate Teaching Assistant, Principles and Methods of Functional Neuroimaging I, Department of Biostatistics, Johns Hopkins Bloomberg School of Public Health, 2014-2015.
- Graduate Teaching Assistant, Statistical Reasoning in Public Health I, Department of Biostatistics, Johns Hopkins Bloomberg School of Public Health, 2013-2014.
- Instructor, Statistical Thinking, Department of Statistics, Washington State University (WSU), 2011-2012.
- Graduate Teaching Assistant, Introduction to Statistical Methods, Department of Statistics, WSU, 2010-2012.

INVITED TALKS

1. The 8th International Conference of the ERCIM WG on Computational and Methodological Statistics, London, U.K. December, 2015.
2. Mathematics Colloquium, Department of Mathematics and Statistics, Washington State University, Pullman, WA. August, 2015.

PRESENTATIONS

1. Organization for Human Brain Mapping Annual Meeting, Geneva, Switzerland, June, 2016.
2. Invited. The 8th International Conference of the ERCIM WG on Computational and Methodological Statistics (CMStatistics 2015), London, U.K. December, 2015.
3. Selected for oral presentation. The 142nd Annual Meeting and Exposition of the American Public Health Association, Chicago, IL. October, 2015.
4. The Joint Statistical Meetings (JSM), Seattle, WA. August, 2015.
5. International Biometric Society Eastern North America Region (ENAR), Miami, FL. March, 2015.
6. Delta Omega Society, Baltimore, MD. Feburary, 2015.

SKILLS

- Statistical Packages: R, SAS, Matlab, SPM, Mathematica, Stata, Minitab, RSplida, and StatCrunch
- Coding: Visual Basic, SQL, HTML, Bash, WinBUGS (some experience), C (some experience)
- Actuary: P1 Test, Score: 9/10

AWARDS

1. Joseph Zeger Award, 2015
2. Statistical and Applied Mathematical Sciences Institute Fund, 2015
3. Louis I. and Thomas D. Dublin Award for the Advancement of Epidemiology and Biostatistics, (presented with the Dean), 2015
4. Award of Excellence for Outstanding Performance and Lasting Contributions as a Teaching Assistant, 2012
5. ECUST Comprehensive Academic Performance Award, 2010

OTHER VISITS

- Program on Challenges in Computational Neuroscience (CCNS) Workshop. The Hamner Conference Center, 15 TW Alexander Dr. RTP, NC. August, 2015.
- Computational Neuroscience Summer School. The Solution Center, 1101 Slater Road, Durham, NC. July 27-31, 2015.

PROFESSIONAL MEMBERSHIPS

- Bernoulli Society for Mathematical Statistics and Probability
- International Society for Business and Industrial Statistics
- American Statistical Association
- American Public Health Association

HOBBIES

I have been painting *Gōng-bǐ* style *watercolor* (aquarelle) for twenty years; I also enjoy *oil painting*; I played *trombone*, *trumpet*, and *Chinese Sornā*; I like classical music: my favorite composer is Debussy, my favorite pianist is Horowitz, and my favorite piece is *Nr. 7, Träumerei* in Schumann's *Kinderszenen, Op.15*, performed by Horowitz at the Moscow Conservatory in 1986; and I enjoy studying red wine, especially when combined with some captivating conversation with my friends.