Meng Xu
Postdoctoral Fellow | Statistician

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Profile

- Solid statistical background with demonstrated analytical and quantitative skills
- Expertise in programming languages mainly in **R**, **MATLAB** and **SPSS** (Entry level : STATA, SAS, C) on Windows and/or Unix
- 5+ years of experience in statistical modelling, inference and complex data analysis in Financial/Bio-statistics
- Data analyst/researcher with excellent communication, strong team skills and passion for challenges

Core Quant Skills : Functional/longitudinal/multilevel Data Analysis , Hypothesis Testing, Semi/Non-parametric Regression, Bootstrap, Cross Validation, Backfitting, Permutation, CVaR/VaR, Parallel Computing, etc.

Professional Experience

Present – 10/2018 | **Postdoctoral Fellow, Department of Statistics, University of Haifa, Israel**

Mentor : Philip Tzvi Reiss

- Current projects : Evaluation and measures on data reliability ; hypothesis test of difference on distributions ; analysis and modeling on Experience Sampling Model (ESM), fMRI, fNIRs and behavioral data
- Built R packages : *dbicc, pppvalue, DVDtest*

R | SPSS | Reliability | Functional/longitudinal Data | GLMM | Parallel Computing | Test | fMRI | Emotion | Personality

08/2017 – 10/2016 | **Visiting Ph.D. Researcher, University of Granada, Spain**

Supervised by Jose Miguel Angulo ; Sponsor : Erasmus +

- Construct a new measurement of risk based on the general formation and simulated via MATLAB
- Review a study on functional depth.

MATLAB | Risk Measure | Convexity | Entropy | Data Depth

10/2015 – 10/2014 | **Joint Ph.D. Trainee, National University of Singapore, Singapore**

Supervised by Jialiang Li ; Sponsor : China Scholarship Council

- Model and analyze financial time series data via Functional Data Analysis and Nonparametrics.

MATLAB | Functional Data | Smoothing | Yield Curve

10/2014 – 04/2014 | **Visiting Ph.D. Trainee, University of Göttingen, Germany**

Supervised by Helmut Herwartz ; Sponsor : Erasmus Mundus Action 2

R | Time Series

Education

2018 | **Doctor of Economics in Statistics**, Sichuan University, China

Dissertation : *Study on the Factors of Asset Price via Functional Data Analysis*
Degree conferred on Sep. 25, 2019

2011-2013, Graduate study (M.A level) in Finance, Sichuan University, China

2011 | **B.S. in Mathematics**, Sichuan University, China

Publication

- **Meng Xu**, Philip Reiss. (2020) Distribution-free pointwise adjusted p-values for functional hypotheses. Accepted by proceeding of IWFOS 2020. [ArXiv]
- **Meng Xu**, Philip Reiss, Ivor Cribben. (2019+) Generalized reliability based on distances. Invited revision for Biometrics. [ArXiv]
- Philip Reiss, **Meng Xu**. (2020) Tensor product splines and functional principal components. Journal of Statistical Planning and Inference. [DOI]
- **Meng Xu**, Jose M. Angulo. (2019) Divergence-based risk measures : a discussion on the sensitivities and extensions. Entropy. [DOI]
- **Meng Xu**, Jialiang Li, Ying Chen. (2017). Varying coefficient functional autoregressive model with application to the U.S. treasuries. Journal of Multivariate Analysis. [DOI]
- **Meng Xu**, Zhuyu Li, Taiji Wang. (2012). Study on the comparative analysis of the FDLR model and its nonlinear improvement in the interval finance yield series. Soft Science, in Chinese with English abstract. [DOI]
- **Meng Xu**, Tiande Li. (2012). Study on the semi-parametric models for Engel Curve of traffic and communication. Statistics and Decision, in Chinese with English abstract. [DOI]

Conference

Organizer — Topic Contributed session in Joint Statistical Meeting. Philadelphia. 2020*

Pres. — Distribution-free pointwise adjusted p-values for functional hypotheses. IWFOS. Brno, Czech. 2020*

Pres. — Generalized reliability based on distances. UH-UCY (University of Cyprus) Workshop in Statistics, Haifa, Israel. Nov. 12, 2019.

Pres. — Generalized test-retest reliability based on distances. Annual Meeting of the Israel Statistical Association. Bar-Ilan University, Israel. June 6, 2019.

Pres. — Divergence-based Risk Measures : A Discussion on the Sensitivities and Extensions. Jerusalem Joint Statistical Event 2018 : 10th Conference of the Eastern Mediterranean Region of the International Biometrics Society (EMR – IBS). Jerusalem, Israel. Dec. 17 – 20, 2018

Pres. — Divergence-based Risk Measures : A Discussion on the Sensitivities and Extensions. Joint Statistical Meetings, Vancouver, Canada. Jul. 28 – Aug. 2, 2018

Poster — Time-Varying Coefficient Functional Autoregressive Model and its application to U.S. Treasuries. Asian Regional Section of the International Association for Statistical Computing ARS-IASC Conference. Singapore. Dec 17 – 19, 2015

Other Professional Experience

06/2018
10/2017 — **Research Assistant, Business School, Sichuan University, China**

Participant in General Project *Air Pollution and Tourism : Sustainable development of Tourism based on the System of Air Pollution-Tourism-Economic Model*, sponsored by NNSFC (PI : Ying Li, No.71773082, Jan.2018-Dec.2021)

- Participated in completing the application declaration
- Constructed the statistical model (Time Varying Spatial Autoregressive Model ; TV-SAR) for considering the interactions of cities and other factors on the tourism industry

Modeling | Spatial model | Time-Varying | Tourism | Environment

08/2018
10/2011 — **Research Assistant, School of Economics, Sichuan University, China**

Participant in a series of national or provincial level of academic projects and governmental/enterprise programs hosted by supervisor Tiande Li's research group.

- Developed the Early-warning assessment Model, participating in Key Project *Overseas Petroleum Resources Replacement Strategy based on the Perspective of Chinese Petroleum Security*, sponsored by NSSFC, Jan.2012-Jun.2018
- Application of risk models, participating in the enterprise consulting project *A Systematically Financing Plan for Mineral Resources of Tibet*, sponsored by China Development Bank, 2013
- Reviewed works on the housing price model, participating in the project *Study on the Formation and Transmission Mechanism of Bubbles in the Housing Market – based on the OLG Model*, sponsored by Committee of Researched on the Generalized Virtual Economy, China, Sept.2012-Sept.2013
- Data collection & analysis in R, and writing organizer, in the project *Program on the Contemporary Situation, Problems and Advice of Housing market for Sichuan Province*, Apr.2012-Jun.2012
- Revised and rechecked the model, for Prof. Tiande Li's book *The Theory of Global Economical Fluctuation* (*Global Economic Cyclical and Non-cyclical Fluctuations and the Construction of the Warning Mechanism of China's Economy*, Major Project of NSSFC), Oct.2011-Aug.2012

Modeling | Assessment/evaluation model | Risk model | House price | House bubbles | Business cycle

09/2011 — **Research Assistant, School of Mathematics, Sichuan University, China**

Participant in the project on the experiment of multicultural decisive behaviors between German and Chinese students, collaborated with the University of Bonn, Germany ; Advisor : Prof. Zhuyu Li

- Data analysis of fuzzy survey in R and SPSS

Fuzzy Statistics

Intern & Volunteer

- Examiner Member. Evaluation Committee of China Scholarship Council in Israel. 2019
- Stipend Assistant, Centre for European Studies, Sichuan University. 2011 – 2012 & 2015 – 2016
- Summer Intern (Lobby Manager), Bank of China, Chengdu. Aug. 2012
- Founder & President, Mathematics Fan Association of Sichuan University. 2009 – 2010

Award

National Merit Scholarship for Graduate Students issued by the Ministry of Education, P.R. China, 2012 & 2013