# Lin (Amanda) Li, MS

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**SAS.** Certified Base Programmer for SAS'9

## HIGHLIGHTS

- **Programming Languages:** R/RMarkdown/Rshiny, Python, MATLAB, LINUX Shell, MySQL

- **Statistical Analysis:** SAS (certified programmer), SPSS, STATA, SQL, nQuery, PASS

- **Website Development:** HTML, CSS, JS

- **Clinical Database:** CDISC ADaM, SDTM; REDCap

- **Clinical Trials:** Experience with Phase I - III clinical trials, sponsored by Genetech, Pfizer and Merck, etc

- **R-Package Development:** Co-authorship R-package: "colocalization", and "DSMtools"

- **Project Management:** The owner and manager of GitHub organization "ABCD-HBCD-Biostat-WG"

- **Academic achievements:** Multiple first/shared first authorships, and co-authorships as the main statistician. Attended and/or gave speaks in regional, national and international academic conferences with travel award. Review manuscripts as statistics reviewer of the Lancet Regional Health - Western Pacific

## EDUCATION

- **University of North Carolina at Chapel Hill**     Department of Biostatistics
  *Master of Science in Biostatistics*     *August 2018-August 2020*

  - **Master Thesis**: Missing Values Imputation with Machine Learning Methods on Drug Metabolomics Studies

  - **MS Thesis Committee**: Matthew Loop. PhD, Matthew Psioda, PhD, Xianming Tan, PhD

  - **Key Projects:**:
    Analysis of opiate prescriptions after cesarean deliveries under new prescribing guidelines
    Assessing the Efficacy of three Different Interventions to Prevent Vertical Transmission of HIV from Mothers to Infants via Breastfeeding in Lilongwe, Malawi
    Exploring the Relationship between Monthly Painkiller Consumption and Stress among UNC Undergraduate Students and Student Athletes

- **Northwestern University**     School of Professional Studies
  *Continuing Education in Mathematics*     *September 2020 - December 2020*

  - **Real Analysis**: Analysis on the real line: axiomatic development of the real number system, sequences and series of real numbers, continuity, and differentiability; Riemann integral, measurement theory and Lebesgue integral

  - **Data Science Boot-camp**: Intensive data science coursework with R and Python

- **Shanghai University**     Department of Economics
  *Bachelor of Economics, with minor in Financial Mathematics*     *August 2014-July 2018*

  - **Overall GPA is the top 5% in Department, graduated with "Outstanding Honor Thesis"**:

- **Duke Kunshan University**     Global Learning Semester
  *Global Learning Semester Certificate*     *August 2017-December 2017*

  - **Health Research Methods** : Introduction of Cohort study, Case-control study, Clinical trials. Healthcare and health insurance systems comparison, Non-Communicable Diseases (NCDs)

  - **Numerical Methods and Machine Learning**: Numerical Method for PDE, Linear and Convex Optimization, Compressed Sensing and Support-vector Machine.

## Research and Working Experience

- **Research Data Analyst III (Full time)** UC, San Diego
  *Center for Human Development* *September 2021 - Present*
  - ○ Working with **Dr. Wesley Thomson** to provide statistical analyses on complex social survey data of ABCD and HBCD. Applying complex statistical methods, including **missing data imputation and analysis methods, item response theory (IRT), machine learning (ML) prediction algorithms**, etc., to analyze **high-dimensional behavioral (e.g., survey responses), experimental (e.g cognitive test batteries), and biomarkers data (e.g., genotyping data) data**. and **interpret the outcomes**.
  - ○ Participating **research workshops and meetings** with principal investigators (PIs), as well as **exploring and discussing new statistical methodologies** published in the latest research manuscripts with them. Working with Dr.Thomson and other PIs to **develop innovative statistical methods**, and finally applying the outcomes to ABCD/HBCD data to **draft publishable research paper**.
  - ○ Working in the Data Science and Management team of the **Adolescent Brain Cognitive Development Study (ABCD)** and **HEALthy Brain and Child Development Study (HBCD)** directly funded by **Drs. Terry Jernigan and Anders Dale**. Contributing to **database build and management, quality control (QC)**, and QC reports generation.
  - ○ Collaborating with the bioinformatics and application developers on **Website developments with Rshiny and HTML/CSS/JS**. Contributing to **imaging processing with machine learning algorithms** occasionally.

- **Associate Biostatistician (Full-Time)** Quidel Corporation
  *Department of Biostatistics and Data Science* *March 2021 - September 2021*
  - ○ Performing statistical analyses in accordance with protocol, drafting research and development reports from statistical perspective. Conducting **data quality control (QC) and data assurance (QA)**, providing **biostatistical supports** for product research, development and evaluation.
  - ○ The **outcomes** of the biostatistics and data science division I worked in include but are not limited to the **"Sofia 2" fluorescent immunoassay analyzer, and "Sofia Q" rapid antigen test device**, which were **approved by US Food and Drug Administration (EUA Number: EUA200742)**.

- **Statistical Analyst (Full-Time)** Robert H. Lurie Comprehensive Cancer Center
  *Quantitative Data Science Core* *August 2020 - February 2021*
  - ○ Contributing to **Statistical analysis plan (SAP)** designing, data management and analyses (e.g., sample size and power analysis, generating reproducible **statistical analysis reports (SARs)** using **SAS and R/RMarkdown)** for early-phase **clinical trials**, basic science of medicine (in vivo and in vitro) studies, etc.
  - ○ Statistical supports on grants applications, proposal and manuscript writing for investigators in the Robert H. Lurie Comprehensive Cancer center.
  - ○ **R shiny App, R-package** and **SAS Macros** development

- **Graduate Student Research Assistant** Department of PACE, Eshelman School of Pharmacy, UNC-CH
  *Clinical Data Analyst* *September 2018 - May 2020*
  - ○ Working in Dr. Sachiko Ozawa research group on the project "The condition and social cost of antibiotics over-prescription and abuse in rural area of China"
  - ○ Cleaning and analysis data collected from an innovative health economic survey on antibiotics abuses among village doctors in Yunnan Province, China by **SAS and STATA**. The key methods include **Item Response Theory, Balloon Analogue Risk Task and Generalized Linear Model**.

- **Research Assistant Internship** Global Health Research Center, Duke Kunshan University
  *Global Health Research Assistant* *November 2017-March 2018*
  - ○ Assisting senior research analyst to perform panel data analysis on "Chinese Longitudinal Healthy Longevity Survey (CLHLS)" led by PIs from Duke University.
  - ○ Searching and reviewing papers of "prevalence, awareness, treatment, and control rates of hypertension in China" from the PubMed and MedLine flowing rigorous search strategies.

- **Consulting Internship** Shanghai Da-Rui, Supply-Chain Management Consulting Co., LTD
  *Business Analyst* *June 2017-August 2017*
  - ○ Providing Consulting service with a senior consultant on **inventory level optimization** for Master Kong LLC

## Teaching Experience

- **Teaching Assistant**                                    Department of Mathematics, Shanghai University
  *Teaching Assistant of Business Statistics*                              *September 2016-June 2017*
  - Helped the instructor to grade homework; tutored sophomore students with problems in business statistics lecture, such as hypothesis test, confidence interval estimates

## Publications(chronological order)

### Accepted/Published Paper:

- Yin, R.(shared first author), Yin, L.(shared first author), **Li, L.**, Silvia-Nash, J., Tan, J., Pan Z., Zeng, J., Yan, L., Hypertension in China: Burdens, Guidelines, and Policy Responses: A State-of-the-Art Review, *Journal of Human Hypertension*, Nature Press. doi: https://doi.org/10.1038/s41371-021-00570-z

- Gelarden I., Nguyen J., Gao J., Chen Q., Morales-Nebreda L., Wunderink R., **Li L. (first biostatistician coauthor)**, Chmiel J.S., Hrisinko M., Marszalek L., Momnani S., Patel P., Sumugod R., Chao Q., Jennings L.J., Zembower T.R., Ji P., Chen Y.H.. Comprehensive evaluation of bronchoalveolar lavage from patients with severe COVID-19 and correlation with clinical outcomes. *Hum Pathol.* 2021 Jul;113:92-103. doi: 10.1016/j.humpath.2021.04.010.

- Lamiaa El-Shennawy, Andrew Hoffmann, Nurmaa Khund Dashzeveg, Paul J. Mehl2, Zihao Yu, Valerie Tokars, Vlad Nicolaescu, Carolina Ostiguin, Yuzhi Jia, **Lin Li (first biostatistician coauthor)**,···, Deyu Fang, Huiping Liu., Circulating ACE2-expressing extracellular vesicles block broad strains of SARS-CoV-2, *Nature Communication.* Jan 2022, doi: https://doi.org/10.1038/s41467-021-27893-2

- El-Shennawy, L., Hoffmann, A., Dashzeveg, N., Mehl, P., Yu, Z., Tokars, V., Nicolaescu, V., Ostiguin, C., Jia, Y., **Li, L. (first biostatistician coauthor)**, Furlong, K., 2021. Circulating ace2-expressing exosomes block SARS-CoV-2 infection as an innate antiviral mechanism, *bioRxiv.* Dec 2020, doi: https://doi.org/10.1101/2020.12.03.407031

- Wu, P., **Li, L.**, Xie J., Chen J., Probabilistic Guaranteed Path Planning for Safe Urban Air Mobility Using Chance Constrained RRT*. *2020 AIAA AVIATION Forum.* doi: https://doi.org/10.2514/6.2020-2914

- **Li, L.**, Wu, M., Wu, Z. The Impact of Public Health Expenditure on Economic Development–Evidence from Prefecture-Level Panel Data of Shandong Province. *Research in World Economy*, 2017, 8(2), 59. doi: https://doi.org/10.5430/rwe.v8n2p59

### Submitted and Under Review:

- Das J.I., Yadav P., Abazeed M., **Li L. (first biostatistician coauthor)**, Andersen A., Chen Z., Langer M., Lee C., Popple R., Schiff P., Zhu C. T., Dose Prescription and Reporting in Stereotactic Body Radiotherapy: A Multi-Institutional Study,  *Radiotherapy and Oncology.* Manuscript Number: RADONC-D-22-01353

- **Li, L.**, Jiang, A., Huang, Z., Tam K.L., Huang, Y.C., The Effects of Dynamic Learning and the Forgetting Process on Optimizing Modeling for Pricing of Full-Service Repair Contracts for Medical Devices, *Journal of Operational Research Society.* Reference ID: TSYB-2021-OP-0392.R1

- Kosche C., Jaishankar D., Cosgrove C., Ramesh P., Hong S., **Li L. (first biostatistician coauthor)**, Shivde R, Bhuva D, Perez-White B, Munir S, Zhang H, Lu K, Choi J, Le Poole. C Skin infiltrate composition as a telling measure of responses to checkpoint inhibitors, *Frontiers in Immunology.* Manuscript ID: 1095243)

## Conferences (chronological order)

- Southern California Robotics Symposium "Real Solutions to Real Problems Impacting Real People", Sep. 22-23, 2022, UCLA. (participated the poster session)

- Annual meeting of the "Chinese Medicine Clinical Pharmacology Professional Committee", and the "Tianjin Integrative Chinese and Western Medicine Association", Dec. 08, 2021, Tianjin, China & Virtual. (Speaker)

- 2020 AIAA AVIATION Forum, June 15-19, 2020, VIRTUAL EVENT.(Supported research paper presentation)

- International Conference on "Interdisciplinary and Frontier Research on Healthy Aging", Nov. 10-11, 2017, Peking University

- International Conference on Transformations and Innovations in Management (ICTIM), September 9-10, 2017, Shanghai University. (Presented research paper)

## Volunteering and Community Service

- Member of the Research Affair EDI Advisory Committee at UCSD, Present

- Conference volunteer for the "Digital Health Conference". Duke Kunshan University, China, October 2017

- Teaching volunteer (Maths) at a Christian School for young religious refugees from Myanmar. Ampang Jaya, Kuala Lumpur, Malaysia, January 2017 (Christian Ministry)

- Interpreting volunteer at Shanghai Trade Fair. Shanghai, China, April 2015

## Certificates and Awards

- **Grants for individual Training, UCSD**                                       October 2022

  - **Training and career development funds**: The Staff Equal Opportunity Enrichment Program (SEOEP)

- **Travel Award, Department of Biostatistics, UNC-CH**                      March 2020

- **ICH-GCP: Association of Clinical Research Professionals Certificate**           August 2020

- **CITI Program course Certificate**                        August 2020, September 2021

  - **Human Research**: Social Science and Behavioral Science Research
  - **Biomedical Research**: Biomedical Research Basic

- **Certified SAS Programmer for SAS 9**                           January 2019

- **Advanced Diploma in Accounting and Business**                    February 2017

- **Merit-based Scholarships**                      September 2015, September 2017

  - **First Class Scholarship of Shanghai University**:
  - **Second Class Scholarship of Shanghai University**: