

**Xiao Ling**  
**Ph.D. Candidate in Systems modeling**  
**Virginia Commonwealth University**

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## EDUCATION

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- **Virginia Commonwealth University** Virginia, USA  
*Doctor of Philosophy in Systems modeling* Aug 2017 - Exp. May 2021
- **The University of Toledo** Ohio, USA  
*Master of Science in Statistics* Aug 2015 - Jun 2017
- **Saginaw Valley State University** Michigan, USA  
*Master of Business Administration* Aug 2009 - Jun 2011
- **University of Shanghai for Science and Technology** Shanghai, China  
*Bachelor of Engineering in Power Engineering and Engineering Thermal physics* Aug 1998 - Jun 2003

## RESEARCH INTERESTS

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My main research interest is theory and algorithm for optimization for subspace estimation and its application in computer vision.

## SKILLS SUMMARY

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- Experienced in designing, implementing, testing, and deploying algorithm to handle big data in distributed platform.
- Strong background in computer vision, machine learning, statistical analysis.
- Strong system builder, excellent presenter, and team player.
- Independent, creative, and rigorous thinker.

## PROGRAMMING SKILLS

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- **Languages:** R, Scala, Spark, SAS, Python, VBA, C

## EXPERIENCE

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- **Virginia Commonwealth University** Virginia, USA  
*Graduate Teaching Assistant* July 2017 - Present
  - Teaching an undergraduate level math course including concepts and applications of linear, exponential, logarithmic, power and quadratic functions, graphing, transformations and inverses of functions, algebra and composition of functions.
- **The University of Toledo** Ohio, USA  
*Teaching Assistant* Jan 2016 - Jun 2017
  - Taught Business Calculus Recitation section. Implemented stimulating examples to capture students' attention and interest. Created and administered regular quizzes and tests to tract student progress.
  - Offered after-school tutoring to help struggling students improve their skills and critical thinking.
  - Conducted PCA, CCA, Regression Statistical analysis on real projects.
- **General Electric Healthcare** Shanghai, China  
*Demand Planning Analyst* Sep 2012 - Aug 2015
  - Conducted and tuned critical parameters for multiple regression model in SAP APO system.
  - Tuning Monthly Global demand forecast with a cross-functional global team including meeting, training personnel and collecting data.
  - Developed AD-Hoc Dynamic applications based on Excel and Access for global teams. Significantly saved reporting time and reduced process errors.
  - Developed an Visual Basic API to automate demand dataset reconciliation and regression forecast output.
  - Configured APO Data Mart with Key Figures, Characteristics, Data Sources, and Info Cubes to store historical sales invoice data which is gathered from R/3 and non-R/3 systems.
  - Training junior team member.

- **Freelancer** New York, US  
*Data Analyst and VBA Programmer* *Jun 2011 - Aug 2012*
  - Developed a Data processing application with VBA.
  - Conducted various statistical model using R and VBA.
- **Shanghai Shi-Cheng Electronics Technology Company** Shanghai, China  
*Analyst and Consultant* *Sep 2003 - Aug 2009*
  - Reconciled data from multiple sources into Excel or Access using advanced Excel functions to generate spreadsheets and pivot tables.
  - Optimized data collection procedures and generated reports on a weekly, monthly and quarterly basis.
  - Utilized SPSS statistical software to track and analyze data.
  - Developed and initiated more efficient data collection procedures using VBA.

## ONGOING PROJECTS

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- **Image denoising via patch based L1-PCA** A novel image denoising framework that produces a one-dimensional dictionary based on the  $L_1$ -norm.
- **Kernel  $L_1$ -PCA** Developing a kernel version of  $L_1$ -norm PCA

## PUBLICATIONS

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- Xiao Ling, Paul Brooks,  **$L_1$ -norm regularized  $L_1$ -norm best-fit line problem**  
 The 15th INFORMS Virtual Workshop on Data Mining and Decision Analytics  
 Implemented in Spark using Scala: [github.com/maovurin/Sparse-L1](https://github.com/maovurin/Sparse-L1)

## PROFESSIONAL SOCIETIES

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- **Memberships:** Institute for Operations Research and Management Science (INFORMS) Quality, Statistics & Reliability Section and Optimization Society Subdivision.