Jiaqi Li

Email jq_li25@stu.pku.edu.cn
Phone 13873147238
Website cheerly-pku.github.io
GitHub cheerly-pku

Research Direction

- **Scientific computing, numerical linear algebra, parallel programming, and research software.**
- Interested in turning mathematical and computational ideas into reviewable, runnable, and maintainable materials.

Education

- **Peking University** — **Beijing, China**
  Undergraduate Student — *Sep. 2025-Jun. 2029*
  - *2026.09 - 2027.06*, Theoretical and Applied Mechanics (Engineering and Scientific Computing track), College of Engineering & Zhou Pei-Yuan College.
  - *2025.09 - 2026.06*, Chemistry (Materials Science and Engineering track), College of Engineering.
- **Changjun High School** — **Changsha, Hunan, China**
  High School Student — *Sep. 2022-Jun. 2025*

Selected Grades

98	Linear Algebra and Geometry
96	Introduction to Computing (B)
94	Data Structures and Algorithms (B)
92	Mathematical Analysis (II)
91	Mathematical Analysis (I)
91	General Physics (I)
91	Parallel Programming
3.87	Term GPA, Fall 2025

Research Experience

- **Assoc. Prof. Mohan Chen's Research Group** — **Beijing, China**
  Undergraduate Research Training — *2026.01-2026.09*
  - The group is affiliated with the Center for Applied Physics and Technology, Peking University Academy for Advanced Interdisciplinary Studies, and the Department of Scientific Computing and Engineering Intelligence, School of Mechanics and Engineering Science, Peking University.
  - Research training in scientific computing, iterative solver design, numerical methods, and performance-oriented implementation.

Publications

- **Solving Functional Equations via the Injection-Commutation Method** *2023*
  Link · **PDF**
  CNKI-indexed journal article, published in Middle School Mathematics, 2023(5). Chinese title: 利用单射-交换元方法解函数方程.

Relevant Coursework and Self-Study

- **Introduction to Embodied Intelligence, by He Wang**

Audited course; focused on conceptual foundations, perception-action loops, and robotics-oriented AI systems.

- **Introduction to Computer Vision, by He Wang**
  Audited course; studied visual perception foundations for intelligent systems.
- **Introduction to Artificial Intelligence**
  Audited course; studied foundational concepts, methodological frameworks, and representative applications in AI.
- **Large Models: From Foundations to Practice**
  Summer school course; studied large-model foundations, practical applications, and related technical workflows.
- **CS231n: Deep Learning for Computer Vision**
  Self-study; reviewed convolutional networks, visual representation learning, and modern computer vision pipelines.

Selected Technical Work

- **Leyun SparkEdu** *2026*
  Technical project experience from DAMO Developer Matrix, Alibaba DAMO Academy, with exposure to VLA (Vision-Language-Action) model training workflows.
  - Participated in a technical project involving interaction scenarios and VLA model training workflows.
  - Used the project as a focused bridge between mathematical computing and programming practice.
- **ABACUS Pull Request #7580** [Link] *2026*
  PPCG iterative diagonalization solver for an open-source electronic-structure package.
  - Proposed a PPCG iterative diagonalization solver and added the `ks_solver=ppcg` path.
  - Added unit tests, build integration, and user-facing documentation.
  - Practiced reading and modifying a large research codebase involving numerical kernels and build-system constraints.
- **Parallel Programming and GPU Study Materials** *2026*
  Review notes and exercises on MPI, OpenMP, CUDA, memory hierarchy, and performance-aware programming.

Selected Honors

- **2023 Chinese Mathematical Olympiad Preliminary Round (2023 Chinese High School Mathematics League), First Prize, Hunan Province** *2023*
  Provincial first prize in the Hunan division. Link PDF
- **Second Prize, Beijing Region, Chinese College Students Mathematics Competition** *2025*
  17th National College Students Mathematics Competition / 36th Beijing College Students Mathematics Competition. Link PDF

Technical Skills

Programming	Python (proficient), C++, HTML
Computing	Linux, Git, CMake, MPI, OpenMP, CUDA, LAPACK-related workflows
Foundations	Linear algebra, optimization, probability, numerical methods, scientific computing
Writing	Markdown, LaTeX-style mathematical writing, bilingual technical notes

Last updated: July 2026.