Personnel Infos:

Homepage:
https://qingxiaxjtu.com
Email:
xiaqing151701@stu.xjtu.edu.cn
qingxia151701@outlook.com
qingxia151701@gmail.com
ResearchGate:
https://www.researchgate.net/profile/Qing-Xia-12
Google Scholar:
https://scholar.google.com/citations?user=pWXuL4EAAAAJ&hl=zh-CN
ORCID:
https://orcid.org/0000-0003-1608-415X

Language:

Mandarin: *Maternal*
English: *Fluent*

Computer skills:

•**Programing Language:** C/Python/C++, Matlab, Mathicmatica
•**Working Software:** Excel/PowerPoint/Word, PS, and AfterEffect
•**Scientific Software:** Abaqus, COMSOL

Proficient in using LaTeX and power user of LINUX

Qing XIA

EDUCATIONS

Sept 2021-Present XI'AN JIAO TONG UNIVERSITY(XJTU), CHINA
-Department of Applied Mathematics
-School of Mathematics and Statistics
-Ph.D candidate *Advisor: Prof. Dr. Yibao Li*

Sept 2019-Jun 2021 XI'AN JIAO TONG UNIVERSITY(XJTU), CHINA
-Department of Applied Mathematics
-School of Mathematics and Statistics
-Master candidate *Advisor: Prof. Dr. Yibao Li*

Sept 2015-Jun 2019 XI'AN JIAO TONG UNIVERSITY(XJTU), CHINA
-Department of Applied Mathematics
-School of Mathematics and Statistics
-Bachelor Degree

RESEARCH INTEREST

His research interests mainly lie in **Topology optimization** in additive manufacturing and **Multi-scale multi-physics coupled computation**. His research interests also include computer vision on the digital twin, entropy analysis and numerical analysis. His main work is to project the physical models from real space to digital space for equivalent experiments, which can eliminate the environment and material cost constraints of real physical experiment. Since 2019, he has published **19** SCI papers on the international academic journals such as *Comput. Methods Appl. Mech. Eng., Comput. Phys., Commun., Phys. Fluids, J. Comput. Phys., Pattern Recognit.*, **13** of them are included in **JCR Q1** journals.

MAGNUM OPUS

Remark: # is the first author, ∗ is the corresponding author.

Multi-physical fields coupled computation

• ***Qing Xia#***, *Qian Yu, Yibao Li∗, A second-order accurate, unconditionally energy stable numerical scheme for binary fluid flows on arbitrary curved surfaces, Comput. Methods Appl. Mech. Eng., 384 (2021) 113987. (JCR **Q1**, IF 6.756).*

• ***Qing Xia#***, *Junxiang Yang, Yibao Li∗, On the conservative phase-field method with the N-component incompressible flows, Phys. Fluids, 35 (2023) 012120. (JCR **Q1**, IF 4.980).*

• ***Qing Xia#***, *Junseok Kim, Binhu Xia, Yibao Li∗, An unconditionally energy stable method for binary incompressible heat conductive fluids based on the phase–field model, Comput. Math. Appl., 123 (2023) 26-39. (JCR **Q1**, IF 3.440).*

• ***Qing Xia#***, *Junseok Kim, Yibao Li∗, Modeling and simulation of multi-component immiscible flows based on a modified Cahn-Hilliard equation, Eur. J. Mech. B-Fluid., 95 (2022) 194-204. (JCR **Q2**, IF 2.598).*

•***Qing Xia#***, *Yuehan Liu, Junseok Kim, Yibao Li*, Binary thermal fluids computation over arbitrary surfaces with second-order accuracy and unconditional energy stability based on phase-field model, J. Comput. Appl. Math., (2023). (JCR **Q1**, IF 2.037).*

Expertise field:

Phase field method, Finite Difference Method, Numerical analysis, Hydrodynamic topology optimization, Computational Fluid dynamics with , Image processing under convection

Hobby:

Jogging, Traveling, Photographing, Fitness, Guitar

Teaching Assistant:

Master course, Xi'an Jiaotong University.

• Numerical Analysis(A) Instructor: Prof. Dr. Yibao Li, Iharbour, Xi'an, Shaanxi Province, China, Fall 2020.

• Numerical Analysis(B) Instructor: Prof. Dr. Yibao Li, Iharbour, Xi'an, Shaanxi Province, China Fall 2019.

Chinese Patents:

*• Yibao Li, Zhengyuan Shi, **Qing Xia**, Bingheng Lu, A rapid tooth - gum segmentation method for invisible braces.*

*• Yibao Li, Rui Liu, **Qing Xia**, An automatic target prediction algorithm based on multiple detectors.*

*•Yibao Li#, Rui Liu, **Qing Xia**, Chenxi He, Zhong Li∗, First- and second-order unconditionally stable direct discretization methods for multi-component Cahn-Hilliard system on surfaces, J. Comput. Appl. Math., 401 (2022) 113778. (JCR **Q1**, IF 2.037).*

Topology optimization & Additive manufacturing

*• **Qing Xia**#, Gangming Sun, Junseok Kim, Yibao Li∗, Multi-scale modeling and simulation of additive manufacturing based on fused deposition technique, Phys. Fluids, 35 (2023) 034116. (JCR **Q1**, IF 4.980, Cover Article/Featured/Scilight Article of AIP publishing).*

*• **Qing Xia**#, Xiaoyu Jiang, Yibao Li∗, A modified and efficient phase field model for the biological transport network, J. Comput. Phys., (2023). (JCR **Q1**, IF 4.645).*

*• **Qing Xia**#, Gangming Sun, Qian Yu, Yibao Li∗, Thermal-fluid topology optimization with unconditional energy stability and second-order accuracy via phase-field model, Commun. Nonlinear Sci., 116 (2023) 106782. (JCR **Q1**, IF 4.186).*

*• Yu Qian#, **Qing Xia**, Yibao Li∗, A phase field-based systematic multi-scale topology optimization method for porous structures design, J. Comput. Phys., 466 (2022) 111383. (JCR **Q1**, IF 4.645).*

*• Yibao Li#, **Qing Xia**, Sungha Yoon, Chaeyoung Lee, Bingheng Lu, Junseok Kim∗, Simple and efficient volume merging method for triply periodic minimal structures, Comput. Phys. Commun., 264 (2021) 107956. (JCR **Q1**, IF 4.717).*

*•Bo You#,**Qing Xia**, Continuous Data Assimilation Algorithm for the Two Dimensional Cahn–Hilliard–Navier–Stokes System, Appl. Math. Opt., 85 (2022) 1-19.(JCR **Q1**, IF 3.582)*

*•Yibao Li#, Kunyang Wang, Qian Yu, **Qing Xia**, Junseok Kim, Unconditionally energy stable schemes for fluid-based topology optimization, Commun. Nonlinear Sci., 111 (2022) 106433.(JCR **Q1**, IF 4.260)*

Computer vision

*•Yibao Li#, **Qing Xia**, Sungha Yoon, Junseok Kim∗, A simple and efficient fingerprint image restoration method based on a phase-field model, Pattern Recogn., 123 (2020) 108405. (JCR **Q1**, IF 7.740).*

*•Jin Wang#, **Qing Xia**∗, Binhu Xia, Fast Image Restoration Method Based on the L0, L1, and L2 Gradient Minimization, Mathematics, 10 (2022) 3107. (JCR **Q2**, IF 2.884).*

*•Yibao Li#, Kang Qin, **Qing Xia**, Junseok Kim∗, A second-order unconditionally stable method for the anisotropic dendritic crystal growth model with an orientation-field, Appl. Numer. Math., 184 (2022) 512-526.(JCR **Q1**, IF 2.443)*

HONOURS, AWARDS & PROJECTS

⇒Nov 2022	*Outstanding Model for the Doctoral students*(**Top 0.1%**)
⇒Oct 2022	*National Scholarship for Doctoral students*(**Top 1%**)
⇒May 2022	*The Fundamental Research Funds for the Central Universities(No. XYZ022022005)*(**Top 0.1%**)
⇒Oct 2021	*Alumni Scholarship of 1987 Class*(**Top 5%**)
⇒May 2020	*Outstanding student cadre of Xi'an Jiaotong University*(**Top 5%**)
⇒Oct 2019	*Freshman Scholarship*(**Top 10%**)
⇒Sep 2019	*Outstanding Graduate of Xi'an Jiaotong University*(**Top 5%**)