保 研 招 生 介 绍

2026.11

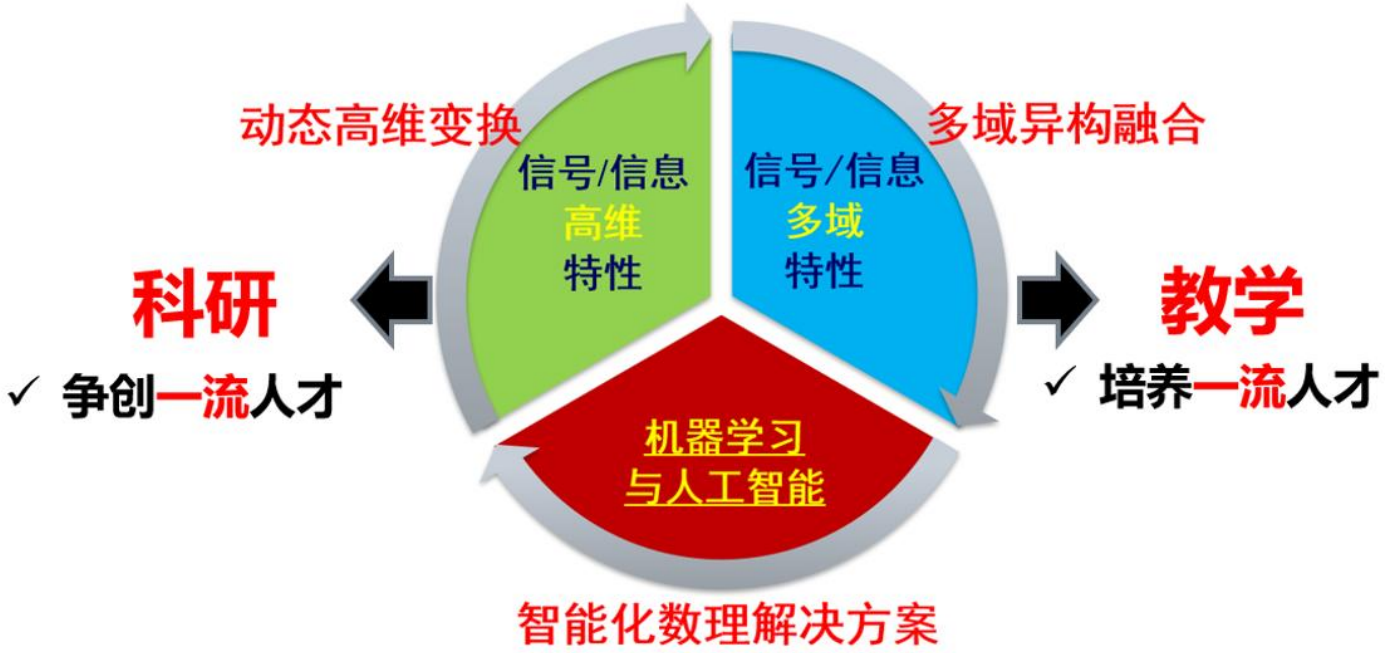
个人简介



王正

副教授，博士生导师，IEEE高级会员，江苏省双创博士
爱思唯尔中国高被引学者
2021年加入东南大学信息科学与工程学院，移动通信全国重点实验室

https://radio.seu.edu.cn/2023/1025/c19941a469691/page.htm
https://seu-zheng-wang.github.io/ （Github国内网络不稳定，建议电脑端网页刷新打开）



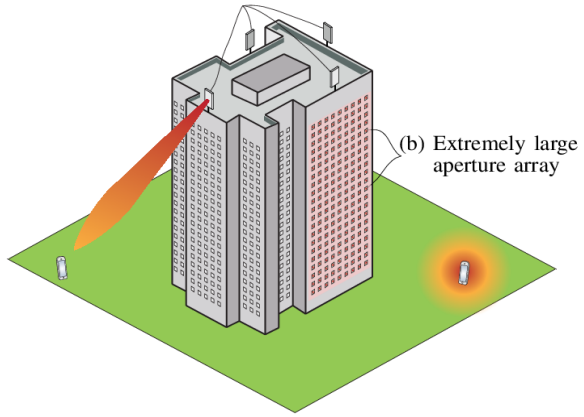
- **亲自一对一带硕士生科研**
- **指导硕士生发表TSP，TWC，TCOM…（一作均为学生）**
- **多名学生硕转博**
- **学生培养质量上限高，下限也高**
- **科研体验好，不签到打卡，假期有保证**
- **找工作准备时间充分，有保障**
- **就业多元化、质量高**
- **……**

研 究 内 容

智能通信核心技术：6G、AI通信、超大规模MIMO

课题组公众号

-6G 超大规模MIMO:
上千根天线



-5G

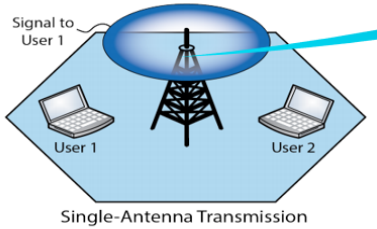
-大规模天线：基站使用大规模天线阵列（几十甚至上百根天线）

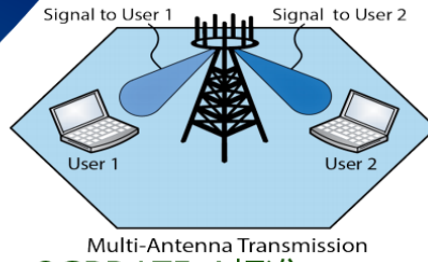
-4G：3GPP LTE标准

-支持SISO，2×2MIMO，4×4MIMO。下行峰值速率100Mb/s。

-3G：WCDMA HSPA标准

-只能使用SISO，下行峰值速率7.2Mb/s





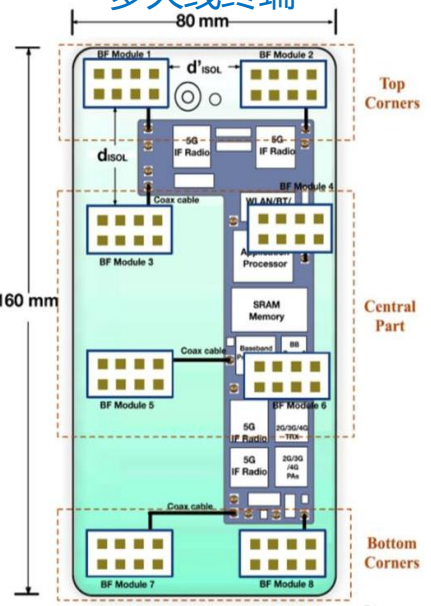
-4G：3GPP LTE-A标准

-最多支持8×8MIMO，下行峰值速率1Gb/s

-3G：WCDMA HSPA+标准

-支持2×2MIMO，下行峰值速率42Mb/s

多天线终端



MIMO系统作为一种基础性的通信核心技术，将会一直延续下去，4G,5G,6G,7G.....

跨域信号融合，高维信息处理，基础计算与算力架构设计.....

研 究 风 格

研究风格

身处科研一线，和博士硕士的科研是层次不同的平行线



更好的科研生态



更多的选择，更好的就业

- 深造
- 企业
- 研究所
- 事业单位
- ……

逐渐锻炼升级

做自己的科研
(五分耕耘一分收获)

同时

亲自一对一指导学生科研
(一分耕耘一分收获)



不停探索，保持自己的学术竞争力



以人为本的高质量指导和培养

培养的学生

2020保研学生：硕士两篇Trans文章

Journals & Magazines > IEEE Transactions on Wireless... > Early Access

Generalizing Projected Gradient Descent for Deep-Learning-Aided Massive MIMO Detection

Publisher: IEEE | Cite This | PDF

Lanxin He ; Zheng Wang ; Shaoshi Yang ; Tao Liu ; Yongming Huang All Authors

投稿IEEE Trans. on Wireless Communications

发表

Conferences > 2021 IEEE 94th Vehicular Tech...

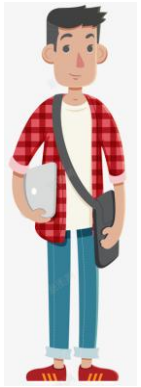
Recurrent Sparse MIMO Detection Network Based on Modified Projected Gradient Descent Method

Publisher: IEEE | Cite This | PDF

Lanxin He ; Tao Liu ; Zheng Wang All Authors

投稿IEEE VTC国际会议

发表



大四保研

研一

研二

研三

Journals & Magazines > IEEE Transactions on Vehicula... > Early Access

Favorable-Propagation-Exploited Variational Inference for Massive MIMO Detection

Publisher: IEEE | Cite This | PDF

Lanxin He ; Zheng Wang ; Zhen Gao ; Lei Liu ; Yongming Huang All Authors

投稿IEEE Trans. on Vehicular Technology

选择课题组内发表继续攻读博士



Journals & Magazines > IEEE Transactions on Signal P... > Volume: 70

Randomized Iterative Methods for Low-Complexity Large-Scale MIMO Detection

Publisher: IEEE | Cite This | PDF

Zheng Wang ; Robert M. Gower ; Yili Xia ; Lanxin He ; Yongming Huang All Authors

A New Low-Complexity WMMSE Algorithm for Downlink Massive MIMO Systems

Publisher: IEEE | Cite This | PDF

Ningxin Zhou ; Zheng Wang ; Lanxin He

- 【2024届】贺岚昕，工学硕士（南航期间招收）(Master of Engineering)，跟随王正老师继续读博(东南大学), PhD supervised by Dr Zheng Wang in Southeast University

▼代表性成果

[J1] **L. He**, Z. Wang, S. Yang, T. Liu and Y. Huang, "Generalizing Projected Gradient Descent for Deep-Learning-Aided Massive MIMO Detection," **IEEE Transactions on Wireless Communications**, vol. 23, no. 3, pp. 1827-1839, March 2024.

[J2] **L. He**, Z. Wang, Z. Gao, L. Liu and Y. Huang, "Favorable-Propagation-Exploited Variational Inference for Massive MIMO Detection," **IEEE Transactions on Vehicular Technology**, vol. 73, no. 9, pp. 14074-14079, Sept. 2024.

[C1] **L. He**, T. Liu and Z. Wang, "Recurrent Sparse MIMO Detection Network Based on Modified Projected Gradient Descent Method," **IEEE Vehicular Technology Conference (VTC2021-Fall)**, Norman, OK, USA, 2021, pp. 1-5.

[C2] **L. He**, Z. Wang and Y. Huang, "A Massive MIMO Sampling Detection Strategy Based on Denoising Diffusion Model," **International Wireless Communications and Mobile Computing (IWCMC)**, Ayia Napa, Cyprus, 2024, pp. 1443-1448.

[J3] Z. Wang, R. M. Gower, Y. Xia, **L. He** and Y. Huang, "Randomized Iterative Methods for Low-Complexity Large-Scale MIMO Detection," **IEEE Transactions on Signal Processing**, vol. 70, pp. 2934-2949, 2022.

2021保研学生（东南第一届）：硕士人均大于一篇Letter文章

Conferences > 2022 14th International Confe...

A New Low-Complexity WMMSE Algorithm for Dow... Systems

Publisher: IEEE | Cite This | PDF

Ningxin Zhou ; Zheng Wang ; Lanxin He ; Yang Huang All Authors



Conferences > 2023 IEEE 97th Vehicular Tech...

Ordered Iterative Methods for Low-Complexity Massive MIMO Detection

Publisher: IEEE | Cite This | PDF

IEEE VTC国际会议研一发表

Beilei Gong ; Ningxin Zhou ; Zheng Wang All Authors

WCSP国际会议研一发表

- [2025届] 周宁欣，工学硕士(Master of Engineering)，就职于小米(上海) Xiaomi
  ▼ 代表性成果
  [J1] **N. Zhou**, Z. Wang, Q. Shi, W. Xu and Y. Huang, "Model-driven Distributed WMMSE for Downlink Massive MIMO Systems," **IEEE Wireless Communications Letters**, early access, 2025.
  [J2] **N. Zhou**, Z. Wang, C. Ma, Y. Huang and Q. Shi, "Distributed Precoder Based on Weighted MMSE With Low Complexity for Massive MIMO Systems," **IEEE Communications Letters**, vol. 29, no. 3, pp. 482-486, March 2025.
  [C1] **N. Zhou**, Z. Wang, L. He and Y. Huang, "A New Low-Complexity WMMSE Algorithm for Downlink Massive MIMO Systems," **International Conference on Wireless Communications and Signal Processing (WCSP)**, Nanjing, China, 2022, pp. 1096-1101.

毕业论文
盲审双90+

- [2025届] 龚蓓蕾，工学硕士(Master of Engineering)，就职于国家电网(上海) State Grid

校优秀论文

  ▼ 代表性成果
  [J1] **B. Gong**, Q. Chen, Z. Wang, W. Xu and Y. Huang, "Feedback Interference Cancellation Detection for quantized Massive MIMO Systems,"**IEEE Wireless Communications Letters**, early access, doi: 10.1109/LWC.2025.3588528.
  [C1] **B. Gong**, N. Zhou and Z. Wang, "Ordered Iterative Methods for Low-Complexity Massive MIMO Detection," **IEEE Vehicular Technology Conference (VTC2023-Spring)**, Florence, Italy, 2023, pp. 1-5.

- [2025届] 高逸群，工学硕士(Master of Engineering)，就职于普源精电(苏州) RIGOL Technologies

校优秀论文

  ▼ 代表性成果 考研学生
  [J1] **Y. Gao**, Q. Chen, L. He, Z. Wang, J. Zhang, Y.Huang, Y. Gao, and Z. Xu, "Artificial Intelligence Enabled Joint Channel Estimation and Signal Detection for Massive MIMO Systems," **Chinese Journal of Electronics**, early access.
  [C1] **Y. Gao**, H. Zhu, Z. Wang and Z. Gao, "Recursive Joint Channel Estimation and Signal Detection for Massive MIMO Systems," **IEEE INFOCOM 2025**, early access.



2022&2023保研学生:人均大于一篇Trans文章

Journals & Magazines > IEEE Transactions on Vehicula... > Early Access

General Recursive Least Square Algorithm For Distributed Detection In Massive MIMO

IEEE Trans. on Vehicular Technology研一发表

Publisher: IEEE | Cite This | PDF

课题组内硕转博

Qiqiang Chen; Zheng Wang; Cong Ma; Xiaoming Dai; Derrick Wing Kwan Ng All Authors

科研为主，项目为辅
快速入门，自由翱翔

IEEE ICCT国际会议研一发表

Conferences > 2023 IEEE 23rd International ...

Energy Efficiency Optimization in Cell-Free Massive MIMO With Normalized Conjugate Beamforming

Publisher: IEEE | Cite This | PDF

Bin Yan; Ningxin Zhou; Zheng Wang All Authors



课题组内硕转博

Conferences > 2023 IEEE 23rd International ...

A Low-Complexity Gaussian Approximate Message Passing Detection Algorithm For Massive MIMO With High Order Modulation

Publisher: IEEE | Cite This | PDF

He Zhu; Beilei Gong; Zheng Wang All Authors

IEEE ICCT国际会议研一发表

该五位同学(已硕士毕业3人，两人转博)目前期刊论文成果(截止2026.11.15)

- 已中稿9篇（TVT,TWCx3,WCLx2,TSP,JSTSP,TCOM)
- 投稿中（TWC，IEEE Communication Magzine，.....)

Conferences > 2024 International Wireless C...

Efficient Joint Hybrid Precoding And Analog Combining Scheme For Massive MIMO Systems

Publisher: IEEE | Cite This | PDF

Yuanli Ma; Qiqiang Chen; Bin Yan; Zheng Wang; Lanxin He All Authors

287 Full Text Views

IWCMC国际会议研一发表

Conferences > 2025 IEEE Wireless Communicat...

An Efficient NS-ADMM Detection for Uplink MIMO-ISAC Systems

Publisher: IEEE | Cite This | PDF

IEEE WCNC国际会议研一发表

Jian Wang; Qiqiang Chen; Zheng Wang; Wenbing Fan All Authors

96 Full Text Views

2024保研学生：一如既往研一发高水平文章







- [2025.10] Paper of Yunjie Chen was accepted by IEEE ICCT 2025(陈蕴杰(研一，2025级)论文被IEEE ICCT录用) [PDF] [PPT]
- [2025.10] Paper of Kaijie Zeng was accepted by IEEE ICCT 2025, and was conferred the Best Oral Presentation Award for his outstanding delivery.(曾凯杰(研一，2025级)论文被IEEE ICCT录用，并在会场报告中取得了最佳口语展示奖) [PDF] [PPT]
- [2026.01] Paper of Yuhao Zhu was accepted by IEEE ICC 2026(朱玉浩(研一，2025级)论文被IEEE ICC录用)
- [2026.01] Paper of Xuanxiang Hu was accepted by IEEE WCNC 2026(胡铉祥(研一，2025级)论文被IEEE WCNC录用)
- [2026.03] Paper of Yuhuan Zhao was accepted by IEEE VTC-2026 Spring (赵雨欢同学(研一，2025级)论文被IEEE VTC会议录用) [PDF] [PPT]

已投稿TCOM

准备Trans中

准备Trans中

准备Trans中

2025保研学生：一如既往研一发高水平文章

- [2026.09] Paper of Chengzhe Weng was accepted by IEEE GLOBECOM 2026. (翁程哲同学(研一，2026级)论文被IEEE GLOBECOM会议录用) [PDF]

Joint Receiver Design for Massive MIMO-ISAC Systems via Expectation-Maximization Detection

Shuai Yuan, Zheng Wang, *Senior Member, IEEE*, Chenhao Qi, *Senior Member, IEEE* and Yongming Huang, *Fellow, IEEE*

投稿 IEEE Wireless Communications Letters

***Abstract*—In this letter, an expectation-maximization (EM)-based joint estimation and detection scheme is proposed for uplink receiver design in massive MIMO-ISAC systems. By modeling the target reflection coefficients as latent variables, the proposed scheme derives their posterior distribution in the E-step and uses the corresponding MMSE estimate to iteratively couple sensing estimation and communication detection. Moreover, the observed-data log-likelihood of the communication symbol is demonstrated to be nondecreasing and convergent, while the corresponding sequence of communication symbol converges as well for the exact EM-based scheme. Besides, to avoid the exhaustive search required by the M-step, a low-complexity approximate implementation based on MMSE detection is developed. Simulation results demonstrate that the proposed method achieves improved communication detection and competitive sensing estimation.**

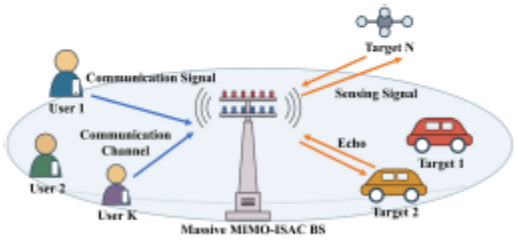


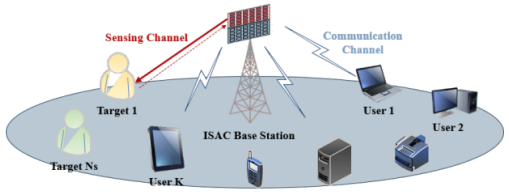
Fig. 1. Uplink MIMO-ISAC system model.

Block-Level Precoding for MIMO-ISAC Based on Interference Exploitation

已录用 IEEE Globecom 2026

Chengzhe Weng, Bin Yan, Zheng Wang, Yongming Huang
School of Information Science and Engineering, Southeast University, Nanjing, 210096, China
Email: {chengzhe, bin_yan, zheng_wang, huangym}@seu.edu.cn

***Abstract*—In this paper, the technique of constructive interference (CI) is introduced to improve the performance of multiple-input multiple-output (MIMO) integrated sensing and communication (ISAC) systems. First, we formulate a non-convex sensing-oriented precoding problem under communication CI constraints, which can be approximately solved via successive convex approximation (SCA). To reduce computational complexity, we further derive the *Lagrange* dual of the SCA sub-problem. By eliminating the explicit second-order cone constraint in the primal sub-problem, the dual formulation enables a more efficient solution procedure, leading to the proposed CI-SCA-Dual algorithm. Simulation results show that the proposed CI-SCA-Dual precoding method achieves significant ISAC performance improvement with limited computational complexity increment.**





Efficient Adaptive Low-Rank MMSE Detection for Near-Field XL-MIMO Systems

投稿 IEEE VTC Spring 2027

Zhipeng Fan, Lanxin He, Zheng Wang, and Yongming Huang
School of Information Science and Engineering, Southeast University, Nanjing, China
E-mail: zp_fan@seu.edu.cn; lanxin_he@seu.edu.cn; wznuua@gmail.com; huangym@seu.edu.cn

博士培养质量

- [2026.10] Congratulations to Qiqiang Chen on being selected for the Doctoral Student Track of the 2026 Young Science and Technology Talent Development Program of the China Association for Science and Technology (CAST).(祝贺陈啟强(博二，2025级)入选2026年中国科协青年科技人才培育工程博士生专项计划)









- [2026.10] Congratulations to Qiqiang Chen, Lanxin He and Bin Yan on receiving the First-Class Doctoral Academic Scholarship!. (祝贺陈啟强(博二，2025级)，贺岚昕(博三，2024级)，颜斌(博二，2025级)获得博士研究生学业一等奖学金) (link)

2026年9月已出国（新加坡） 2026年11月已出国（意大利） 2027年3月出国交流（澳大利亚）

- [2026.07] Congratulations to Qiqiang Chen and Lanxin He on being selected for the 2026 Chinese Government Scholarship Program for Study Abroad. (祝贺陈啟强(博二，2025级)，贺岚昕(博二，2024级)获得2026年国家公派出国留学资格)

- [2025.12] Lanxin He, Qiqiang Chen and Bin Yan were awarded Category C funding from the 2026 Southeast University Doctoral Innovation Capability Improvement Program. (贺岚昕(博二,2024级),陈啟强(博一，2025级),颜斌(博一，2025级)获得2026年度东南大学博士研究生创新能力提升计划“C类”资助) (link)

核 心 优 势

学生培养核心优势

- 培养重心前置 → 形成先发优势，为后续发展打基础（亲自带）
- 亲自1对1指导 → 拔高上限，托举下限
- 收获有预期 → “一分耕耘一分收获”的科研
- 东西出的快 → 100%研一发表高水平论文
- 成果有保障 → 100%学生本人均署名第一作者
- 交流机会多 → 出国开会，交流学习
- 时间灵活，假期有保证 → 无打卡、无签到、个人安排工作时间
- 线上组会 → 灵活高效
- 兴趣驱动，自由度高 → 聚焦前沿热点
- 组内氛围和谐，团建活动丰富 → 热爱生活，互帮互助，经常自发活动
- 找工作准备时间充分，有保障 → 科研好，积累好，能力强，机会多
- 信息开放，无壁垒 → 有效反馈机制，双向选择

快速成长





发展多元








保 研 建 议

充分了解，再做选择

邮件联系 → 初步交流 → 双方意向 → 提供全体在读学生联系方式 → 学生独立了解 → 再次交流 → 双向确认

选择导师是双向的，信息也应该是双向透明的。

在双方初步交流并有进一步意向后，我会向申请同学提供**课题组全体在读学生的联系方式**。你可以自行联系任何同学，了解科研指导、课题组管理、学习生活、就业、读博等任何你关心的问题。

不指定学生，不限制人数，交流过程无需向我反馈。

这也是课题组一直以来的传统——今天接受你咨询的师兄师姐，当年也是通过同样的方式了解课题组、做出自己的选择。

希望每一位同学都是在充分了解之后，主动选择加入我们。



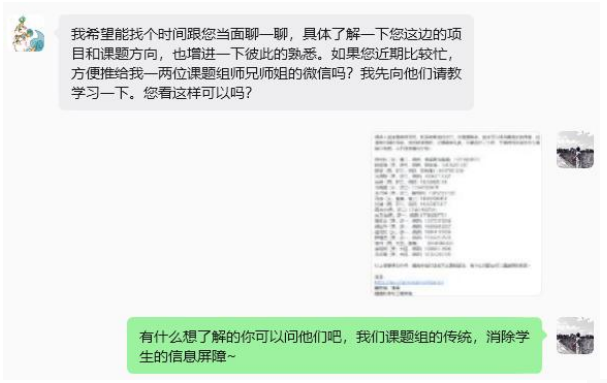
"The greatest people are self-managing. They don't need to be managed. What they need is a common vision, and that's what leadership is."

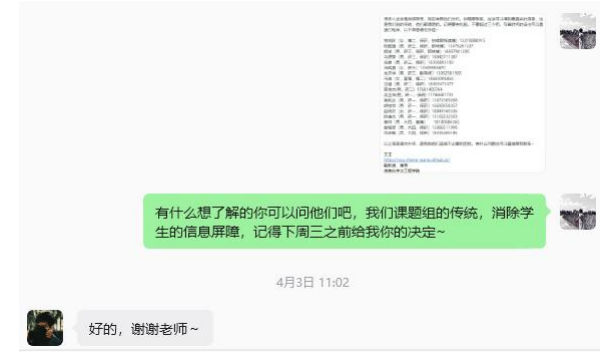
"人才无需管理，只需要有共同理想"

—— 史蒂夫 · 乔布斯

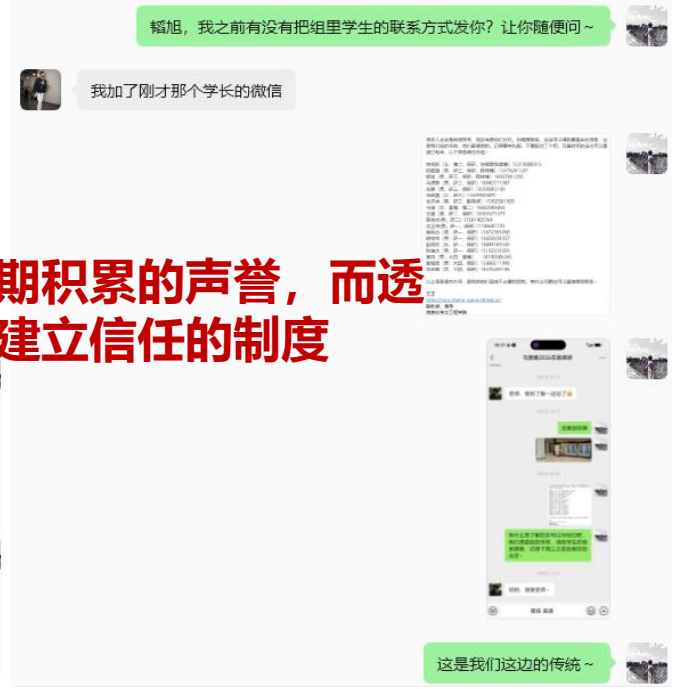
管理上给予自由，科研上提供指导，学术上坚持标准

"不用相信我的宣传，你可以自己找组里任何一个学生问。"



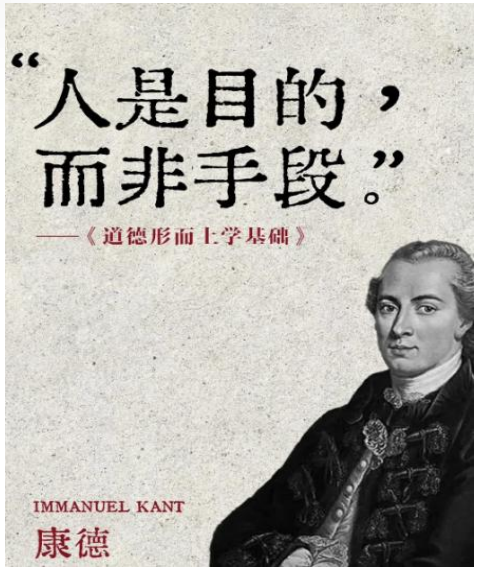






口碑是一种长期积累的声誉，而透明是一种主动建立信任的制度

充分了解，再做选择



以人为本

学生不是导师完成项目、论文、职称、帽子的工具；培养学生本身，就是目的。

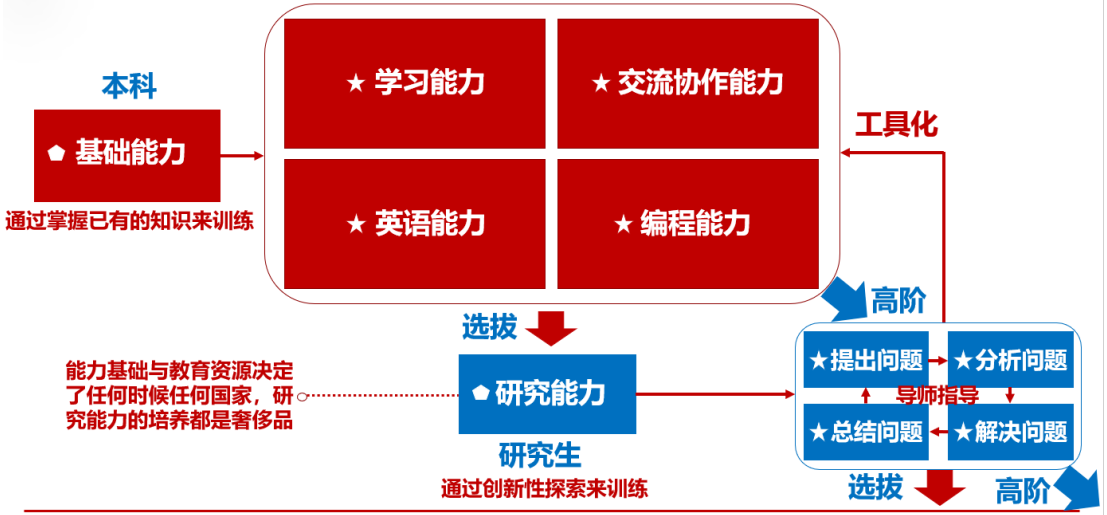
不画饼，无宏大叙事，就是做科研，锻炼能力

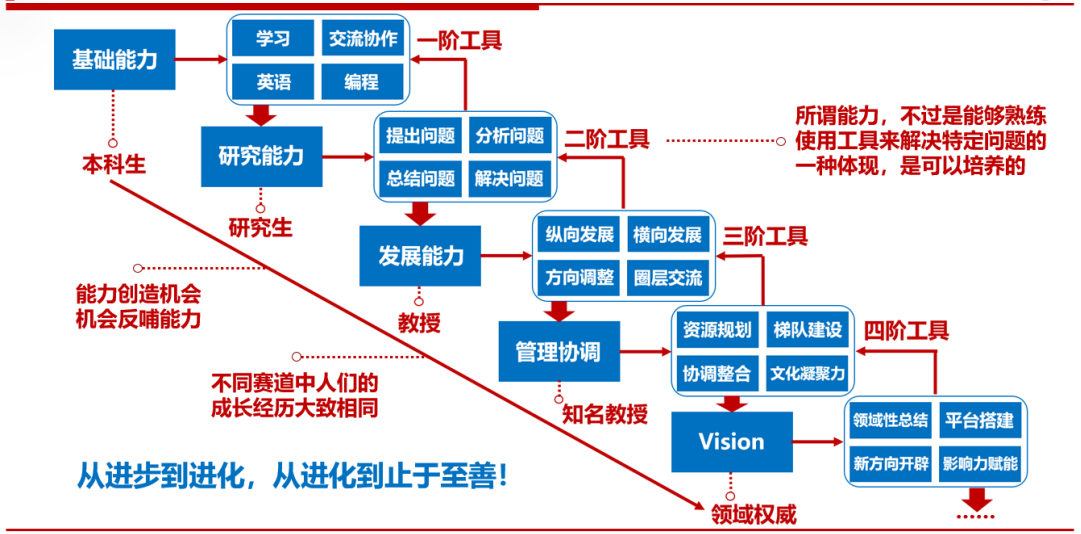
Alumni (所有学生毕业情况)

- [2026届] 陈啟强，跟随王正老师继续读博(2025年3月转硕博贯通), Transfer to PhD supervised by Dr Zheng Wang in Southeast University
  - 代表性成果
- [2026届] 颜斌，跟随王正老师继续读博(2025年9月转硕博连读), Transfer to PhD supervised by Dr Zheng Wang in Southeast University
  - 代表性成果
- [2026届] 马源黎，工学硕士(Master of Engineering)，东南大学研究生优秀毕业生，就职于华为(上海) Huawei
  - 代表性成果
- [2026届] 马晓晨，工学硕士(Master of Engineering)，就职于小米(上海) Xiaomi
  - 代表性成果
- [2026届] 朱赫，工学硕士(Master of Engineering)，就职于翱捷科技(上海) ASR
  - 代表性成果
- [2026届] 朱济坤，工学硕士(Master of Engineering)，就职于中国移动(苏州) China Mobile
  - 代表性成果
- [2025届] 周宁欣，工学硕士(Master of Engineering)，就职于小米(上海) Xiaomi
  - 代表性成果
- [2025届] 龚蓓蕾，工学硕士(Master of Engineering)，东南大学研究生优秀毕业生，就职于国家电网(上海) State Grid
  - 代表性成果
- [2025届] 高逸群，工学硕士(Master of Engineering)，东南大学研究生优秀毕业生，就职于普源精电(苏州) RIGOL Technologies
  - 代表性成果

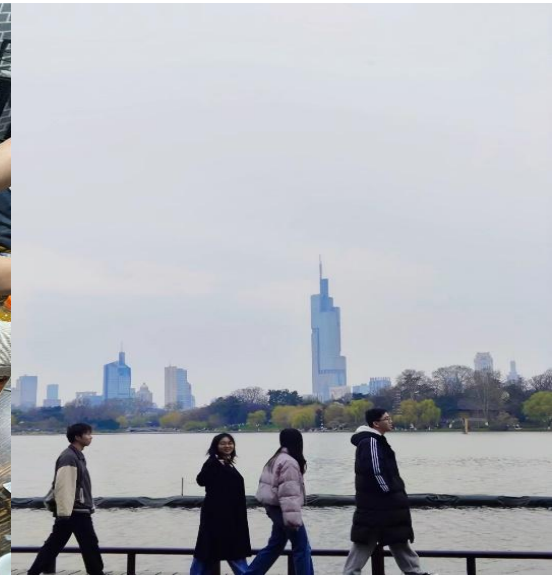
重质量，不重数量，更在意他们今后长久的发展

教育的第一核心，是培养能力，而不是追求分数







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“人才无需管理，只需要有共同理想”

“人是目的，而非手段”

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