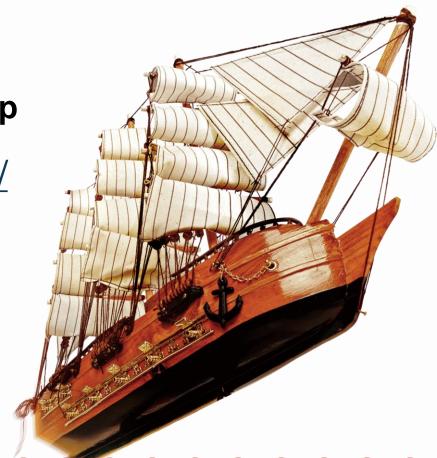
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算法逻辑实验室

Algorithms and Logic Group

% https://tcsuestc.com/

2022研究生招新



一、团队基本情况

基本情况

- **重要**:致力于研究计算机科学方向的重要问题,如组合优化算法、参数算法、运筹、逻辑与自动机
- · 实力: STOC, SODA, LICS, AAAI, IJCAI, WWW等顶级会议上发表论文200多篇,并获得了STOC 2017年的最佳论文奖。
- 阵容:新西兰院士Bakh教授担任主任,肖鸣宇教授(副院长)任副主任。4位全职老师,2名博士后,7名博士生,10名硕士生和20余名本科生。导师均有海外博士背景、且指导学生认真负责。
- 人才培养: 2019华为天才少年, 2022 IEEE极限大赛全国 第2名, 国家级大创奖...



导师阵容



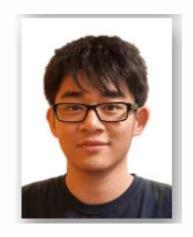
Bakh教授,新 西兰皇家科学 院院士



肖鸣字教授,副 院长。香港中文 大学博士,师从 姚期智教授



周毅,副教授,法国昂热大学博士,师从Jin-Kao Hao,法国IUF院士



许超助理教授 (TenureTrack),美 国伊利诺伊大学香槟 分校博士。



Toru Takisaka, 博士后,京都大 学博士,研究兴 趣:自动机理论 ,算法及随机性

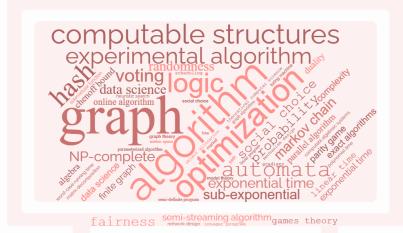


张梦筱,博士 后,奥克兰大 学博士,研究 兴趣:机制设 计、隐私保护 等

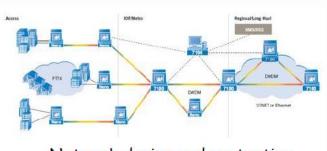


研究方向

- ◆理论:逻辑、图论、计算代数系统,自动机、图上博弈
- ◆**算法**:参数算法、图算法、组合 优化
- ◆ **应用**: 网络规划、图数据库、机制设计、社会计算
- ◆**优化**: 启发式、算法工程、精确 算法



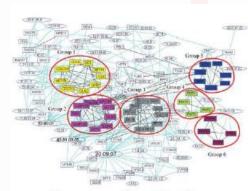
convexityStreaming algorithm parallel computing



Network design and protection 网络规划与备份



Sports scheduling 比赛调度问题



Community finding 社团挖掘



定期邀请国际专家指导

Chengdu A&L Seminars

2021-12-07 Rod Downey: Some New Directions in Online Structure Theory

2021-12-03 Baoxiang Wang: Multilinear extension of k-submodular functions

2021-11-12 Yan Gu: Introduction to Parallel Algorithms

2021-11-01 Liang Yu: On the reals weakly low for \$K\$

2021-10-11 Cristian Calude: Randomness and Complexity

2021-09-17 Weiming Feng: Rapid mixing of Glauber dynamics via spectral independence for all degrees

2021-07-27 Chenglin Fan : Sparse Metric Repair and Distance Realease

2021-07-07 Wenfei Wu:面向多租户分布式机器学习的聚合传输协议

2021-07-06 Zhipeng Lv: 启发式优化及其复杂工业应用

2021-06-30 Jian Li: 机器学习与量化投资



Introduction to Parallel Algorithms

Yan Gu

University of California, Riverside

Time: 10:20 AM (Time in Beijing) 3:20 PM (Time in Auckland) November 12, 2021 (Friday) VooV Meeting ID: 359 812 755

Abstract: Parallel processors are ubiquitous nowadays and it is almost impossible to find a single-core processor, probably other than a toaster. However, very few courses and online materials cover the basic knowledge for designing parallel algorithms. This talk consists of two parts. The first part will overview the key idea for parallel computing and programming, such as the computational and programming models for parallel algorithms, and the key concept of the scheduler. The second half of this talk will overview some of the most exciting advancements in parallel algorithm research in recent years, and introduce promising research topics in this scope.

Speaker Bio: Yan Gu is an Assistant Professor in the Computer Science and Engineering (CSE) Department at the University of California, Riverside (UCR), since 2020. Prior to that, he was a postdoc associate at MIT CSAIL in 2019. Before that, he received Ph.D. degree and Bachelor's degree from Carnegie Mellon University in 2018 and Tsinghua University in 2012, respectively, both in computer science. His research interest is algorithm design, broadly on both the most canonical problems, and applications in databases, machine learning, graphics, architecture, etc. He has received the Outstanding Paper Award from SPAA and Memorable Paper Award Finalist at NVMW. He is also looking for self-motivated Ph.D. students with solid math and programming background.





线上线下研讨班











Algorithms and Logic Group in UESTC

Home News

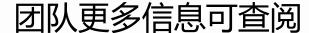
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Research

中文



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About Us

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News and Announcements

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The Algorithms and Logic research lab in the UESTC was established by Professors Bakk Khoussainov and Mingyu Xiao in 2020. The lab conducts research in algorithms, automata, computational complexity, mechanism design, games played on graphs, automatic structures, and computable structures. Furthermore, our research involves interactions with other disciplines such as algorithm engineering, experimental

Join Us

Currently, our laboratory is recruiting undergraduate, Master and Ph.D students with strong self-motivation and interest in theoretical research.

algorithms, databases, computational economics, and security.

We are also hiring postdocs, assistant professors, associate professors, and professors. If you are interested in joining, please contact us by email. <u>Download Poster</u>

CONTACT US:

bmk{AT}uestc.edu.cn (Bakh Khoussainov) and myxiao{AT}uestc.edu.cn (Mingyu Xiao). > One paper accepted by WWW 2022

2022-01-17

- We got one paper accepted by AAAI 2022 in the full...2021-12-08
- > We got one paper accepted by INFOCOM 2022 in t... 2021-12-04
- Prof. Baoxiang Wang's Visit from 1 to 5 December, ... 2021-11-25
- Prof. Bakh Khoussainov's talk at Sirius Mathematic... 2021-11-13

Seminars

1,1111

- Listing Maximal k-Plexes in Large Real-World Grap...2022-04-01
- Automated Generation of Branching Rules 2022-03-25
- > Combinatorial games on networks 2022-03-18
- Facility location with entrance fees 2022-03-11
- Minimum violation vertex maps and their applicati... 2022-03-04
- Reachability and Büchi games 2022-01-07
- > Brief introduction on fair allocations of divisible an... 2021-12-17

Recent Visitors

more)

Q€ 2021-04-07 Angsheng Li(李昂生) Beihang University

二、2022招生情况



Bakh老师



Bakh Khoussainov, Professor, Group Director Ph.D.(Novosibirsk University)

Research Interests: Algorithms, Automata, Computability, Games on Graphs, Logic, Randomness.

Email: bmk@uestc.edu.cn

Brief Intro (see Wikipedia):

- 1. Love playing football, tennis, martial arts, & drinking coffee.
- 2. My students are placed at Oxford, UCSD, Univ of Auckland, Univ of Sydney, Univ of Wellington, Univ of Waterloo.

• Prerequisite:

- 1. Strong Math and Data Structures background (important)
- 2. Discipline, good work habit, creativity (important)
- 3. Communicative, active, and independent (desirable)



肖鸣宇老师



Mingyu Xiao(肖鸣主), Professor, Deputy Director

Ph.D.(The Chinese University of Hong Kong)

Research Interests: Graph Algorithms and Graph Theory, Exact and Parameterized Algorithms, Mechanism Design, Computational Social Choice.

Email: myxiao{AT}uestc.edu.cn

Address: Main Building B1-515 (Qingshuihe Campus)

• 2022年计划招生3名招考生

研究方向有三个:

算法博弈论 (计算经济问题为主)

网络与优化(以图算法为主,需要编程实现算法)

算法理论 (以算法时间复杂度分析为主,需要强的逻辑推理能力)

特别欢迎数学背景好或有编程竞赛经历或英文读写能力强的学生联系

邮箱: myxiao@uestc.edu.cn

周毅老师



- ◆ 研究大规模组合优化算法的设计、分析、实现、并行;研究组合优化算法在人工智能搜索,图数据库,网络规划,工业调度等实际问题中的应用。
- ◆ 联系方式: <u>zhou.yi@uestc.edu.cn</u>
- ◆ 主页: https://joey001.github.io/

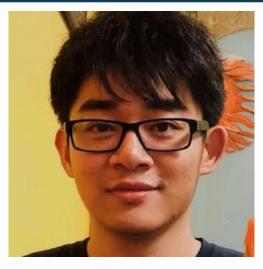
2022年预计招收2名研究生:

报考要求:

- 1. 热爱编程,具有优秀的C、C++编程能力
- 2. 专注踏实,执行力较好,
- 3. 有论文发表,或有编程大赛、数学建模大赛等奖项,或者有程序性能调优经验的学生可优先考虑



许超 (Chao Xu) 老师



研究方向: 组合优化, 计算几何, 算法, 运筹

联系方式: the.chao.xu@gmail.com
个人主页: https://chaoxuprime.com

导师简介:

主要做纯理论研究,兼顾应用场景中抽象产生的具体理论问题。曾就职于多个科技大厂和知名对冲基金,具有丰富的工业界经验

预计招收3名研究生

报考要求 (满足至少一项) :

- 数学能力: 熟练读写数学证明, 清晰分辨证明中的错误

- 问题解决能力:在领域相关竞赛上有突出表现,包括但不限于OI

, ACM-ICPC, 数学联赛, CMO等

- 实践能力:编程(如函数式编程),熟练使用常见优化/数学软件

- 综合能力: 沟通能力强, 英语好, 独立解决问题, 执行力强

THANKS



Q&A