English Ad

Multiple Ph.D. openings are available in the Computer Science Department at George Mason University across multiple research areas, including, but not limited to, Machine Learning (Theory/Data Mining/NLP/CV), Systems and Networking, Software Engineering, Security and Privacy, and Robotics. All Ph.D. students are fully funded. Interested students are welcome to reply to this post or contact our faculty members (emails listed below). Please put `[Prospective PhD Student]` in the email subject when sending emails.

About GMU-CS:

GMU is an R1 university (R1 universities are those that meet the highest benchmarks in research activity and expenditures as measured by the Carnegie Classification of Institutions of Higher Education), and the overall CS ranking is 34 according to csrankings.org (2017-2022). The CS department is growing rapidly, and the number of faculty members has doubled in the past 4 years. There are 78 faculty members in the department: 21 instructional, 21 tenure-track and 36 tenured. Students will have the opportunity to work with all of our faculty members on cutting-edge research problems, and there are lots of collaborations within our department. GMU is only miles away from Washington DC, and is also very close to Amazon's new headquarters, which offers plenty of intern and full-time opportunities.

GMU is the largest public research university in Virginia, with an enrollment of over 38,000 students studying in over 200 degree programs. GMU is located in the city of Fairfax in Northern Virginia at the doorstep of the Washington, D.C., metropolitan area, with unmatched geographical access to a number of federal agencies and national laboratories. Northern Virginia is also home to one of the largest concentrations of high-tech firms in the nation, providing excellent opportunities for interaction with industry (e.g., Amazon is building its second headquarters in Northern Virginia). Fairfax is consistently rated as being among the best areas to live in the country, and the area is close to three of the top 30 airports in the USA with direct flights to many continents, such as Africa, Asia, Europe, and South America.

In conjunction with Amazon's decision to establish a second headquarters in Northern Virginia, the Commonwealth of Virginia announced a multi-year plan to invest in the growth of degree programs in computing, and GMU has committed to accelerate its plans to grow its capacity in computing and high-tech fields. Among the exciting initiatives being undertaken by the university are the launch of the Institute for Digital InnovAtion (IDIA), a university think tank and incubator to serve the digital economy, and the expansion of its Arlington Campus with a planned 400,000 square foot Digital InnovAtion Building. These initiatives reflect hundreds of millions of dollars in new investment by GMU that will rapidly elevate GMU's already leading national position in computing and related areas.

Ph.D. students are fully funded as GTA (Graduate Teaching Assistantship) or GRA (Graduate Research Assistantship). GTAs are supported by the department for the first two years, and students are expected to find an advisor within that time frame. GRAs are supported by funding from individual faculty members who serve as their advisors. By contacting faculty members in advance, students have a higher chance to get GRA offers (if any of the faculty members agrees to do so), and GRAs can commit themselves to research shortly after they start their Ph.D. program.

How to Apply:

- Program Info: https://cs.gmu.edu/prospective-students/phd-program/admissions/
- Application link: https://cec.gmu.edu/admissions/graduate-admissions/application-requirements-and-deadlines
- Deadline: Dec. 1, 2022 (Fall 2023)
- Demonstration of English language proficiency is required for international students (Duolingo also accepted): https://www.gmu.edu/admissions-aid/apply-now/how-apply/international/english-proficiency-requirements
- GRE is not required for Fall 2023

Research Areas:

If you want to pursue a Ph.D. in an area that is not listed below, please contact any faculty that conducts research in a related field.

Machine Learning

Contact: Mingrui Liu (mingruil AT gmu DOT edu), Fang-Yi Yu (fangyiyu AT gmu DOT edu)

The Machine Learning group is looking for self-motivated students who are interested in designing provably efficient algorithms for solving cutting-edge machine learning problems with elegant mathematical/theoretical foundations, and understanding the interaction between machine learning and society. The main research topics include mathematical optimization, statistical learning theory, deep learning, federated learning, and its applications in economics and edge computing. We regularly publish papers on top venues, such as NeurIPS, ICML, ICLR, SODA, and EC. Students can potentially work with Dr. Mingrui Liu, Dr. Fang-Yi Yu, Dr. Grigory Yaroslavtsev, or Dr. Sanmay Das. Students who have a strong mathematical background are strongly encouraged to apply.

Data Mining:

Contact: Ziwei Zhu (zzhu20 AT gmu DOT edu)

The data mining group at GMU conducts research covering a wide range of core data mining and machine learning topics, including but not limited to recommender systems, learning-to-rank, time series mining, financial data mining, educational data mining, social network analysis, graph mining, etc. Our

faculty members regularly publish papers in top-tier data mining and information retrieval conferences, such as KDD, SDM, WSDM, ICDM, SIGIR, CIKM, WWW, and other machine learning and AI related venues. Students can potentially work with any faculty in the data mining group, including: Ziwei Zhu, Jessica Lin, Grigory Yaroslavtsev, Carlotta Domeniconi, and Sanmay Das. Students with relevant experience in general data mining, information retrieval, machine learning are encouraged to apply.

Software Engineering

Contact: Wing Lam (winglam AT gmu DOT edu); Thanhvu H Nguyen (tvn AT gmu DOT edu); Kevin Moran (kpmoran AT gmu DOT edu)

The software engineering group at GMU is looking for self-motivated doctoral and master's students with a strong academic background in Software Engineering, Formal Methods, Programming Languages, Human Computer Interaction, or Machine Learning. The group consists of 14 faculty members that are working on research projects in the topics of Software Testing and Analysis, the synergy between AI and Software Engineering, Fairness and Bias Detection, Software Evolution, Software Dependability, User Interfaces, Mining Software Repositories, Distributed Systems, and Mobile Computing. Our software engineering group is among the **top 10** within the last five years in the USA, according to csrankings.org. Students who are interested in software engineering can work with any faculty in the software engineering group, including but are not limited to Wing Lam, Brittany Johnson, Kevin Moran, Thanhvu H Nguyen, Thomas LaToza, Paul Ammann, Jeff Offutt, and David Rosenblum. Our faculty members regularly publish papers in top-tier conferences, such as ICSE, ESEC/FSE, ASE, ISSTA, TACAS, PLDI, OOPSLA, CHI, VL/HCC, and AAAI. Students with interest in the aforementioned topics are encouraged to apply.

Security and Privacy

Contacts: Xiaokuan Zhang (xiaokuan AT gmu DOT edu); Lannan Lisa Luo (lluo4 AT gmu DOT edu); Qiang Zeng (zeng AT gmu DOT edu)

The security group is looking for self-motivated students to join our group and tackle cutting-edge security problems. Our faculty members regularly publish papers in top-tier security conferences, such as ACM CCS, USENIX Security, NDSS, and S&P. The research interests include the broad area of System and Software Security, and Privacy, including side channels, mobile security, IoT security, blockchain security, binary code analysis, etc. The students can potentially work with any faculty in the security group, including but not limited to: Xiaokuan Zhang, Qiang Zeng, Lannan Lisa Luo, Dov Gordon, Foteini Baldimtsi, Eric Osterweil, Giuseppe Ateniese, Evgenios Kornaropoulos, Xinyuan Wang. We also collaborate with other faculty members from the Department of IST and ECE such as Kun Sun, Xiaonan Guo, Jianli Pan, Zhisheng Yan, and Kai Zeng. Students with experience on ACM-ICPC/CTF competitions or publications in Security conferences are encouraged to apply.

Systems & Networking

Contact: Lishan Yang (lyang28 AT gmu DOT edu)

The systems group is looking for highly-motivated students who are interested in system research to join our group. There are plenty of ideas, funding, and computing resources. Our research covers the broad areas of computer systems, including system reliability, computer architecture, networked systems, wireless networking, sensors, internet of things (IoT), and mobile computing. Our faculty members

regularly publish papers in top-tier system conferences, such as MICRO, ASPLOS, USENIX ATC, SC, NSDI, Sigmetrics, IMC, MobiSys, and MobiCom. Students can potentially work with any faculty in the systems group, including: Lishan Yang, Shuochao Yao, Parth Pathak, Bob Simon, Bo Han, and Songqing Chen. Students with experience in design, implementation, and programming of computer systems and networking, architecture, and the Linux kernel are strongly encouraged to apply.

Robotics

Contact: Xuesu Xiao (xiao AT gmu DOT edu)

The robotics group at GMU performs a wide range of research including motion planning, machine learning, and computer vision. The group also has a focus on deployable field robotics with a fleet of state-of-the-art robot platforms. Our faculty regularly publish at top-tier robotics conferences such as ICRA, IROS, RSS, CoRL, SSRR, etc. The robotics group has a collaborative environment among all robotics faculty, including Xuesu Xiao, Sean Luke, Jana Košecká, Erion Plaku, and Gregory Stein, and other interdisciplinary faculty from ECE (Xuan Wang, Ningshi Yao, Felipe Veiga, and Camera Nowzari) and ME (Daigo Shishika and Leigh McCue). Any candidate with relevant experience in robotics, motion planning, machine learning, and computer vision is encouraged to apply. Hands-on knowledge in robotics hardware, field experience, and a good publication record is strongly preferred.

Natural Language Processing

Contact: Ziyu Yao (ziyuyao AT gmu DOT edu)

The NLP group at GMU CS (https://nlp.cs.gmu.edu/) conducts research covering a wide range of topics such as machine translation, multilingual NLP, low-resource and endangered languages, question answering, text generation, language-to-code generation, human-AI interaction, efficient NLP, etc. Our faculty regularly publish at top-tier venues such as ACL, EMNLP, NAACL, TACL, ICLR, AAAI, WWW, etc., and have served as area chairs and organized multiple workshops at these conferences. The NLP group at GMU includes Dr. Antonios Anastasopoulos and Dr. Ziyu Yao from CS, as well as Dr. Marcos Zampieri, Dr. Kevin Lybarger, and Dr. Ozlem Uzuner from IST. Students with relevant experience are encouraged to apply.

中文广告

乔治梅森大学 (George Mason University, GMU) 计算机系计划招收多名博士生，涵盖众多不同的研究方向，包括但不限于：机器学习/人工智能 (理论/数据挖掘/自然语言处理/计算机视觉)，系统与网络，软件工程，安全与隐私，机器人与自动化等。所有录取的博士生都将获得全额奖学金。感兴趣的同学欢迎在这个帖子下面回复，或者直接写邮件给系里相关方向的老师 (联系方式见下文)。发邮件时请以 `[Prospective PhD Student]` 为邮件主题。

[关于乔治梅森大学]

GMU是美国146所R1研究型院校之一，计算机系在以注重学术研究的csranking排名里名列34 (2017-2022)。GMU-CS最近正在蓬勃发展，在过去4年里招收了许多的年轻教授，教授的数量也翻了一番。目前，系里已有78名教授，其中有21名是终身教轨的年轻教师。这里的老师都活跃在学术的第一线，系里的学术合作氛围良好。计算机系为所有博士生提供全额奖学金，分为助教(GTA)和助研(GRA)。助教在入学前两年由系里资助，可以与多位不同的老师合作，直到找到满意的导师。助研的奖学金一般由导师个人的研究经费资助。通过在申请时提前联系意向导师，同学们可以有更大的几率得到GRA资助，也可以更早地开始进行科研训练。

GMU位于弗吉尼亚州的费尔法克斯(fairfax)市，是美国最宜居的几个地区之一，也是全美国受教育程度最高的地区之一。全美最好的公立高中(Thomas Jefferson High School for Science and Technology)也在这里。这里离华盛顿特区(DC，美国首都)只有半小时的车程，同学们可以尽情享受DC的各式各样的博物馆和米其林餐厅，除了公共地铁以外，学校也提供往返DC的班车，方便同学们的出行。学校附近十分安全，晚上经常能看到遛狗的人们。学校附近交通便利，有众多的餐馆和超市，种类丰富，亚洲、欧洲的饭店数不胜数。学校离华盛顿IAD机场也只有30分钟车程，IAD有直飞中国的航班，对中国学生来说十分方便。 因为出众的地理位置，亚马逊的第二总部也选址在这里，预计在2024年就将建成，也会带来大量的就业机会。除了亚马逊，许多世界五百强也在这里设置分公司。附近还有很多联邦机构，例如NSF，CIA等。

[如何申请]

- 申请链接:
https://cec.gmu.edu/admissions/graduate-admissions/application-requirements-and-deadlines
- 申请截止时间: 2022年12月1日 (2023秋季入学)
- 国际学生需要提交英语考试的成绩 (接受托福，雅思，duolingo等)
- 2023秋季入学的学生不需要提交GRE成绩

[研究方向介绍]

数据挖掘
联系人: Ziwei Zhu (zzhu20 AT gmu DOT edu)
数据挖掘研究组现计划招收多名博士生。我们的研究覆盖了数据挖掘领域内众多核心的前沿问题，包括但不局限于:推荐系统，搜索排序，时间序列分析，金融数据挖掘，教育数据挖掘，社交网络分析，图数据挖掘等。数据挖掘组的教授们长期活跃在学术第一线，他们稳定地在数据挖掘与信息检索领域的顶会上发表论文，比如KDD，SDM，WSDM，ICDM, SIGIR, CIKM, WWW等。录取的学生有机会和数据挖掘组里的多位教授展开合作，包括Ziwei Zhu, Jessica Lin, Grigory Yaroslavtsev, Carlotta Domeniconi, Sanmay Das等。欢迎有相关科研经历的同学申请。

机器学习/人工智能
联系人: Mingrui Liu (mingruil AT gmu DOT edu), Fang-Yi Yu (fangyiyu AT gmu DOT edu)
机器学习小组计划招收多名有兴趣研究机器学习算法，或者机器学习与社会之间的相互作用的博士生。目前的研究方向包括:统计学习理论, 数学优化，深度学习，联邦学习，以及他们在经济学与边缘计算中的应用。组内的老师每年都在顶级会议上发表论文，包括但不限于NeurIPS, ICML, ICLR, SODA, EC。对这些方向感兴趣的同学可以与组内任意老师合作，包括但不限于：Mingrui Liu, Fang-Yi Yu, Grigory Yaroslavtsev, Dr. Sanmay Das。欢迎有数学背景的学生申请加入机器学习组。

软件工程
联系人: Wing Lam (winglam AT gmu DOT edu); Thanhvu H Nguyen (tvn AT gmu DOT edu); Kevin Moran (kpmoran AT gmu DOT edu)
软件工程组计划招收多名有相关方向背景(软件工程、形式化验证、程序语言、人机交互、机器学习等)硕士博士研究生。软件工程组目前有14名教授，软件工程的位列美国前十名(csrankings, 2017-2022)，相关研究常常发表于顶级软件工程会议，例如 ICSE, ESEC/FSE, ASE, ISSTA, TACAS, PLDI, OOPSLA, CHI, VL/HCC, and AAAI。目前研究方向包括:软件测试分析，公平性检测，软件演化分析，软件依赖，软件包挖掘，分布式系统，移动端计算等。对软件工程感兴趣的同学可以与任何一位老师合作，包括但不限于：Wing Lam, Brittany Johnson, Kevin Moran, Thanhvu H Nguyen, Thomas LaToza, Paul Ammann, Jeff Offutt, and David Rosenblum。欢迎感兴趣的同学申请加入软件工程组。

安全与隐私
联系人: Xiaokuan Zhang (xiaokuan AT gmu DOT edu); Lannan Lisa Luo (lluo4 AT gmu DOT edu); Qiang Zeng (zeng AT gmu DOT edu)
安全与隐私研究组计划招收多名硕士博士研究生，一起研究最前沿的安全问题。安全组的教授们长期活跃在学术第一线，论文也常常发表在顶级的安全会议上，例如 ACM CCS, USENIX Security, NDSS, IEEE S&P。目前的研究方向包括网络安全，系统安全，移动端安全，IoT安全，区块链与加密货币安全，侧信道安全，可信计算

，程序分析等。加入我们组的学生可以与我们组的所有老师合作，包括但不限于：Xiaokuan Zhang, Qiang Zeng, Lannan Lisa Luo, Dov Gordon, Foteini Baldimtsi, Eric Osterweil, Giuseppe Ateniese, Evgenios Kornaropoulos, Xinyuan Wang。我们也与其他院系的老师保持紧密合作，包括信息技术 (IST) 系的Kun Sun, Jianli Pan, Zhisheng Yan等。在本科或硕士期间参加过ACM编程竞赛或者是CTF比赛的同学将优先考虑。

系统/网络

联系人: Lishan Yang (lyang28 AT gmu DOT edu)

系统/网络组的科研内容涵盖体系结构，系统可靠性，高性能计算，计算机网络，无线网络，传感器，物联网，移动端计算等。我们有充足的课题、研究基金以及计算资源。我们的研究成果在系统/网络领域的顶会上有很多论文发表，比如MICRO, ASPLOS, USENIX ATC, SC, NSDI, Sigmetrics, IMC, MobiSys, and MobiCom。我们欢迎对系统/网络方向感兴趣的学生联系申请，加入后可与相关老师合作，包括但不限于：Lishan Yang, Shuochao Yao, Parth Pathak, Bob Simon, Bo Han, and Songqing Chen。有系统编程设计经验或熟悉Linux内核、体系结构、计算机网络的学生将优先考虑。

机器人与自动化

联系人: Xuesu Xiao (xiao AT gmu DOT edu)

机器人组从事各种广泛研究，包括运动规划，机器学习，和机器视觉。机器人组也同时着力于开发可在真实环境下使用的机器人，拥有一系列顶尖的机器人硬件平台。机器人组的教授在机器人界的顶级会议发表论文，包括ICRA, IROS, RSS, CoRL, SSRR等会议。机器人组有着非常紧密的合作氛围，包括计算机科学系的Xuesu Xiao，Sean Luke，Jana Košecká，Erion Plaku，和 Gregory Stein，电气与计算机工程系的Xuan Wang，Ningshi Yao，Felipe Veiga，Camera Nowzari，和机械工程系的Daigo Shishika和Leigh McCue。有机器人，运动规划，机器学习，和机器视觉相关经验的申请人欢迎申请。具有动手能力，实地机器人作业经验，和论文发表记录的申请人优先考虑。

自然语言处理

联系人: Ziyu Yao (ziyuyao AT gmu DOT edu)

GMU计算机系自然语言实验室(https://nlp.cs.gmu.edu/)从事广泛相关科研课题 ,包括机器翻译，多语种自然语言处理，低资源/濒危语言处理，知识问答，文本生成，自动代码生成，人机互动/对话，高效率NLP方法，等等。实验组在顶会如ACL, EMNLP, NAACL, TACL, ICLR, AAAI, WWW等有丰富论文发表经验，也有在顶会担任领域主席和组织研讨会的经验。GMU在自然语言处理方向实力雄厚，现有研究员包括计算机系Dr. Antonios Anastasopoulos 和 Dr. Ziyu Yao, 以及IST系 Dr. Marcos Zampieri, Dr. Kevin Lybarger, 和 Dr. Ozlem Uzuner。研究氛围融洽，鼓励合作。有相关经验的学生欢迎申请！