孙源

出生年月： 1995 年 11 月 11 日　　**毕业院校：** 美国佛罗里达大学
籍贯： 皖　　**专业：** 施工管理/建筑科学/建环
民族： 汉族　　**联系方式：** 18955736100
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研究兴趣： 虚拟现实技术（VR）；机器学习（ML）；施工安全（construction safety）；新的教育理念与技术在建筑教育与培训中的应用；建筑机器人在施工环境下的应用与风险；建筑信息模型（BIM）；建筑可持续发展（sustainability）。

教育背景

佛罗里达大学 University of Florida | 博士研究生 | 施工管理 Construction Management 2020 – 至今

- 毕业论文：“Active Learning in Online Construction Site Visits: Focusing on Students’ Knowledge Construction and Collaborative Problem Solving”
- 导师：Masoud Gheisari (Chair, Construction Management); Jeelani Idris (Construction Management); Gabriel Castelblanco (Construction Management); Ricardo Eiris (Construction Management); and Pavlo Antonenko (Education).

南加利福尼亚大学 University of Southern California | 硕士研究生 | 建筑科学 Building Science 2018 – 2020

- 毕业论文：“Enhanced Indoor Environmental Satisfaction: Potential Use of Multi-Occupants Bio-signals for Higher-Performance Building Control Mechanisms”
- 导师: Joon-ho Choi (Chair, Building Science); Marc Schiler (Building Science); Yolanda Gil (Information Science), and Shrikanth Narayanan (Computer Science).

云南农业大学 | 大学本科 | 建筑环境与能源应用工程 2013 – 2017

工作经历

研究助理&教学助理 | 佛罗里达大学 2020 – 至今

- 科研项目:
  - “Using Virtual Humans in 360-degree Immersive Digital Sites to Practice Communication Skills within Complex Spatiotemporal Contexts”
    科研基金： National Science Foundation (NSF)
  - “Online Site Visits using 360-degree Panoramic Collaborative Spaces”
    科研基金： National Science Foundation (NSF)
  - Safety Challenges of Construction Robots
  - 正在筹备的科研项目：
    - Outdoor dynamic lighting at night to improve public safety.
    - Potential use of virtual museums in construction education.
    - Integrate robots and automations in construction curriculum
- 教学项目:
  - 建筑绘图 Graphic Communication in Construction
    - 帮助学生使用多种建筑领域绘图软件： Revit, Navisworks, Microsoft Project Pro.
  - BIM 在建筑施工领域的应用 Introduction to BIM

- 帮助学生理解如何应用点云数据集了解施工现场信息以及建筑无人机及各类机器人在施工现场的数据采集，安全性分析等。

研究助理 | 南加利福尼亚大学 2018 – 2020

- 科研项目:
  - "Human-Building Integration: Bio-Sensing Adaptive Environmental Control for Human Health and Sustainability"
    科研基金：National Science Foundation (NSF)

可持续建筑规划和设计实习 | 安徽省建筑设计研究总院 2019

- 协助客户追求并遵守各种净零可持续性框架，如 LEED, WELL, Living Building Challenges 等。
- 开发生命周期成本计算，水平衡计算，建筑能源研究，可再生能源和分布式能源可行性研究，以及运营和碳计算
- 参与项目：六安矗街，合肥市龙湖，合肥银河商务中心等

研究助理 | 山东建筑大学 2015-2017

- 科研项目:
  - 通风阻力的数值与实验研究

研究成果

我的谷歌学术 : https://scholar.google.com/citations?user=ZSVhJ6EAAAAJ&hl=EN

期刊论文

J1. **Yuan Sun**, Masoud Gheisari, and Idris Jeelani. 2023. Safe Human-Robot Collaboration in Construction: A Conceptual Perspective. ***Elsevier Journal of Safety Research*** *Special Issue on 2022 National Occupational Injury Research Symposium (NOIRS): Preventing workplace injuries in a changing world.* 86:39-51. https://doi.org/10.1016/j.jsr.2023.06.006 **(IF: 4.264)**

J2. **Yuan Sun**, Gilles Albeaino, Masoud Gheisari, and Ricardo Eiris. 2022. Online site visits using virtual collaborative spaces: A plan-reading activity on a digital building site. ***Elsevier Journal of Advanced Engineering Informatics***. 53: 1-14. https://doi.org/10.1016/j.aei.2022.101667 **(IF: 8.8)**

J3. **Yuan Sun**, Masoud Gheisari, and Idris Jeelani. 2023. RoboSite: An Educational Virtual Site Visit about Safety Interaction of Four-legged Robots in Construction. ***Elsevier Journal of Safety Science*** *Special Issue on 2023 The Use of Extended Reality Technologies in Safety Research. Under Review.* **(IF: 6.1)**

J4. Yu Pan, **Yuan Sun**, Yuancheng Wang, Huiyi Zhao, Tianyu Shi, and Lei Wei. 2016. The numerical and experimental study on the ventilation resistance of three stored grains during horizontal aeration and vertical aeration using half-round perforated duct on the floor. ***Science and Technology of Cereals***, *Oils and Foods.* 24: 102-105. https://caod.oriprobe.com/articles/47694525/The_numerical_and_experimental_study_on_the_ventil.htm

J5. **Yuan Sun**, Masoud Gheisari, and Ricardo Eiris. 2024. Active Learning in Online Construction Site Visits: Focusing on Knowledge Construction and Collaborative Problem Solving of Students. *Under Preparation.*

J6. **Yuan Sun**, Masoud Gheisari, and Ricardo Eiris. 2024. Collaborative Problem-Solving in Online Construction Site Visits. *Under Preparation.*

国际会议论文

C1. **Yuan Sun**, Gilles Albeaino, Masoud Gheisari, and Ricardo Eiris. 2022. Virtual Collaborative Spaces for Online Site Visits: A Plan-Reading Pilot Study. ***Proceedings of the 58th ASC Annual International Conference.*** 3: 688-696. https://doi.org/10.29007/d14v ***(Best Conference Paper – Honorable Mention Award)***

C2. Ricardo Eiris, **Yuan Sun**, Masoud Gheisari, Brent Marsh, and Pasi Lautala. 2022. VROnSite – Online Site Visits Using Web-Based Virtual Environments. ***Proceedings of the 2022 ASCE Construction Research Congress (CRC).*** 100-109. https://doi.org/10.1061/9780784483985.011

C3. **Yuan Sun**, and Masoud Gheisari. 2021. Potentials of Virtual Social Spaces for Construction Education. ***Proceedings of the 56th ASC Annual International Conference.*** 469-477. https://doi.org/10.29007/sdsj

C4. **Yuan Sun**, Masoud Gheisari, and Idris Jeelani. RoboSite: A Virtual Site Visit on using Four-legged Robots in Construction. ***Proceedings of the 2024 ASCE Construction Research Congress (CRC).*** *In Press*

C5. **Yuan Sun**, Masoud Gheisari, and Idris Jeelani. 2023. Enhancing Students' Attitudes Towards Robots using a Virtual Site Visit on Four-Legged Robot Applications in Construction. ***Proceedings of the 28th International Symposium on Advancement of Construction Management and Real Estate (CRICOM).*** *In Press*

C6. **Yuan Sun**, Masoud Gheisari, and Idris Jeelani. 2023. Potential Safety Challenges of Four-Legged Robots in Construction. ***Proceedings of the 2023 ASCE International Conference on Computing in Civil Engineering (i3CE).*** *In Press*

C7. **Yuan Sun**, Masoud Gheisari, and Ricardo Eiris. Active Learning Approaches in Online Construction Site Visits. ***Proceedings of the 59th ASC Annual International Conference.*** *Under Preparation*

C8. **Yuan Sun**, Masoud Gheisari, and Ricardo Eiris. Studying Students' Collaborative Problem-Solving Behaviors in Online Site Visits. ***ASCE International Conference on Computing in Civil Engineering (i3CE) 2024.*** *Under Preparation*

学术汇报

P1. **Yuan Sun**, Masoud Gheisari, and Idris Jeelani. Studying Students' Collaborative Problem-Solving Behaviors in Online Site Visits. ***Proceedings of the 2024 ASCE Construction Research Congress (CRC).***

P2. **Yuan Sun**, Masoud Gheisari, and Idris Jeelani. Enhancing Students' Attitudes Towards Robots using a Virtual Site Visit on Four-Legged Robot Applications in Construction. ***Proceedings of the 28th International Symposium on Advancement of Construction Management and Real Estate (CRICOM).***

P3. **Yuan Sun**, Masoud Gheisari, and Idris Jeelani. 2023. Potential Safety Challenges of Four-Legged Robots in Construction. ***Proceedings of the 2023 ASCE International Conference on Computing in Civil Engineering (i3CE).***

P4. **Yuan Sun**, Gilles Albeaino, Masoud Gheisari, and Ricardo Eiris. 2022. Virtual Collaborative Spaces for Online Site Visits: A Plan-Reading Pilot Study. ***Proceedings of the 58th ASC Annual International Conference.***

P5. **Yuan Sun**, and Masoud Gheisari. 2021. Potentials of Virtual Social Spaces for Construction Education. ***Proceedings of the 56th ASC Annual International Conference.***

P6. **Yuan Sun**, Gilles Albeaino, Masoud Gheisari, and Ricardo Eiris. 2021. Virtual Collaborative Spaces for Online Site Visits: A Plan-Reading Pilot Study. ***DCP Research Symposium, University of Florida.***

学术研究指导经验

学术指导 | 佛罗里达大学 2021 – 至今

- 在研究过程中为学生提供建议和帮助，从研究问题和目的到改进文章写作，以便学生的学术成果在同行评审的期刊与会议中提交和发表。
- 指导学生:
  - **Parth K. Bhadaniya**, 2023 – 至今 (博士研究生 | 施工管理).
    - 指导项目: *Online Site Visits using 360-degree Panoramic Collaborative Spaces*
  - **孙雪飞 Xuefei Sun**, 2021-2022 (硕士研究生 | 土木工程).
    - 指导项目: *Legged Robots: Potential Challenges in Construction Management*

获得荣誉

1. **最佳论文奖** ASC International **Best Conference Paper Runner-Up Award**, The 58th Annual Associated Schools of Construction (ASC) International Conference, 2022.
2. **盖特奖学金 The Grinter Fellowship**, 佛罗里达大学 University of Florida, 2023 – 至今.
3. **最佳研究奖 Outstanding Research Presentation**, 南加利福尼亚大学 University of Southern California, 2020
   - 获奖项目: *"Enhanced Indoor Environment Satisfaction: The Potential Use of Multi-Occupant Bio-Signals for High-Performance Building Control Mechanisms"*
4. **最佳数据科学奖**, 南加利福尼亚大学 University of Southern California, 2019

- 获奖项目： *"Enhanced Indoor Environment Satisfaction: The Potential Use of Multi-Occupant Bio-Signals for High-Performance Building Control Mechanisms"*

5. **优秀学生奖学金 Merit Scholarship**, 南加利福尼亚大学 University of Southern California, 2018-2020
6. **一等奖学金**, 云南农业大学, 2017

文章评审与学术服务

文章评审 Reviewer

EMERALD Journal of Engineering, Construction and Architectural Management (2023 – 至今)
Associated Schools of Construction (ASC) Conference Proceedings (2021 – 至今)
ASCE Construction Research Congress (CRC) Conference Proceedings (2022 – 至今)
ASCE International Conference on Computing in Civil Engineering (i3CE) Proceedings (2023 – 至今)
International Symposium on Automation and Robotics in Construction (ISARC) Conference Proceedings (2022 – 至今)

学术服务机构 Affiliations

American Society of Civil Engineering (ASCE): 学生会员.
ASCE Visualization, Information Modeling, and Simulation (VIMS) Committee: 学生会员.
American Society of Heating, Refrigeration and Air-Conditioning Engineers (ASHRAE): 学生会员.
U.S. Green Building Council (USGBC)： 会员.

专业技能

计算机技能

- **建筑领域 Construction Management and BIM:** Autodesk Revit, Autodesk BIM 360, Autodesk Construction Cloud, Autodesk Recap, Autodesk Navisworks, Autodesk AutoCAD, Lumion, On-screen Takeoff, Oracle Primavera P6, and Synchro PRO.
- **能量模拟领域 Energy Simulation:** DesignBuilder, IESVE, and eQuest
- **数据分析 Data Analysis:** R and IBM SPSS
- **计算机编程 Programming:** Python and C#
- **设计与虚拟现实技术 Design, Rendering and Virtual Reality:** Unity, 3Ds Max, Blender, Sketchup, Rhino, Unreal Engine, and Mozilla Spoke

专业证书

- 30-Hour Safety Training. Occupational Safety and Health Administration (OSHA).
- LEED AP BD+C. U.S. Green Building Council.
- SPSS Certificate, University of Florida

语言

- English: 专业教学，学术交流，以及学术写作