

Yingying REN

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EDUCATION

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| SEPT. 2019 - PRESENT | Swiss Federal Institute of Technology Lausanne (EPFL), Switzerland
PhD in Computer Science
Geometric Computing Laboratory
Advisor: Prof. Dr. Mark Pauly |
| AUG. 2015 - MAY 2019 | University of Illinois at Urbana-Champaign (UIUC), USA
Dual Degrees BSc. with Highest Honors in Computer Science
BSc. with Highest Distinction in Mathematics
GPA: 3.94 / 4.0 |

PUBLICATIONS

- Y. Ren, J. Panetta, T. Chen, F. Isvoranu, S. Poincloux, C. Brandt, A. Martin, M. Pauly
3D weaving with curved ribbons
ACM Transactions on Graphics (Proc. of SIGGRAPH 2021)
- A. Q. Nilles, Y. Ren, I. Becerra, S. M. LaValle
A Visibility-Based Approach to Computing Nondeterministic Bouncing Strategies
The International Journal of Robotics Research 2021

PROFESSIONAL EXPERIENCE

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| JUN. 2021 - AUG. 2021 | Visiting Researcher at Carnegie Mellon University
Mentors: Prof. Dr. Keenan Crane, Rohan Sawhney
Worked on topics in Monte Carlo Geometric Processing |
| JUN. 2019 - AUG. 2019 | Software Engineering Intern at Google, Mountain View
Worked in the Draco team
Designed and implemented algorithms for mesh simplification and abstraction |
| JUN. 2018 - AUG. 2018 | Research Intern at EPFL
Mentors: Prof. Dr. Mark Pauly, Prof. Dr. Peng Song
Worked on assembly-aware design of topological interlocking structures |
| OCT. 2017 - MAY 2019 | Undergraduate Researcher at Motion Strategy Lab, UIUC
Mentors: Prof. Dr. Steve LaValle, Dr. Alexandra Nilles
Worked on motion strategies for bouncing robots |
| JAN. 2017 - AUG. 2017 | Research Intern at Samsung Research America, Mountain View
Worked in Computer Vision Group, Think Tank Team
Designed and built deep learning pipelines for virtual reality and augmented reality applications |
| AUG. 2016 - AUG. 2017 | Undergraduate Researcher at Illinois Geometry Lab, UIUC
Worked on a research project about polyhedral geometry for analyzing phylogenetic methods and tree spaces |
| MAY. 2016 - AUG. 2016 | Research Intern at Health Care Engineering Systems Center, UIUC
Produced virtual reality scene builder with 360 videos for medical training
Created multi-view RGBD video collection for potential use in reconstruction of existing environments |

RESEARCH INTERESTS

Computer Graphics, Optimization, Computational Fabrication, Differential Geometry, Shape Analysis, Robotics

HONORS AND AWARDS

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| 2019 - 2020 | EPFL EDIC Fellowship |
| 2019 | C.W. Gear Outstanding Undergraduate Award, UIUC |
| 2018 - 2019 | Yunni and Maxine Pao Memorial Scholarship, College of Engineering, UIUC |
| 2017 - 2019 | Hayward Tau Beta Pi Award, College of Engineering, UIUC |
| 2017 - 2018 | JP Morgan Chase WCS Scholarship, Department of Computer Science, UIUC |
| 2017 - 2018 | John Deere Scholarship, Department of Computer Science, UIUC |
| 2017 | Elizabeth Bennett Scholarship, Department of Mathematics, UIUC |
| 2016 - 2019 | James Scholar, College of Engineering, UIUC |
| 2015 - 2019 | Dean's List, College of Liberal Arts and Sciences, College of Engineering, UIUC |

SELECTED TALKS

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| SEPTEMBER 17, 2021 | Toronto Geometry Colloquium
Invited speaker |
| AUGUST 12, 2021 | ACM SIGGRAPH
Technical paper presenter |
| AUGUST 3, 2017 | SIAM Conference on Applied Algebraic Geometry , Atlanta, Georgia, USA
Mini-symposium presenter |

TEACHING EXPERIENCE

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| SEPT. 2021 - DEC. 2021 | CS 457 Geometric Computing, EPFL |
| FEB. 2021 - JUN. 2021 | CS 341 Introduction to Computer Graphics, EPFL |
| SEPT. 2020 - DEC. 2020 | Math 101 Analysis I, EPFL |
| FEB. 2020 - JUN. 2020 | CS 251 Theory of Computation, EPFL |
| JAN. 2019 - MAY. 2019 | CS 374 Introduction to Algorithms and Models of Computation, UIUC |
| AUG. 2016 - DEC. 2016 | CS 498 Virtual Reality, UIUC |

MENTORING EXPERIENCE

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| SEPT. 2020 - DEC. 2020 | M. Pisa (Master student, EPFL); Topic: Simulation and Design of Tensegrities with Discrete Elastic Rods |
| AUG. 2018 - MAY. 2019 | R. Lou, A. Rios, J. Rogge, X. Yu (Undergraduate students, UIUC); Topic: Search for New Tensegrity Configurations |

LEADERSHIP EXPERIENCE

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| MAR. 2021 - PRESENT | Event Coordinator at WiGRAPH
Organize the yearly SIGGRAPH Berthouzoz Women in Research Event |
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