Yangruirui ZHOU

Email: yrrzhou@bu.edu   Tel: (+1) 857-763-9402   Boston, MA

EDUCATION

Boston University, Boston, MA   09/2020-Now
Ph.D. student, Department of Engineering
GPA: 3.91/4.00
- Research focus on microfluidic CAD tools and algorithms in synthetic biology applications.

University of Electronic Science and Technology of China (UESTC), Chengdu, China   09/2016-06/2020
B.E, Department of Software Engineering *(Elite program)*
GPA: 3.94/4.00 (Rank: 6/740)
- Senior Theis: Analysis of Postoperative Applications of Pose Tracking Algorithms.

RESEARCH

Boston University, Boston, MA   07/2020-Now
Research Assistant, **CIDAR lab (**Supervisor: Prof. **Douglas Densmore**)

MIT, Boston, MA   11/2022-09/2024
Collaborative Research Assistant, **Voigt lab (**Supervisor: Prof. **Christopher Voigt**)

University of California, Santa Barbara, CA   06-08/2019
Student Research Internship, **Four eye's lab (**Supervisor: Prof. **Matthew Turk** and Prof. **Tobies Hollerer**)

AWARDS & HONORS

iGEM "**Gold medal**" (Student Mentor)   11/2024
China Youth Science and Technology Innovation Award (Nominated by UESTC)   05/2020
Most Outstanding Students of UESTC 2019 (成电杰出学生, **10/5000** in UESTC, **1/740** in department)   12/2019
iGEM "**Gold medal**" and "**Best Software Project**"   11/2019
Outstanding Graduates Award of UESTC   10/2019
"Wu Liang Ye" Enterprise Scholarship (**2/740** in Software Engineering department)   09/2019

PROFESSIONAL SERVICES

ICCAD'22 Second Paper Reviewer   06/2022
Teaching Assistant of EC504 (Advanced data structure and algorithms)   01-05/2022, 01-05/2023
Student Mentor of iGEM team: BostonU   04-10/2024
Patent of Agricultural Heavy Metal Biosensor-Integrated Device   05/2024-Now

ACTIVITIES

[1] International Workshop on Bio-Design Automation (IWBDA'22)   10/2022
[2] Engineering Biology Research Consortium (EBRC'23)   06/2023
[3] Chicago BioEngineering Conference (CBEC'24)   09/2024

SKILLS

Programming language: Python, Java, C/C++, Typescript, HTML, Linux Shell.
Tools: NetworkX, Tensorflow, Pytorch, Latex, Fusion 360.
Manufacturing (microfluidics): CNC Milling, Laser Cutting.

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PUBLICATIONS

[1, IWBDA'22] A Conceptual Interactive Microfluidic Design and Control Workflow　　　07-08/2022

[2, IEEE-TCAD] Zhou, Y., Oliveira, S. M., Sanka, R., McIntyre, D., & Densmore, D. (2024). Vespa: Logic-Level Constraint-Based Validation for Continuous-Flow Microfluidic Devices. *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems*. (doi: 10.1109/TCAD.2024.3435706)　　　09/2021-02/2024

[3, Nature Chemical Biology] Padmakumar, J. P., Sun, J. J., Cho, W., Zhou, Y., Krenz, C., Han, W. Z., ... & Voigt, C. A. (2024). Partitioning of a 2-bit hash function across 66 communicating cells. *Nature Chemical Biology*, 1-12. (doi: 10.1038/s41589-024-01730-1)　　　04/2022-12/2023

[4, IEEE-TCBB] [under review] Constraint-based Sub-graph Partitioning for Multi-cellular Biological Networks　　　02/2023-08/2024