CURRICULUM VITAE

Kaiyan Yu

Chinese).

C2. X. Lu, J. Liu, **K. Yu**, H. Li, Y. Li, and L. Sun (2011). High precision and rapid pose measurement for the competitive networked robots. *Chinese Automation Congress*, Beijing, China.

C1. H. Li, J. Liu, Y. Li, X. Lu, **K. Yu**, and L. Sun (2010). Trajectory planning for visual servoing with some constrains. In *Proceedings of the 29th Chinese Control Conference*, Beijing, China, pp 3636-3642.

- **Conference workshop contribution (poster/extend abstract reviewed)**

NC4. **K. Yu** (2018). Motion control, planning and manipulation of multiple nanowires under electric-fields in fluid suspension for automated characterization and nanoassembly. In *Poster Session at 30th annual Electronics Packaging Symposium*, Binghamton, NY.

NC3. **K. Yu**, J. Yi, and J. Shan (2018). Motion control, planning and manipulation of multiple nanowires under electric-fields in fluid suspension for automated characterization and nanoassembly. In *Workshop on 30 Years of Small-Scale Robotics: from Nano-, to Millimeter-Sized Robotic Systems and Applications at 2018 IEEE International Conference on Robotics and Automation*, Brisbane, Australia.

NC2. L. Wang, K. Yang, A. Dusane, M. Cotton, J. Xie, Y. Wang, X. Gong, S. Zhang, C. Yang, E. Kim, **K. Yu**, J. Yi, and A. D. Mazzeo (2017). A jellyfish-based aquatic locomotor with tunable gaits. In *Workshop on Material Robotics at 2017 Robotics Science and Systems*, Boston, MA.

NC1. **K. Yu** (2017). Motion control, planning and manipulation of nanowires under electric-fields in fluid suspension. In *Women in Robotics Workshop at 2017 Robotics Science and Systems*, Boston, MA.

- **Theses**

T2. **K. Yu** (2017). Motion control, planning and manipulation of nanowires under electric-fields in fluid suspension. Ph.D. dissertation, Department of Mechanical and Aerospace Engineering, Rutgers University. Committee members: Dr. Jingang Yi (chair), Dr. Jerry Shan, Dr. Qingze Zou, Dr. Kostas Bekris, Dr. Yicheng Lu.

T1. **K. Yu** (2010). Design and implementation of multi-robot vision simulation system. B.S. thesis, Department of Information Technical Science, Nankai University, China. (**Best Undergraduate Thesis Award.**)

PROFESSIONAL ACTIVITIES

- Member of the Institute of Electrical and Electronic Engineers (IEEE), 2013–present
- Member of the American Society of Mechanical Engineers (ASME), 2013–present
- Associate Vice President of the *IEEE Robotics and Automation Society (RAS) Media Services Board* (2019-present).
- Associate Editor
  - *IEEE Trans. on Automation Science and Engineering* (2022–present)
  - *IEEE Robotics and Automation Letters* (2021–present)
  - *IFAC Mechatronics* (2021–present)
  - *Frontiers in Robotics and AI* (2022–present)
  - *IEEE International Conference on Robotics and Automation (ICRA), Conference Editorial Board* (2020, 2021)
  - *IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), Conference Editorial Board* (2019)
  - *IEEE/ASME International Conference on Advanced Intelligent Mechatronics (AIM), Conference Editorial Board* (2018, 2019, 2020)
  - *American Control Conference (ACC), Conference Editorial Board* (2023)
  - *Modeling, Estimation and Control Conference (MECC), Conference Editorial Board* (2022, 2023, 2024)
- Organizing / Operating Committee Member
  - E-Media Co-Chair of the *2028 IEEE International Conference on Robotics and Automation (ICRA)*, Guadalajara, Jalisco, México.
  - Student Chair of the *2027 IEEE/ASME International Conference on Advanced Intelligent Mechatronics (AIM)*, Boulder, CO.
  - E-Media Co-Chair of the *2024 IEEE International Conference on Robotics and Automation (ICRA)*, Yokohama, Japan.
  - Exhibit and Special Session Chair of the *2023 IEEE/ASME International Conference on Advanced Intelligent Mechatronics (AIM)*, Seattle, IL.

- *Rensselaer Polytechnic Institute (RPI)*, Department of Electrical Engineering, and Computer, and Systems Engineering, Troy, NY, May 2019
- *University of Waterloo*, Department of Mechanical and Mechatronics Engineering, Waterloo, ON, Canada, March 2017
- *Louisiana State University*, Department of Mechanical and Industrial Engineering, Baton Rouge, LA, March 2017
- *City College of New York*, Department of Mechanical Engineering, New York, NY, March 2017
- *Binghamton University*, Department of Mechanical Engineering, Vestal, NY, March 2017
- *McGill University*, Department of Mechanical Engineering, Montreal, QC, Canada, February 2017
- *California State University at Northridge*, Department of Mechanical Engineering, Northridge, CA, February 2017
- *Fort Lewis College*, Department of Physics and Engineering, Durango, CO, February 2017
- *Rowan University*, Department of Mechanical Engineering, Glassboro, NJ, January 2017
- *New Jersey Institute of Technology*, Department of Mechanical and Industrial Engineering, Newark, NJ, December 2016
- *Louisiana Tech University*, Department of Mechanical Engineering, Ruston, LA, December 2016
- *Boise State University*, Department of Mechanical and Biomedical Engineering, Boise, ID, November 2016

STUDENT SUPERVISION AND

- "Reconnaissance Robot" (C. Gale, A. Paul, D. Adamczuk, J. McCoy, J. Squitieri), *2018/2019*, co-advise with Prof. R. McGrann. (**First Place winner of the 2019 MacDonald Family Prize in Senior Design**)

3.615Comas003 - "Crack-Filling Robot" (M. Jackson]TJ/uui(9050)]TJ/F72 9.9626 Tf 86.605 0 Td [(First)-250(dtkoTd [(F Td [(FL7 3.615S7

	J. Pourghader, *Mechanical Engineering*	Advisor: Dr. R. Miles
	M. Karimi, *Mechanical Engineering*	Advisor: Dr. R. Miles
	A. Momani, *Mechanical Engineering*	Advisor: Dr. F. Cardullo
	V. Kudalka, *Computer Science*	Advisor: Dr. S. Zhang
	D. DeFazio, *Computer Science*	Advisor: Dr. S. Zhang
	Sivaranjani A, *Electrical and Electronics Engineering, Anna University, India*	Advisor: Dr. B. Vinod
M.S. students:	D. Nelson, *Mechanical Engineering*	Advisor: Dr. S. Towfighian
	P. Yin, *Mechanical Engineering*	Advisor: Dr. S. B. Park
	J. H. Ha, *Mechanical Engineering*	Advisor: Dr. S. B. Park
	F. Xue, *Biomedical Engineering*	Advisor: Dr. Y. Wan
	Y. Lai, *Mechanical Engineering*	Advisor: Dr. S. B. Park
	Y. Tian, *Mechanical Engineering*	Advisor: Dr. S. Towfighian
	M. A. Razzaq, *Mechanical Engineering*	Advisor: Dr. M. Younis
	H. Albatayneh, *Mechanical Engineering*	Advisor: Dr. M. Younis
	M. Matahen, *Mechanical Engineering*	Advisor: Dr. M. Younis
	K. Hunte, *Mechanical and Aerospace Engineering, Rutgers University*	Advisor: Dr. J. Yi

UNIVERSITY / DEPARTMENTAL SERVICES

- *Thomas J. Watson School of Engineering and Applied Science, Binghamton University*
  - Diversity Equity and Inclusion Committee (2024-2025)
  - Watson Commencement Committee (2022-2024)
  - Instructional Software & Labs Committee (2018-2020)
    - Conducted a comprehensive assessment of projected needs for the teaching laboratories in the Mechanical Engineering department for the period 2019-2024.
    - Compiled and analyzed data on equipment and space requirements, ensuring alignment with the department's instructional objectives.
    - Evaluated and summarized the current inventories and status of all eight teaching laboratories across the department.
    - Provided recommendations and justifications for necessary upgrades or additions to the teaching laboratories, considering emerging technologies and pedagogical advancements.
- *Department of Mechanical Engineering, Binghamton University*
  - Faculty Search Committee (2021-2024)
  - Graduate Studies Committee (2020-2024)
  - Undergraduate Studies Committee (2018-2020)
  - Seminar Committee (2018-2019, 2023-2024)
  - Junior / Sophomore Advising (2018-present)

OUTREACH

- Guest Lecture for the *EDD 112 Intro to Engineering Analysis*, Engineering Design Division, Binghamton University (April 15, 2024)
- Panelist for Women in STEM, the Society of Hispanic Professional Engineers (SHPE) (March 25, 2024)
- Faculty Advisor for the Binghamton University Projects for New Undergraduate Researchers (BUPNUR) (Spring 2024)
- "Nanofish Frenzy: Dive into the Exciting World of Nanomanipulation". High School Track, Community Day, National Engineers Week (February 24, 2024)
- Faculty Advisor for the Scalable Asymmetric Lifecycle Engagement Microelectronics Workforce Development Program (SCALE) (Spring 2024)
- "Autonomous Racing Cars and the Thrill of Safe Drifting", Mini Lectures to High School Seniors during the Bi-Annual "Bearcat for a Day" Event. (Oct 28, 2023)

- Guest Lecture for the *ISE 479 Industrial Automation & Control*, Department of Systems Science and Industrial Engineering, Binghamton University (October 17, 2023)
- Panelist for "Careers in Academia", Modeling, Estimation and Control Conference (October 5, 2022)
- Judge for BattleBots Competition, Watson Combat Robotics League (Spring 2022, Fall 2022, Spring 2023)
- Lecturer for Introduction to Autonomous Intelligent Robots, Lyceum Program (Winter 2021)
- Lab tours with Broome County Promise Zone Camp (August 8, 2019)
- Faculty Advisor for the Summer Training Experience in Engineering Research (STEER) (Summer 2019)
- Faculty Advisor for the Strategic Partnership for Industrial Resurgence (SPIR) Project (Spring 2019, Fall 2024 - Spring 2025)
- Instructor at the First Annual Junior Robotics Challenge for K-6 students (March 30, 2019)
- Panelist for Women in STEM, National Engineers Week (February 18, 2019)

PRESS / MEDIA COVERAGE

- "Binghamton University Professor is Helping to Build the Next Generation of Autonomous Robotics". June 26, 2023.
- "Binghamton University Campus Tour: Thomas J. Watson College of Engineering and Applied Science". December 1, 2023.
- *Warson Review*, Summer 2022. "Machines that think".
- *BingUNews*, June 24, 2022. "Researchers at Watson College creating machines that think - Faculty members shaping the future of autonomous systems".
- *Binghamton University Blog*, November 11, 2022. "34 Cool Classes at Binghamton University".
- NSF CAREER Award:
  - *BingUNews*, March 30, 2022. "Assistant professor's nanobot research wins NSF CAREER AwardAr.737 -17.435 TTmm