

Alkesh K. Srivastava

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EDUCATION

Temple University <i>Doctoral Specialization - Mechanical Engineering</i> Advisor: Dr. Philip Dames, <i>Temple Robotics and Artificial Intelligence Lab</i> , Department of Mechanical Engineering, Temple University	Aug 2023 -
University of Maryland, College Park <i>Master's Specialization - Robotics</i> Advisor: Dr. Michael Otte, <i>Motion and Teaming Lab</i> , Department of Aerospace Engineering, University of Maryland, College Park Mentor: Dr. George Kontoudis	Jan 2021 - Dec 2022
Jaipur Engineering College and Research Centre (Rajasthan Technical University) <i>Baccalaureate Specialization - Electrical Engineering</i>	Aug 2016 - Nov 2020

RESEARCH EXPERIENCE

Research Associate, DEVCOM Army Research Laboratory <i>Journeyman Fellow</i> , ARL Research Directorate: Science of Intelligent Systems (Mentor: Carlos P. Nieto)	March 2025–
Graduate Research Assistant, Temple University Temple Robotics & Artificial Intelligence Lab., Dept. of Mechanical Engineering (PI: Philip Dames)	Aug 2023–
Faculty Assistant (Researcher), University of Maryland Motion and Teaming Lab, Dept. of Aerospace Engineering (PI: Michael Otte)	Jan 2023–Aug 2023
Graduate Student Researcher, University of Maryland Motion and Teaming Lab, Dept. of Aerospace Engineering (PI: Michael Otte)	Jun 2021–Dec 2022
Graduate Student Researcher (Pathway to the Ph.D. fellowship), Maryland Robotics Center Motion and Teaming Lab, Maryland Robotics Center (PI: Michael Otte)	Nov 2021–Jul 2022
Independent Research Study, University of Maryland Maryland Applied Graduate Engineering (PI: Nikhil Chopra)	Jan 2022–May 2022
Undergraduate Research Assistant, Jaipur Engineering College & Research Center Department of Electrical Engineering (PI: Ram Singh & Gopal Tiwari)	Jan 2019–May 2020

TEACHING EXPERIENCE

Graduate Teaching Assistant, Temple University ENGR 2332 Engineering Dynamics Instructor: Osman Sayginer	Spring 2024
Graduate Teaching Assistant, Temple University ENGR 2332 Engineering Dynamics Instructor: Philip Dames & Haijun Liu	Fall 2023
Graduate Teaching Assistant, University of Maryland ENPM809K Fundamentals for A.I. and Deep Learning Framework Instructor: George Zaki	Fall 2022

INDUSTRY EXPERIENCE

Software Engineer (Intern) , Pi Systems Pvt. Ltd.	May 2019–Jul 2019
Software Engineer (Intern) , Pustakkosh Book Rentals Pvt. Ltd.	Jun 2018–Jul 2018

START-UP EXPERIENCE

Founder and Administration Incharge , Your Pharmacy	Dec 2017–Sep. 2018
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DEVELOPMENT EXPERIENCE

Games: The TapBait! and Defy The Fall

Application: Your Pharmacy

AWARDS & HONORS

Journeyman Fellowship by DEVCOM U.S. Army Research Laboratory	2024
Second Place Award in <i>Late-Stage Research Category</i> Poster Presentation at the College of Engineering, Temple University	2025
Graduate Student Travel Award of \$500 by Temple University	2024
Vic Schutz Travel Award of \$500 by Temple University	2024
MRC Conference Travel Award of \$1000 by Maryland Robotics Center	2022
MRC “Pathway to the Ph.D” fellowship to support research at Motion and Teaming Laboratory	2021
Best paper award at 2 nd National Conference on Recent Trends & Smart Technologies in Electrical Engineering	2020

PUBLICATIONS

In submission/preparation

- [1] **Alkesh K. Srivastava**, Alex Mendelsohn, George P. Kontoudis, Donald Sofge, Michael Otte “Hazard Detection in Communication-Denied Environments using Bayesian Network Modeling of Path-Based Sensors.”

Referred Conference Publications (C)

- [3] **Alkesh K. Srivastava** and Philip Dames, “Speech-Guided Sequential Planning for Autonomous Navigation using Large Language Model Meta AI 3 (Llama3),” *International Conference on Social Robotics (ICSR)+ AI*, Odense, Denmark, 2024.
(Will appear as a chapter in the book: **Lecture Notes in Computer Science (LNCS)**, *Lecture Notes in Artificial Intelligence series*.)
- [2] **Alkesh K. Srivastava**, George P. Kontoudis, Donald Sofge, Michael Otte, “Distributed Multi-Robot Information Gathering using Path-Based Sensors in Entropy-Weighted Voronoi Regions,” *International Symposium on Distributed Autonomous Robotic Systems (DARS)*, Montbéliard, France, 2022.
(Also appeared as a chapter in the book: **Distributed Autonomous Robotic Systems**, *Springer Tracts in Advanced Robotics*, p. 286–299. 2024.)

- [1] **Alkesh K. Srivastava**, Aashish Tanwar, Varun Joshi, Ram Singh, Gopal Tiwari “Acoustic Response of Nearby Objects for Visually Impaired,” *National Conference on Recent Trends and Smart Technologies in Electrical Engineering*, Jaipur, India, 2020.

Referred Workshop Publications (W)

- [1] **Alkesh K. Srivastava**, George P. Kontoudis, Donald Sofge, Michael Otte “Path-Based Sensors: Will the Knowledge of Correlation in Random Variables Accelerate Information Gathering?”, *Communication Challenges in Multi-Robot Systems: Perception, Coordination, and Learning at IEEE International Conference on Robotics and Automation (ICRA)*, London, United Kingdom, 2023.

Technical Reports (TR)

- [1] **Alkesh K. Srivastava** “Learning-Based Control for Automated Perpendicular Parking in CARLA environment,” *University of Maryland*, College Park, USA, May 2022.

TALKS & PRESENTATIONS

- “Speech-Guided Sequential Planning for Autonomous Navigation using Large Language Model Meta AI 3 (Llama3),” *International Conference on Social Robotics (ICSR)+ AI*, Odense, Denmark, 2024. **[Poster]**
- “Estimating Hazards Location in Communication-Denied Environments: Distributed Multi-Robot Approaches using Path-based Sensors”, *Temple University*, Philadelphia, PA, USA, Nov 2023 **[Student Seminar]**
- “Path-Based Sensors: Will the Knowledge of Correlation in Random Variables Accelerate Information Gathering?”. *Communication Challenges in Multi-Robot Systems: Perception, Coordination, and Learning at IEEE International Conference on Robotics and Automation (ICRA)*, London, United Kingdom, Jun 2023. **[Oral Presentation]**
- “Estimating Hazardous Locations in Communication-Denied Environments: A Bayesian Network Approach with Path-Based Sensors” at *Maryland Robotics Center (MRC) Research Symposium*, College Park, MD, USA, May 2023. **[Poster]**

- “Estimating Hazardous Locations in Communication-Denied Environments: Distributed Multi-Robot Approaches with Path-Based Sensors” at *Maryland Robotics Center (MRC)* Research Symposium, College Park, MD, USA, May 2023. **[Poster]**
- “Distributed Multi-Robot Information Gathering using Path-Based Sensors in Entropy-Weighted Voronoi Regions”, at *International Symposium on Distributed Autonomous Robotic Systems (DARS)*, Montbéliard, France, Nov 2022. **[Oral Presentation]**
- “Distributed Multi-Robot Information Gathering using Path-Based Sensors in Entropy-Weighted Voronoi Regions”, at *Maryland Robotics Center*, MD, USA, Nov 2022 **[Student Seminar]**
- “Path Planning for maximizing information gathered when hazards correlate with targets”, *Maryland Robotics Student Seminar*, College Park, MD, USA, Feb 2022. **[Student Seminar]**

SERVICE ACTIVITIES

Reviewer, Conferences

- IEEE International Conference on Robotics and Automation (ICRA) 2024

Memberships

- IEEE, Student Member 2021–present

Organizing

- Helped in the organization of *the 15th International Workshop on the Algorithmic Foundations of Robotics (WAFR)* 2022
- Represented *Motion and Teaming Lab* and the *Department of Aerospace Engineering* at Maryland Day to inspire young minds toward the field of Robotics. 2023,2022

SKILLS

Game, Design & Simulation Software Programming

CARLA, Solidworks, Unity3D, Adobe Illustrator, Adobe After Effects
Python, Julia, C/C++, C#, MATLAB, R, HTML/CSS, JS, PHP

RECOMMENDATIONS

- [1] **Philip Dames** - Associate Professor, Department of Mechanical Engineering, Temple University, Philadelphia, PA, USA
✉ pdames@temple.edu 🏠 <https://sites.temple.edu/trail/>
- [2] **Michael W. Otte** - Assistant Professor, Department of Aerospace Engineering, University of Maryland, College Park, MD, USA
✉ otte@umd.edu 🏠 <https://www.ottelab.com>
- [3] **George P. Kontoudis** - Assistant Professor, Department of Mechanical Engineering, Colorado School of Mines, Golden, CO, USA
✉ george.kontoudis@mines.edu 🏠 <https://www.georgekontoudis.com>
- [4] **Donald A. Sofge** - Head, Distributed Autonomous Systems Section, Laboratory for Autonomous Systems Research, Naval Research Laboratory, Washington DC, USA
✉ donald.sofge@nrl.navy.mil 🏠 <https://eng.umd.edu/clark/faculty/763/Donald-Sofge>
- [5] **George F. Zaki** - Director, Applied Scientific Computing, Frederick National Lab, National Cancer Institute, USA
✉ gzaki@umd.edu 🏠 <https://user.eng.umd.edu/~gzaki/>