Alkesh K. Srivastava

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www.alkeshks.com ✉ alkesh@temple.edu, 29alkesh@gmail.com

EDUCATION

Temple University *Aug 2023 -*
Doctoral Specialization - **Mechanical Engineering**
Advisor: Dr. Philip Dames, *Temple Robotics and Artificial Intelligence Lab*,
Department of Mechanical Engineering, Temple University

University of Maryland, College Park *Jan 2021 - Dec 2022*
Master's Specialization - **Robotics**
Advisor: Dr. Michael Otte, *Motion and Teaming Lab*,
Department of Aerospace Engineering, University of Maryland, College Park
Mentor: Dr. George Kontoudis

Jaipur Engineering College and Research Centre (Rajasthan Technical University) *Aug 2016 - Nov 2020*
Baccalaureate Specialization - **Electrical Engineering**

RESEARCH EXPERIENCE

Research Assistant, University of Pennsylvania
xLab, Deptartment of Electrical & Systems Engineering (PI: Rahul Mangharam) *May 2024–*

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 *Spring 2024*
Instructor: Osman Sayginer

Graduate Teaching Assistant, Temple University ENGR 2332 Engineering Dynamics *Fall 2023*
Instructor: Philip Dames & Haijun Liu

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*

DEVELOPMENT EXPERIENCE

Games: The TapBait! and Defy The Fall
Application: Your Pharmacy

AWARDS & HONORS

MRC Conference Travel Award of $1000 for DARS 2022 *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

[2] **Alkesh K. Srivastava**, Samuel Migirditch, Mohamed Khalid M Jaffar, Aamodh Suresh, George P. Kontoudis, Carlos Nieto-Granda, Michael Otte "Learning a Surrogate to Plan Paths for Information Gathering about Hazards in Dangerous Environments."

[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)

[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

- "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 Presentation]**
- "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 Presentation]**
- "Distributed Multi-Robot Information Gathering using Path-Based Sensors in Entropy-Weighted Voronoi Regions", *The* 16^{th} *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", *Maryland Robotics Center*, College Park, 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]**
- "Quantum Computing: Prime Factorization" 2^{nd} *National Conference on Recent Trends and Smart Technologies in Electrical Engineering*, College Park, MD, USA, Mar 2020. **[Oral Presentation]**

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	CARLA,Solidworks, Unity3D, Adobe Illustrator, Adobe After Effects
Programming	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] **Rahul Mangharam** - Professor, Department of Electrical & Systems Engineering, University of Pennsylvania, Philadelphia, PA, USA
✉ rahulm@seas.upenn.edu https://www.seas.upenn.edu/~rahulm/

[3] **Michael W. Otte** - Assistant Professor, Department of Aerospace Engineering, University of Maryland, College Park, MD, USA
✉ otte@umd.edu https://www.ottelab.com

[4] **George P. Kontoudis** - Assistant Professor, Department of Mechanical Engineering, Colorado School of Mines, Golden, CO, USA
✉ george.kontoudis@mines.edu https://www.georgekontoudis.com

[5] **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