DRF – Meet the Team

Data and Reasoning Fabric (DRF)

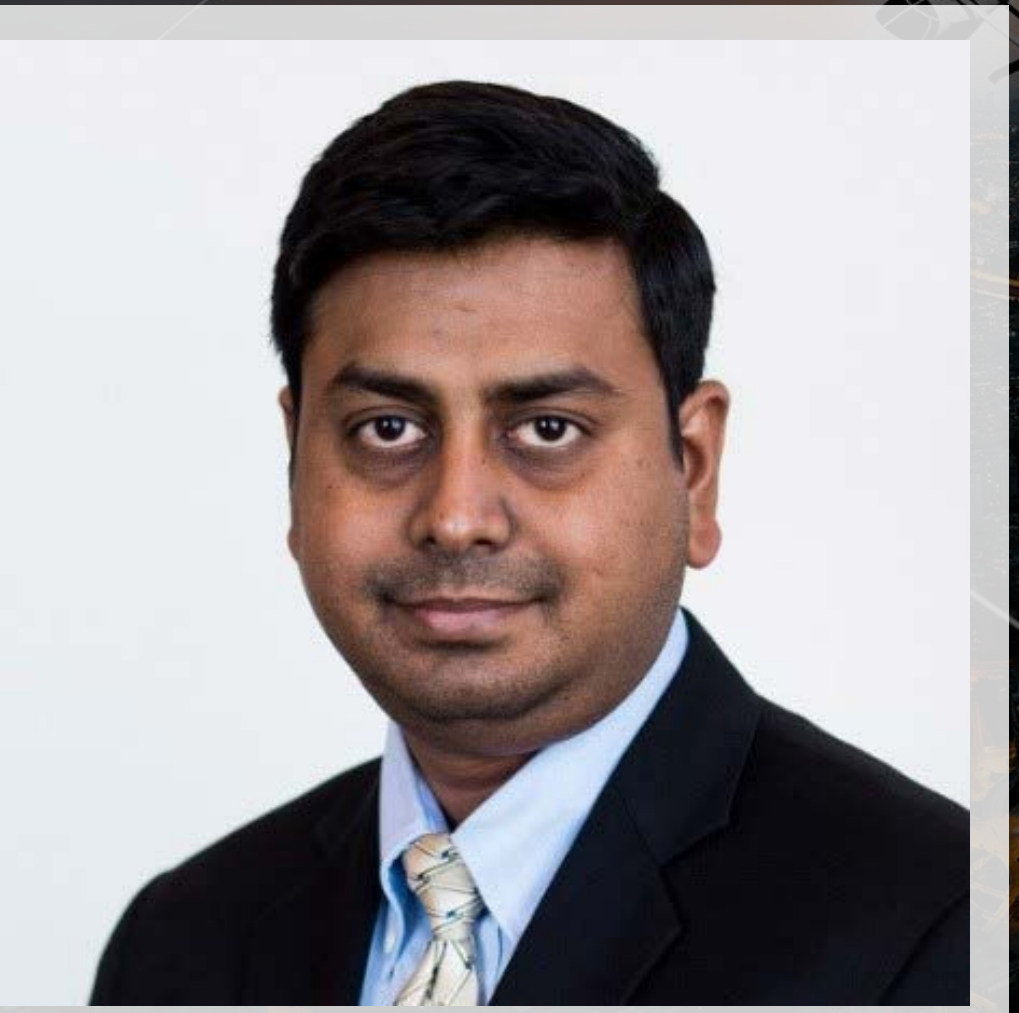
NASA Aeronautics Research Mission Directorate (ARMD)
Transformative Aeronautics Concepts Program (TACP)
Convergent Aeronautics Solutions (CAS) Project
Data and Reasoning Fabric Team

Kenneth Freeman
Principal Investigator

M.S. Electrical Engineering - San Jose State University
B.S. Electrical Engineering & Computer Science - UC Berkeley

Kenneth Freeman began his career at NASA Ames Research Center working in local and wide area networking, network research and space communications, playing major roles in several engineering and research projects. He then led at team to implement NASA's Security Operations Center (SOC), building a cyber-security operations center that is the nerve center for the detection and monitoring information security incidents for NASA. He is now leading the Secure Airspace Technology Group, which develops and demonstrates capabilities, for secure data integrity, resiliency, and information privacy for national airspace environments.

Kenneth Freeman is the Principal Investigator for the Data & Reasoning Fabric (DRF) Activity. DRF is envisioned to enable the growth of future flight by enabling an ecosystem of data and AI-based decision support tools (reasoning) to enable the transportation of people and cargo to places previously not served or underserved by aviation.



Aditya Das
Co-Principal Investigator & DRF Data Lead

Ph.D. Electrical Engineering – University of Texas at Arlington
M.S. Electrical Engineering – University of Texas at Arlington
Master of Business Administration – University of Texas at Austin

Dr. Das worked in academia heading multiple research divisions and managing research in robotics, manufacturing automation, and intelligent systems areas. He also served as a special member of the graduate faculty teaching Robotics at the undergraduate and graduate levels as well as co-advising multiple masters and doctorate theses.

Dr. Das also worked as a senior consultant in the IT industry supporting multiple technology areas involving big data, artificial intelligence, and machine learning. His research interest includes autonomous systems, human machine interaction, artificial intelligence, machine learning, and manufacturing automation. His past research was supported by multiple federal agencies and industries.

Dr. Das is a senior member of IEEE and has authored and co-authored over 45 technical publications in international conferences, journals, and articles. He has served in the organizing committees of multiple international conferences and review committee at the National Science Foundation. He holds five US patents.

Sandeep Shetye

DRF Core Lead

M.S. Computer Science – University of Florida
B.S. Computer Technology – Bombay University

Sandeep Shetye is a highly accomplished computer scientist and a visionary leader at NASA's Intelligent Systems Division. As a domain expert in data management and data analytics, he leads innovative programs which support NASA's space and aeronautics missions. Prior to joining NASA, he held various technical leadership roles at top technology companies where he consistently delivered cutting-edge technology solutions.

Passionate about understanding customer needs across market segments and creating new technology solutions to solve them, Sandeep brings this expertise to his role as the Chief Technology Architect for DRF Core, a revolutionary self-sustaining decentralized platform for data and AI service exchange. Designed to handle the projected scale of future air mobility, DRF Core is a game-changer for geographically dispersed, heterogenous entities with low-latency requirements.

Krishna Kalmanje
DRF Reasoning Lead

Ph.D. Aerospace & Electrical Engineering - University of Alabama
B.S. Aerospace Engineering - Indian Institute of Technology Madras

Dr. Kalmanje Krishnakumar is currently serving as the Associate Division Chief for Aeronautics managing a portfolio of roughly 25 Million dollars. Till December 2016, he served as the Chief of Autonomous systems and robotics area in NASA Ames Research Center.

Within DRF, he serves as the lead for reasoning services and use case simulation development.

DRF enables cloud-based services that will revolutionize the aviation industry enabling cheaper personal transports, federated airspace management, etc.

Channon Wong
DRF Partnerships Lead

Certificate Mastering Design Thinking
MIT Sloan School of Management
B.S. Business Administration
San Jose State University

Channon Wong began her career at NASA Ames Research Center in Human Resources supporting multiple technical and support organizations. With her human resources (HR) background, she leads several NASA Ames HR programs including Classification, Intergovernmental Personnel Act (IPA) Program, Phased Retirement, and Ames Associate. In 2018, Channon joined the NASA Ames Aeronautics Directorate to lead a variety of innovation activities and to assist with strategic planning. Currently, Channon serves as the Associate Chief for the Aeronautics Projects Office.

Within DRF, Channon is part of the executive team navigating partnerships and contracts with industry and academia. She is most excited about DRF's journey in opening perspectives on the future of air mobility.

Supreet “Sue” Kaur
DRF Lead Systems Engineer

M.Sc. Space Studies - International Space University France

B.S. Industrial & Systems Engineering - San Jose State University

Sue first came to NASA Ames Research Center in 2017 through the NASA Community College Aerospace Scholars (NCAS) program. She returned from 2018 - 2019 as a Systems Engineer Intern for the Airspace Technology Demonstration 2 (ATD-2) project.

After working in the global space sector, Sue joined the NASA DRF team in 2021 as the Lead Systems Engineer.

Within DRF, Sue's focus is on workflow optimization in rapid prototyping, supporting strategic and successful partnerships with industry and academia, as well as aerospace education and outreach across the agency.