

**EDITORIAL****Editorial introduction**

This special issue presents 10 articles that feature the NSF Convergence Accelerator, a program launched in 2019 by the US National Science Foundation, focusing on transitioning research to practice for social impact. Included in this special issue are related articles — ranging from an introduction to the NSF Convergence Accelerator program to descriptions of projects in phase 1 and phase 2 of the Convergence Accelerator.

We are pleased to introduce this special issue featuring the NSF Convergence Accelerator, an exciting new program launched in 2019 by the US National Science Foundation, focusing on transitioning research to practice for societal impact.

The special issue begins with an article that provides an overview of the NSF Convergence Accelerator program, coauthored by the program management team at NSF. This article also introduces the first two “tracks” in the program, viz., Track A — Open Knowledge Networks (OKN) and Track B — AI & the Future of Work, and the “track integration” activity underway in each. The second article on Knowledge Graphs relates the Track A work on open knowledge networks to this broader topic area and incorporates perspectives from experts/practitioners from academia and industry. Next is a set of seven articles describing projects currently in phase 2 of the Convergence Accelerator — five in Track A and two in Track B. We recommend reading the NSF overview article first, prior to reading these individual project articles. The last article on Enabling AI Innovation via Data and Model Sharing provides an overview of all 18 projects in phase 1 of the Convergence Accelerator Track D and is coauthored by the 18 project principal investigators along with NSF program directors. Six of these projects have been selected for phase 2, as noted in the article.

The Convergence Accelerator currently has three additional tracks (C, E, and F) that are not covered in this special issue. Track C in the 2020 cohort focuses on Quantum Technology. Tracks E and F in the 2021 cohort focus on

Networked Blue Economy and Trust and Authenticity in Communications Systems, respectively. NSF also recently announced tracks G, H, I, and J in the 2022 cohort focusing respectively on Securely Operating Through 5G Infrastructure, Enhancing Opportunities for Persons with Disabilities, Sustainable Materials for Global Challenges, and Food & Nutrition Security.

We hope that the articles in this issue convey the full excitement of the NSF Convergence Accelerator program. We wish to thank the article authors for their valuable contributions, the reviewers for their diligent work in providing thorough reviews of articles, and the editors of the AI Magazine for featuring this special issue.

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Vinay K. Chaudhri is currently an Executive Director at JPMorgan Chase & Co. working on AI for the financial services Industry. He was a visiting lecturer in the Department of Computer Science at Stanford University when this work was performed. Prior to that, he was at SRI International where he worked on Project Halo that created an Intelligent Textbook, and Project Calo that was spun off as SIRI and was later acquired by Apple.

Chaitanya Baru is distinguished Scientist at San Diego Supercomputer Center, UC San Diego. From 2014 to 2018, he was Senior Advisor for Data Science at the National Science Foundation where he provided leadership for data programs including BIGDATA, Big Data Hubs, TRIPODS, Data Science Corps. From 2019 to 2021, he was Senior Advisor for the Convergence Accelerator and a member of the team that established the program.