

NSF's Advanced Manufacturing Program: Overview, Update and Q&A

Wednesday, June 24, 2021, 1:30 - 3:00 pm

Organizer: Zhijian (ZJ) Pei

In this special session, three NSF program directors from the NSF Advanced Manufacturing Cluster will update the audience what is new at NSF, especially regarding advanced manufacturing. They will also answer questions from the audience.

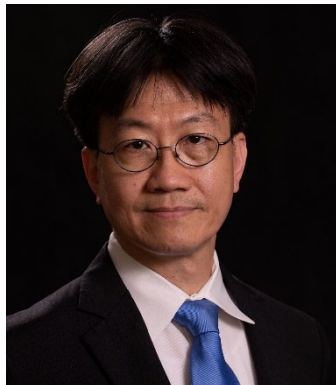
The panelists at this special session are:

- Kevin Chou, Program Director – Responsible for Advanced Manufacturing (AM).
- Khershed Cooper, Program Director – Responsible for Advanced Manufacturing (AM), Engineering Research Centers (ERCs), and Network for Computational Nanotechnology (NCN).
- Andy Wells, Program Director – Responsible for Advanced Manufacturing (AM).

Kevin Chou

Program Director

National Science Foundation (NSF)



Currently serving as a Program Director, Kevin Chou joined the NSF (as IPA) in April 2020 from University of Louisville (UofL), where he is the Edward R. Clark Chair of Advanced Manufacturing. Affiliated with Industrial Engineering Department, Dr. Chou also directed UofL's Additive Manufacturing Institute of Science and Technology (AMIST) from Jan. 2019 – Apr. 2020. He received his Ph.D. from Purdue University and post-doc training from National Institute of Standards and Technology. His research interest includes a broad range of manufacturing processes with recent focus on metal additive manufacturing. He is the recipient of 2016 SME RAPID Dick Aubin Distinguished Paper from SME's Rapid Technologies & Additive Manufacturing Community. Dr. Chou is a Fellow of American Society of Mechanical Engineers (ASME), for which he led the Technical Program of its International Manufacturing Science and Engineering Conference in 2011 and served as the Chair of its Manufacturing Engineering Division (MED) (Jan. 2018 – Jun. 2019). From Aug. 2014 – Aug. 2015, Dr. Chou was the Assistant Director for Technology in the Advanced Manufacturing National Program Office in the U.S. Department of Commerce, supporting the Manufacturing USA initiative.

Khershed P Cooper

Program Director

National Science Foundation (NSF)



Dr. Khershed P. Cooper is a Program Director (PD) for the Advanced Manufacturing (AM) program in the Civil, Mechanical and Manufacturing Innovation (CMMI) Division of the Engineering Directorate at National Science Foundation (NSF). He directs basic research activities in advanced manufacturing, and associated Manufacturing USA and NSF-DFG (Deutsche Forschungsgemeinschaft) collaborations. He is a disciplinary program officer for the Engineering Research Centers (ERC) and a co-PD for cross-cutting programs, such as, Critical Aspects of Sustainability (CAS), Emerging Frontiers in Research and Innovation (EFRI), Network for Computational Nanotechnology (NCN) and National Nanotechnology Coordinated Infrastructure (NNCI). He is an NSF representative for NSTC's Nano Science Engineering and Technology (NSET) Sub-committee, which frames the NNI Strategic Plan. He represents NSF for NextFlex (flexible electronics) and REMADE (circular economy) manufacturing innovation institutes. Prior to joining NSF, Dr. Cooper was a Program Officer for Manufacturing Science at the Office of Naval Research (ONR) and, concurrently, a Senior Research Metallurgist at the Naval Research Laboratory (NRL). His earlier appointments were to serve as a Supervisor of the Materials Research Group at Geo-Centers, Inc and a Scientist II at Olin Metals Research Laboratory. He received his MS and PhD from University of Wisconsin–Madison and his BTech from IIT—Bombay. He has presented at national and international conferences, meetings and workshops. He has over 200 invited talks, 70 contributed presentations, nearly 150 publications, edited one book and holds one patent. He has sponsored and participated in international studies in various emerging areas of advanced manufacturing. He is a Fellow of SME and ASM International and a recipient of ASM International's Burgess Memorial Award.

Andy Wells
Program Director
National Science Foundation (NSF)



Dr. Andy Wells has been a Program Director in the National Science Foundation's Advanced Manufacturing program since 2019, where he supports fundamental research to advance American manufacturing technologies. He is the co-leader of the Future Manufacturing solicitation, which supports research and education that will enable new, potentially transformative, manufacturing approaches to eliminate scientific, technological, educational, economic and social barriers that limit current manufacturing. He is an NSF representative to the National Science and Technology Council's (NSTC) Subcommittee on Advanced Manufacturing, and to the Manufacturing USA Interagency Working Group. Andy brings to the program over 25 years of experience developing and building precision equipment that enables manufacturers and researchers to visualize and transform materials at the micro- and nano-scale. Most recently, he was a technical program manager at Thermo Fisher Scientific and FEI Company, where he led development of scanning electron microscopes and ion-beam machining tools for semiconductor, materials science, and life science customers. Previously, he developed equipment for laser and mechanical micromachining at Electro Scientific Industries and was an adjunct professor at Portland State University. Andy received his PhD and MS degrees in mechanical engineering from Caltech, and his bachelor's degree from Dartmouth.