



Workshop on Materials Science and Engineering in A Post-Pandemic World

December 7-9, 2020

Presented by the National Academies' Defense Materials, Manufacturing and its
Infrastructure Standing Committee (DMMI)

Under the auspices of the National Materials and Manufacturing Board (NMMB)

Day 1: The Recent Past and Present		
11:00 am ET /8:00 am PT	Welcome, Objectives, Introductions all around	15 min
Session 1 Topic: The Talent Pipeline: Workforce Data and Trends Moderated by Session Chair, Susan Sinnott and Haydn Wadley		
11:15 am ET /8:15 am PT	Angus Rockett , Colorado School of Mines Discussion	20 min 10 min
11:45 am ET /8:45 am PT	Joseph Roy , American Society of Engineering Education Discussion	20 min 10 min
12:15 am ET /9:15 am PT	Julia Phillips , Sandia National Laboratory (Retired) Discussion	20 min 10 min
12:45 am ET /9:55 am PT	Topic 1: Q+A and General Discussion	30 min
1:15 pm ET /10:15 am PT	Break	30 min
Session 2 Topic : From Lab to Field: Recent University-Government Successes Moderated by Session Chair, Lourdes Salamanca-Riba and Dianne Chong		
1:45 pm ET	John Joannopoulos , MIT	20 min

/10:45 am PT	Discussion	10 min
2:15 pm ET /11:15 am PT	Lori Graham-Brady , Johns Hopkins University, and K.T. Ramesh , Johns Hopkins University Discussion	20 min 10 min
2:45 pm ET /11:45 am PT	Break	5 min
2:50 pm ET /11:50 am PT	Topic 2 Panel Discussion: Dan Marren , University Consortium for Applied HyperSonics Krista Walton , Georgia Tech Lei Zhu , Case Western Reserve	15 min 15 min 15 min
3:35 pm ET /12:35 pm PT	Q+A and General Discussion Moderated by Session Chair, Lourdes Salamanca-Riba	25 min
4:00 pm ET /1:00 pm PT	Adjourn Day 1	

Day 2: Pandemic Influences		
11:00 am ET /8:00 am PT	Welcome, Objectives, Introductions all around	5 min
Session 3 Topic: The Global Stage Moderated by Session Chair, Katherine Faber and Lourdes Salamanca-Riba		
11:05 am ET /8:05 am PT	Subra Suresh , Nanyang Technological University Discussion	15 min 10 min
11:30 am ET /8:30 am PT	Andreas Mortensen , Ecole Polytechnique Fédérale de Lausanne Discussion	20 min 10 min
12:00 pm ET /9:55 am PT	Topic 3: General Discussion and Q&A	15 min
12:15 pm ET /9:15 am PT	Break	30 min
Session 4 Topic: Positioning DoD and Its Workforce for New or Expanded Areas Moderated by Session Chair, Teresa Clement and Ned Thomas		
12:45 pm ET /9:45 am PT	Introduction on DoD Needs Dan Miracle , Air Force Research Laboratory Discussion	15 min 5 min
1:05 pm ET /10:05 am PT	Topic 4 Panel Discussion: Ajay Malshe , Purdue University Katsuyo Thornton , University of Michigan Jack Bueth , Carnegie Mellon University	15 min 15 min 15 min
2:15 pm ET /11:15 pm PT	Q+A and General Discussion Moderated by Session Chair, Teresa Clement	25 min
2:25 pm ET /11:25 am PT	Break	10 min
Session 5 Topic: Finding and Retaining Talent at Non-DoD Agencies Moderated by Session Chair, Haydn Wadley and Teresa Clement		
2:35 pm ET /11:35 am PT	Chip Blankenship , University of Virginia Discussion	15 min 5 min
3:00 pm ET /12:00 pm PT	Topic 5 Panel Discussion: Om Nalamasu , Applied Materials	15 min

	Charlie Kuehman , SpaceX and Tesla Ann Bolcavage , Rolls-Royce	15 min 15 min
3:45 pm ET /12:45 pm PT	Q+A and General Discussion Moderated by Session Chair, Haydn Wadley	15 min
4:00 pm ET /1:00 pm PT	Adjourn Day 2	

Day 3: Approaches for Meeting the Needs of the Future		
11:00 am ET /8:00 am PT	Welcome, Objectives, Introductions all around	10 min
Session 6 Topic: The Future with COVID Moderated by Session Chair, Robert Hull and Ned Thomas		
11:10 am ET /8:10 am PT	Gopi Billa , Deloitte Discussion	20 min 20 min
11:50 am ET /8:50 am PT	Break	10 min
Session 7 Topic: Traditional Education Reimagined Moderated by Session Chairs, Ned Thomas and Robert Hull		
12:00 pm ET /9:00 am PT	Topic 7 Panel Discussion: Sam Shames , Embr Labs Bryce Meredig , Citrine Informatics John Mauro , Penn State (formerly Corning)	10 min 10 min 10 min
12:30 pm ET /9:30 am PT	Q+A and General Discussion Moderated by Session Chair, Ned Thomas	30 min
1:00 pm ET /10:00 am PT	Break	10 min
1:10 pm ET /10:10 am PT	Jeff Fergus , Auburn University Discussion Moderated by Session Chair, Ned Thomas and Susan Sinnott	15 min 10 min
1:35 pm ET /10:35 am PT	Josh Cramer , America Makes Discussion Moderated by Session Chair, Ned Thomas and Susan Sinnott	20 min 10 min
2:05 pm ET /11:05 am PT	Break	10 min
Session 8 Topic: Developing a Diverse Workforce Moderated by Session Chair, Katherine Faber and Susan Sinnott		

2:15 pm ET /11:15 am PT	Naresh Thadhani , Georgia Tech Discussion	20 min 10 min
2:45 pm ET /11:45 am PT	Damon Dozier , Materials Research Society Discussion	20 min 10 min
3:15 pm ET /12:15 am PT	Admiral Michael Mullen (Ret.) , Former Chairman of the Joint Chiefs of Staff	20 min
3:35 pm ET /12:35 pm PT	General Discussion on Developing a Diverse Workforce Moderated by Session Chair, Katherine Faber	25 min
4:00 pm ET /1:00 pm PT	Adjourn Day 3	