

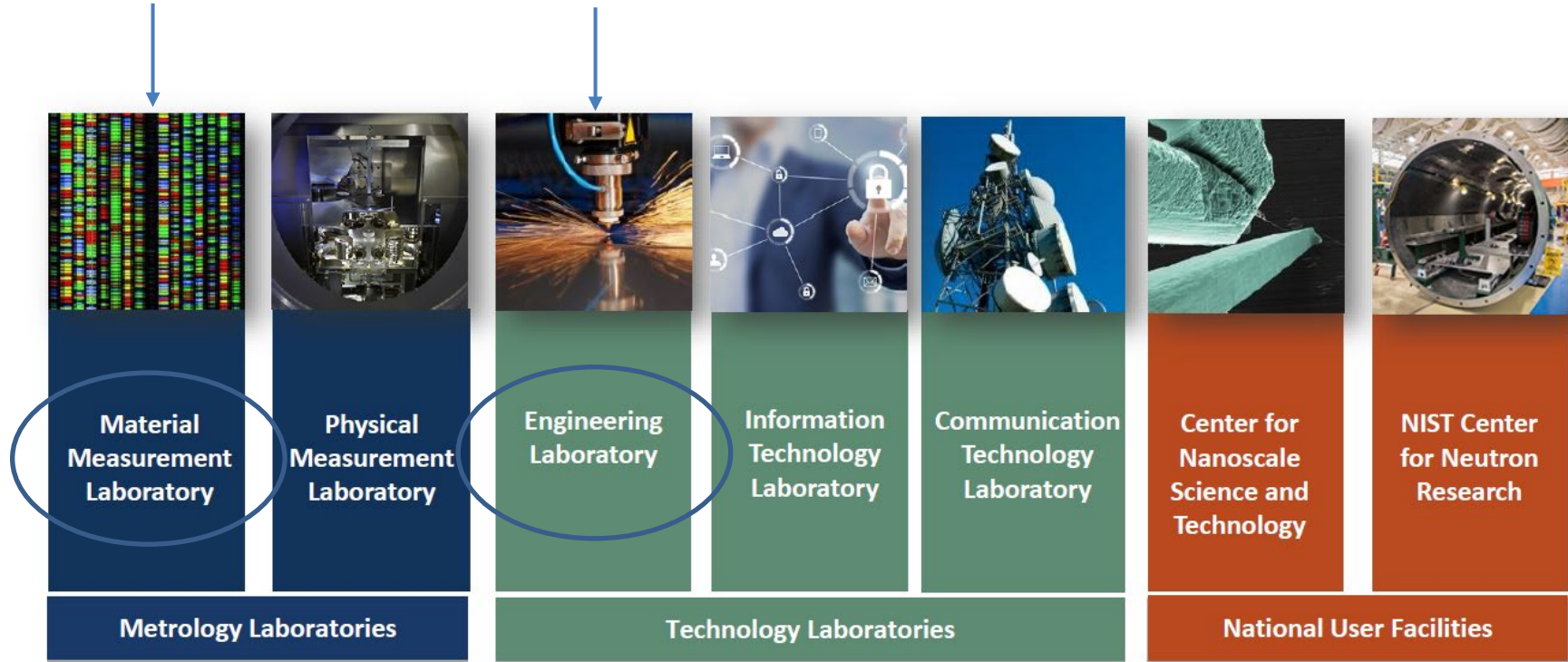


# **Report out from NASEM Assessment of the Material Measurement Laboratory and the Engineering Laboratory**

National Academies  
Committee on NIST Technical Programs

June 8, 2021

# Reviews in FY 20





# Panel on Review of the Material Measurement Laboratory at the National Institute of Standards and Technology

Elsa Reichmanis, Ph.D., *chair*

# Panel 'visited' MML September 9-11, 2020

STEPHANIE L. BROCK, Wayne State University

DENNIS E. DISCHER, NAM, NAE, University of Pennsylvania

THOMAS W. EAGAR, NAE, Massachusetts Institute of Technology

ROBERT E. FONTANA, NAE, Jr., IBM Systems

ERIC E. FULLERTON, NAE, University of California, San Diego

AMIT GOYAL, NAE, SUNY Buffalo

OLIVIA A. GRAEVE, University of California, San Diego

JENNIE C. HUNTER-CEVERA, Hunter-Cevera and Associates

CARL KESSELMAN, University of Southern California

DAE WOOK KIM, University of Arizona

MUKUL KUMAR, Lawrence Livermore National Laboratory

MICHAEL R. LADISCH, NAE, Purdue University

STEVEN H. MCKNIGHT, Virginia Polytechnic and State University

PHILLIP M. NECHES, NAE, Entrepreneurs Roundtable Accelerator

KRISHNA RAJAN, State University of New York at Buffalo

ELSA REICHMANIS, NAE, Lehigh University

ANN BEAL SALAMONE, NAE, Rochal Industries, LLC

WENDY J. SHAW, Pacific Northwest National Laboratory

SUBHASH SINGHAL, NAE, Pacific Northwest National Laboratory (Ret.)

MICHAEL G. SPENCER, Morgan State University

KATHLEEN C. TAYLOR, NAE, General Motors Corporation (Ret.)

CHRISTOPHER J. WELCH, Indiana Consortium for Analytical Sciences and Engineering (ICASE)



# Panel Findings & Recommendations

## Technical Adequacy

- NIST research is exceptional
- Global influence through standards-making bodies and SRM sales
- Challenge of expanding into biological areas

## Portfolio of Scientific Expertise

- Challenge of succession planning and retraining when staffing up in newly emerging areas



# Findings & Recommendations (cont'd)

Adequacy of laboratory budget, facilities, equipment, and human resources

- Reconsider operational model of 50% surcharge on equipment purchase
- Challenge of aging infrastructure that impacts quality of research and ability to carry out technical mission
- Well thought-out plans for new buildings especially for SRM

Dissemination of Outputs

- Impressive set of convening activities; participation in ISO and NSTC
- Impact of journal articles is high
- Opportunity to use post-doc network as brand ambassadors





# Panel on Review of the Engineering Laboratory at the National Institute of Standards and Technology

E. Sarah Slaughter, Ph.D., *chair*