

## Greetings from Dr. JihFen Lei, the Acting Director of Defense Research and Engineering for Research and Technology in the Office of the Under Secretary of Defense for Research and Engineering

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I am excited to introduce volume three, issue one of the *Journal of DoD Research and Engineering (JDR&E)*, DoD's peer-reviewed scientific journal. *JDR&E* is managed by the Defense Technical Information Center (DTIC) and publishes both classified and controlled unclassified research articles in a controlled access environment. Now entering its third year, *JDR&E*'s commitment to put a spotlight on the DoD S&T community and its incredible, innovative work is stronger than ever.

Cognizant of our increasingly capable competitors and near-peer adversaries, the DoD S&T community is engaged in a race to develop cutting-edge technologies and to modernize existing capabilities. As Acting Director of Defense Research and Engineering for Research and Technology, I recognize the strategic importance of knowledge sharing and collaboration

among DoD's S&T professionals to drive scientific breakthroughs. I strongly believe that by highlighting and celebrating these breakthroughs, we help open up the pathways to deliver actual Warfighting capabilities. This is the role that *JDR&E* plays: recognizing the accomplishments of our technical workforce and ensuring that we can build upon its scientific advances.

Throughout my time at DoD, NASA, and in private industry, I have witnessed first-hand the tremendous benefits of scientific research and collaboration that emerge from the Government's S&T ecosystem. Since joining DoD, I have been particularly struck by the immediate, organic connection between this ecosystem and our Warfighters, who depend upon the S&T community to maintain their long-held technology edge in an era of fierce technological competition. Making critical S&T advancements requires initiative and cooperation across all of the Services, as highlighted in the diversity of contributions to this issue of *JDR&E*. Offering unique approaches to evaluating current challenges, the papers share important insights and solutions on topics ranging from ground combat vehicle weight optimization, to chemical agent detection, to sensors for ballistic signature measurement, to cyber mission planning—to name just a selection of this issue's contents. I especially appreciate how well the papers align with our modernization priorities.

I would like to extend my gratitude to the journal's founding advisory board members, who were instrumental in establishing this conduit for our engineers and scientists to advance their careers through the publication of peer-reviewed research. *JDR&E* is the result of their combined vision and your contributions and work. The published volumes represent the legacy of this shared venture. To the DoD S&T community: I encourage you to join us in this important collaborative endeavor by submitting your research for publication in *JDR&E*.