Expeditionary Additive Manufacturing for Operational Readiness

Session Chair: Marc Pepi, Materials Engineer, Combat Capabilities Development Command – Army Research Laboratory

"If you had an expeditionary capability, for example, to print parts, you'd be able to extend the range of a brigade combat team,"

- Mr. Ryan D. McCarthy, US Army Secretary

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Expeditionary Manufacturing

- SERDP SoN WPSON-18-C4 –*Development of Agile, Novel Expeditionary Battlefield Manufacturing Processes using Recycled and Reclaimed Materials*
  - Objective: “to seek basic and applied research for the development of agile manufacturing techniques that take advantage of recycled and reclaimed materials”
  - Benefits:
    - Reduced logistics footprint
    - Improved operational readiness
  - Aligned with Army Directive 2019-29, *Enabling Readiness and Modernization Through Advanced Manufacturing*:
    - “…advanced manufacturing could transform battlefield logistics through on-demand fabrication of parts close to the point of need…”

Session Overview

- **The session will feature presentations regarding**:
  - USMC expeditionary manufacturing efforts
  - Additive manufacturing of energetics
  - Gas atomization of AM grade metal powder in a shipping container
  - 3D-printing with filament made from recycled water bottles
  - Solid-state AM for repair using recycled/reclaimed metals
  - Unique combination of 3D-printing and traditional casting

Admin

- Please silence all cell phones and other electronic devices
- Please hold all questions until the end of each presentation
- Speakers, please allow for five minutes of questions
- I will give each speaker a “three-minute warning”

- Thank you for attending!

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