

2018 ASPE and euspen Summer Topical Meeting on Advancing Precision in Additive Manufacturing

Berkeley, California, USA
22 - 25 July 2018

ISBN: 978-1-5108-7672-9

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Red Hook, NY 12571



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Meeting Program

Sunday, July 22, 2018

9:00 AM – 12:00 Noon – Tutorial

Basics of Metrology

Richard Leach (University of Nottingham, UK)

8:00 AM – 12:00 Noon – Tutorial

Fracture and Fatigue Issues for (Metal) Additive Manufacturing

John J Lewandowski – Arthur P Armington Professor of Engineering II and Director Advanced Manufacturing and Mechanical Reliability Center (AMMRC), Case Western Reserve University, Cleveland, OH

12:00 Noon – 1:00 PM – Lunch on-your-on

1:00 PM – 5:00 PM – Tutorial

X-ray Computed Tomography for Dimensional Metrology

Adam Thompson (University of Nottingham); Massimiliano Ferrucci (Materialise); Evelina Ametova – (KU Leuven)

1:00 PM – 5:00 PM – Tutorial

Applications of Metal Additive Manufacturing to Precision

Kevin Raedts (VDL ETG); Gerrit Oosterhuis (VDL ETG)

6:30 PM – Welcome Reception at Jupiter – 2181 Shattuck Ave, Berkeley, CA 94704

Monday, July 23, 2018

8:00 AM – Registration & Light Breakfast

8:30 AM – Conference Opening

Welcome

Eric Buice, ASPE President, Lawrence Berkeley National Laboratory

Opening Remarks

John S. Taylor, Conference Co-chair, University of North Carolina-Charlotte

Perspective

Richard K. Leach, Conference Co-chair, University of Nottingham

David Bue Pedersen, Technical University of Denmark

Keynote Speaker

Precision Additive Metal Manufacturing %

Ann Witvrouw (University of Leuven (KU Leuven))

9:45 AM – Session 1: Applications of AM & Functional Specifications

Antonius T. Peijnenburg (VDL Enabling Technologies Group) and

Sam Anand (University of Cincinnati)

Oral Presentation

Precise Additive Manufacturing Technology Application to Heavy Duty

Industrial Gas Turbines

Vogel, G.; Rosenbarger, T.; McNally, J.; Houck, L. (Power Systems Manufacturing) 1

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Design and Evaluation of a 3D Printed Flexure for a Fast Steering Mirror

Schlarp, J.; Csencsics, E.; Ito, S.; Schitter, G. (Vienna University of Technology) 7

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Internal Surface Topography and Dimensional Metrology of Microwave Guide using X-ray CT

Metcalfe, C.; George, M.; Hinebaugh, J.; Fishman, Z. (Expanse Microtechnologies Inc.)
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Eric S. Buice (Lawrence Berkeley National Laboratory) and
John S. Taylor (University of North Carolina-Charlotte)

Carl Zeiss Industrial Metrology

Christoph Graf vom Hagen

Zygo Corporation

Kevin Bowes

Aerotech

William S. Land II

Nikon Metrology

David J. Bate

1:00 PM – Lunch

2:25 PM – Session 3: Design for Manufacturing

Gerrit Oosterhuis (VDL Enabling Technologies) and
Bradley H. Jared (Sandia National Laboratories)

Keynote Speaker

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Sam Anand (University of Cincinnati) 24

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Simulation Assisted Design for an Additively Manufactured Autoclave Tool Accounting for an Anisotropic Expansion

Kim, S.; Hassen, A. A.; Lindahl, J.; Post, B.; Love, L. E.;
Kunc, V. (Oak Ridge National Laboratory) No abstract

4:00 PM – Session 4: Lattice & Thin Sections

Michael M. Kirka (Oak Ridge National Laboratory) and
David Bue Pedersen (Technical University of Denmark)

Oral Presentation

**Micro Powder Bed Fusion (µ-PBF) – Extremely High Resolution
for Small-scale Applications**

Masseling, L.; Jauer, L.; Gayer, C. (Fraunhofer Institute for Laser Technology ILT) 45

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**Adapted Scan Strategy and Slicing Tool for Improvement
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Exploring the Limits of Thin Section Builds in Laser Powder Bed Fusion Process

Wu, Z.; Narra, S. P.; Subedi, S.; Beuth, J. (Carnegie Mellon University) No abstract

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**Characterisation of the Influence of the Colour in Resin for Micro Parts Production by
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Seno Rekawa (Lawrence Berkeley National Laboratory) and
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6:00 PM – Travel to Dinner Location at Skates – 100 Seawall Dr, Berkeley, CA 94710

6:30 PM – Cocktail Hour & Dinner at Skates

10:30 PM – Travel to Hotels

Tuesday, July 24, 2018

8:00 AM

Registration & Light Breakfast

8:30 AM

Welcome & Announcements

John S. Taylor (University of North Carolina-Charlotte)
and Richard K. Leach (University of Nottingham)

8:40 AM – Session 6: Standards

Jason C. Fox (National Institute of Standards & Technology) and
Sam Anand (University of Cincinnati)

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ISO 10360 pt 11: Progress Towards an XCT Verification Standard

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Richard K. Leach (University of Nottingham) and
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David J. Bate (Nikon Metrology)
Ann Witvrouw (University of Leuven (KU Leuven))

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John S. Taylor (University of North Carolina-Charlotte) and
Richard K. Leach (University of Nottingham)

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John S. Taylor (University of North Carolina-Charlotte) and
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Keynote Speaker

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