



2018 SCHEDULE

Livermore Technical Presentation Agenda

DAY 1 – October 18th

Welcome to the Livermore, CA Technical Workshop

7:30am- 8:05am

Registration

8:05am

Welcome & Introductions

[Mike Mandina, APOMA President Elect – Optimax Systems Inc.](#)

8:15am

Materials Science of Optical Fabrication

The following presentation will review the fundamental chemical, mechanical and physical interactions between the workpiece, slurry, and lap during both grinding and polishing from a Materials Science point-of-view.

[Tayyab Suratwala – Lawrence Livermore](#)

9:00am

Novel Optics Polishing using MRF

Over the past fifteen years, LLNL has developed Magnetorheological Finishing (MRF[®]) techniques to address complicated optical fabrication issues. Examples include laser beam conditioning optics containing customized gradients that cannot be made using conventional processes. MRF freeform corrective element fabrication is also highlighted yielding optics with nanometer error. Lastly, MRF internal inhomogeneity correction polishing for transmissive optics is discussed.

[Joe Menapace – Lawrence Livermore](#)

9:45am- 10:00am

Coffee Break

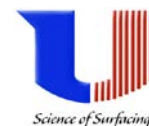
10:00am

AFM Nano scratching of Optical Materials for determining Polishing Removal Function

Presenting the use of atomic force microscope to create nano scratches of plastic deformation in a range of optical materials for studying mechanical material removal in the load range typical of slurry particle polishing.

[Nan Shen – Lawrence Livermore](#)

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Livermore, CA Technical Workshop continued:

10:45am

Predictive Models for Grinding and Polishing of various Optical Materials

The following presentation will describe quantitative rules, based on fundamental removal mechanisms, for determining the grinding & polishing rate and grinding roughness for a variety of workpiece material & slurry particle compositions.

[Tayyab Suratwala – Lawrence Livermore](#)

11:30am – 12:30pm

Noon Hour Talk

Build your own Taco Buffet

NIF Overview

(including explanation of optics recycle loop and tours)

Creating, Diagnosing, and Controlling High Energy Density Matter with the National Ignition Facility.

[Mark Herrmann – Lawrence Livermore](#)

12:30pm – 5:00pm

Buses pick up at Garre` Winery for LLNL Tour

5:00 pm – 6:30pm

Wine, Beer & Hors d'oeuvres

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