

7th International Conference on Laser Peening and Related Phenomena

June 17-22, 2018 • Singapore

THE CONFERENCE CHAIRMEN, Professor Michael Fitzpatrick with Coventry University and Professor Minghui Hong with the National University of Singapore, have announced that the 7th International Conference on Laser Peening and Related Phenomena (LSP 2018) will return to Asia, to the wonderful venue of Singapore, June 17-22, 2018. The 10th Anniversary conference will be hosted by the National University of Singapore (NUS), jointly organised with Coventry University, UK, through its Singapore Hub.

The conference will maintain its workshop-style approach of a single session and an emphasis on discussion and networking, with a focus on industrial problems and applications, alongside the basic phenomena of materials response and the development of laser systems for the future.

Industry leaders will display their products and services in an exhibit during the conference. LSP 2018 will provide a unique opportunity to meet with important vendors, and researchers from around the world.

The conference welcomed abstracts from the community with the following themes. The Conference Committee considered abstracts that fell outside the areas explicitly mentioned here, if they aligned with the overall aims of the conference series. In addition to papers that deal with applications from the core business of LSP in the aerospace and power generation industries, the committee was particularly interested in research into the use of LSP in marine, automotive, and medical industries.

1. Performance and lifing enhancement for engineering applications

- Fatigue and fracture
- Tribology, wear and erosion
- Corrosion and stress corrosion
- Forming and shaping
- Repair or mitigation of damage
- Life extension

2. Fundamental mechanisms and modeling

- Plasma pulse modeling
- Plasma/material interactions
- High-strain-rate effects
- Finite element and other computational methods
- Fundamentals of residual stress generation
- Material hardening and property modification

- Microstructural characterization and modification
 - Phenomenological and eigenstrain techniques
- ## 3. Laser technologies and novel process techniques
- High repetition-rate technologies
 - Pico- and femto-second laser systems
 - Compact and portable systems
 - High-power lasers
 - Micro-scale peening systems
- ## 4. Related and novel technologies
- Multiple and combined surface treatments
 - Burnishing
 - Ultrasonic Nanocrystal Surface Modification (UNSM)
 - Surface Mechanical Attrition Techniques (SMAT)
 - Cavitation shot-less peening
 - Other novel techniques

The conference will be held on the engineering campus of the National University of Singapore. Singapore provides a wide range of cultural attractions, sightseeing, excellent cuisine, and a range of amenities for delegates and their partners. Shuttles will take participants to the conference hotels, and there will be a program of events around the conference, including a river cruise tour, networking events, and technical visits.

The conference hosts look forward to seeing you at the LSP2018 in Singapore. Please visit www.lsp2018.com for more information. ●



The conference will be held in the beautiful city of Singapore.