

## Preface

The 5th Industrial Laser Applications Symposium (ILAS 2017) was held in Grantham, UK from 22-23 March 2017. ILAS was established in 2009 by the Association of Industrial Laser Users (AILU) to disseminate the state-of-the-art in laser material processing. AILU, founded in 1995, connects the laser industry with academia and end-users to promote the use of lasers in industrial material processing applications. Since 2009, AILU has organized ILAS every two years, combining the latest research in universities and other centres of research excellence with new applications from the manufacturers and users of industrial laser material processing equipment.

ILAS attracts visitors from around the world and in 2017 was attended by 225 delegates from 14 countries, 27 exhibiting organizations, 90 oral presenters and 9 poster presentations. Plenary speakers from Japan, Canada and the UK presented aspects of research into the latest precision manufacturing and looked at the first 50 years of laser cutting, a process which was first demonstrated to the world in 1967 near Cambridge, UK.

This special issue of *Lasers in Engineering* comprises selected peer reviewed papers from across the many sessions that formed ILAS 2017. The result is a superb compendium of articles presented and submitted from industrial and academic users that cover a range of topics. On the process side, the latest advances in laser cutting, laser drilling, laser cladding, laser metal deposition (LMD), laser surface engineering and laser shock peening (LSP) are all presented; with the papers covering the wider topics of analysis and imaging for process control, biomedical application, and component performance enhancement.

It has been a wonderful opportunity to edit this special edition, more so because it is the very first time that papers from ILAS have become a special issue of *Lasers in Engineering*. We are greatly appreciative of the work of AILU, the ILAS 2017 Organizing Committee and the 15 Session Chairs. Finally, we must acknowledge all the people around the world active in the

exciting research area of laser engineering, whose work is advancing the field ever more so with each passing year – as evidenced by this special issue.

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