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***Technologies for
Optical Countermeasures VIII***

**David H. Titterton
Mark A. Richardson**
Editors

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Introduction

The purpose of this conference was to provide a technical forum for the discussion and dissemination of information on optical, electro-optical, and infrared technologies as applied to the countermeasure role in security and defence. This was the eighth conference in the series contributing to the Security & Defence Symposium.

Since the polished shields of antiquity that were used to reflect the sun into the enemy's eyes over two millennia ago, optics and optical systems have been used on the battlefield as a cost-effective countermeasure; a classical force multiplier. The simplest modern optical countermeasure techniques can still be extremely inexpensive in comparison with the platform/weapon system that they protect. Take for example, the humble infrared flare ejected from the multi-million dollar aircraft, and the smoke screen deployed to protect an armoured fighting vehicle or column of vehicles. More sophisticated defensive aid systems are being developed that can encompass sensor systems, tracking systems, active and passive countermeasures, and sophisticated control and processing systems. It was all of these techniques and their underlying technologies, from the simple to the complex, which this conference aimed to discuss.

The conference content was similar to last year, with 26 high-quality papers being presented over the last two days of the symposium, half being invited papers plus a key-note address. Interest and attendance were high throughout; the sizeable conference room was usually full, with some people having to stand for some of the sessions, especially for the extended key-note session and during the invited papers. The importance of the laser source in various approaches to countermeasure techniques and was evident by the fact that a number of the sessions were focused on laser technology in countermeasure systems. Additionally, there were sessions on supporting techniques and technology, as well as a general session on Modelling & Simulation.

The conference theme was started with an excellent key-note address session, which provided an excellent overview of the recent advances in high-power laser technology, particularly in relation to laser-damage-weapon technology. The extended sessions on the high-power topics were sponsored by the High-Energy Laser Joint Technology Office in the USA and very well attended. These topics will be spun off into a new high-power conference next year.

All of the eight sessions typically started off with an invited paper, followed by two or three contributing papers. All of the papers were well received and created significant interest and subsequent questioning.

It was particularly pleasing to have a contribution from the southern hemisphere this year, as well as several continents in the northern hemisphere. Additionally, it was interesting to note that two papers reported husband and wife collaboration.

We therefore commend the following papers to your attention and invite you to advance the topic of Technologies for Optical Countermeasures even further, by submitting your research and development work for consideration in next year's conference in Edinburgh, Scotland (UK).

David H. Titterton
Mark A. Richardson