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Technologies for Optical Countermeasures IV

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Editors

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Volume 6738
# Contents

<table>
<thead>
<tr>
<th>Session</th>
<th>Laser Systems I</th>
</tr>
</thead>
</table>
| 6738 03 | The development and application of photonic technology in infrared and electro-optic countermeasures (Invited Paper) [6738-02]  
E. J. O’Driscoll, M. A. Watson, T. Delmonte, R. L. Cooke, BAE Systems (United Kingdom) |
| 6738 04 | High average power thulium fibre laser pumped mid-IR source [6738-03]  
I. Elder, SELEX Sensors and Airborne Systems UK (United Kingdom) |
| 6738 05 | Tandem OPO systems for mid-infrared generation using quasi phase-matching and volume Bragg gratings [6738-04]  
M. Henriksson, Swedish Defence Research Agency (Sweden) and Royal Institute of Technology (Sweden); L. Sjöqvist, Swedish Defence Research Agency (Sweden); M. Tiihonen, V. Pasiskevicius, F. Laurell, Royal Institute of Technology (Sweden) |

<table>
<thead>
<tr>
<th>Session</th>
<th>Laser Systems II</th>
</tr>
</thead>
</table>
| 6738 06 | High performance optically pumped antimonide mid-infrared lasers (Invited Paper) [6738-05]  
| 6738 08 | Mid-infrared InAsSbP/InAsSb quantum well laser diodes [6738-07]  
M. Yin, A. Krier, Lancaster Univ. (United Kingdom) |
| 6738 09 | Monolithic high brightness diode lasers: results and developments at FBH [6738-08]  
G. Erbert, F. Bugge, J. Fricke, K. Paschke, H. Wenzel, G. Tränkle, Ferdinand-Braun-Institut (Germany) |

<table>
<thead>
<tr>
<th>Session</th>
<th>Laser Systems III</th>
</tr>
</thead>
</table>
| 6738 0A | High power semiconductor laser sources for defense and security: a review of current technology (Invited Paper) [6738-09]  
J. Bell, S. Patterson, nLIGHT Corp. (USA) |
| 6738 0B | A 2µm-pump laser-based DIRCM system and aero-optics in the mid-IR [6738-10]  
G. Renz, W. Bohn, Institute of Technical Physics, DLR (Germany) |
| 6738 0C | Development of a compact laser source for airborne countermeasures [6738-11]  
A. Godard, M. Lefebvre, ONERA (France); S. A. Said Hassani, P. Galtier, CNRS, GEMaC (France) |
<table>
<thead>
<tr>
<th>Session</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>0D</td>
<td>High power and efficient far infrared ZnGeP$_2$-based optical parametric oscillator</td>
<td>E. Lippert, G. Rustad, K. Stenersen, FFI, Norwegian Defense Research Establishment (Norway)</td>
</tr>
<tr>
<td>0E</td>
<td>SESSION 4 BEAM STEERING</td>
<td></td>
</tr>
<tr>
<td>0F</td>
<td>A real-time sub-µrad laser beam tracking system</td>
<td>I. Buske, R. Schragner, W. Riede, Institute of Technical Physics, German Aerospace Ctr. (Germany)</td>
</tr>
<tr>
<td>0G</td>
<td>Adaptive laser beam steering with micro-optical arrays</td>
<td>M. Rungenhagen, H. D. Tholl, Diehl BGT Defence GmbH &amp; Co. KG (Germany)</td>
</tr>
<tr>
<td>0H</td>
<td>SESSION 5 GENERAL COUNTERMEASURES I</td>
<td></td>
</tr>
<tr>
<td>0I</td>
<td>The anatomy of the MANPAD (Invited Paper)</td>
<td>M. A. Richardson, Cranfield Univ. at the Defence Academy of the United Kingdom (United Kingdom)</td>
</tr>
<tr>
<td>0J</td>
<td>The European project CASAM for the protection of commercial airliners in flight</td>
<td>J.-F. Vergnolle, SAGEM Défense Sécurité (France)</td>
</tr>
<tr>
<td>0K</td>
<td>Assessment of laser-dazzling effects on TV cameras by means of pattern recognition algorithms</td>
<td>A. Durécu, O. Vasseur, P. Bourdon, ONERA (France); B. Eberle, H. Bürsing, FGAN/FOM (Germany); J. Dellinger, N. Duchateau, Institut d’Optique (France)</td>
</tr>
<tr>
<td>0L</td>
<td>SESSION 6 GENERAL COUNTERMEASURES II</td>
<td></td>
</tr>
<tr>
<td>0M</td>
<td>Progress and development in fibre laser technology (Invited Paper)</td>
<td>R. Horley, S. Norman, SPI Lasers UK Ltd. (United Kingdom); M. N. Zervas, SPI Lasers UK Ltd. (United Kingdom)</td>
</tr>
<tr>
<td>0N</td>
<td>Laser-dazzling effects on TV cameras: analysis of dazzling effects and experimental parameters weight assessment</td>
<td>A. Durécu, P. Bourdon, O. Vasseur, ONERA (France)</td>
</tr>
<tr>
<td>0O</td>
<td>Helicopters on the asymmetric battlefield: challenges for photonics</td>
<td>J. Heikell, Helsinki Univ. of Technology (Finland)</td>
</tr>
<tr>
<td>0P</td>
<td>Time-of-flight range profiling using time-correlated single-photon counting</td>
<td>L. Sjöqvist, M. Henriksson, P. Jonsson, O. Steinvall, Swedish Defence Research Agency, FOI (Sweden)</td>
</tr>
<tr>
<td>0Q</td>
<td>Laser dazzling of focal plane array cameras</td>
<td>R. (H.) M. A. Schleijpen, TNO Defence, Security and Safety (Netherlands); A. Dimmeler, B. Eberle, FGAN-FOM (Germany); J. C. van den Heuvel, A. L. Mieremet, H. Bekman, TNO Defence, Security and Safety (Netherlands); B. Mellier, CELAR (France)</td>
</tr>
</tbody>
</table>
Infrared smoke modelling in CounterSim [6738-25]
R. Walmsley, B. Butters, Chemring Countermeasures (United Kingdom)

Author Index
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Session Chairs

1 Laser Systems I
Mark A. Richardson, Cranfield University at the Defence Academy of the United Kingdom (United Kingdom)

2 Laser Systems II
Lars J. Sjöqvist, FOI—Swedish Defence Research Agency (Sweden)
3 Laser Systems III
Ric H. M. A. Schleijpen, TNO, Defence, Security and Safety
   (Netherlands)

4 Beam Steering
Hans D. Tholl, Diehl BGT Defence GmbH & Company KG (Germany)

5 General Countermeasures I
Ove K. Steinvall, FOI—Swedish Defence Research Agency (Sweden)

6 General Countermeasures II
Brian Butters, Chemring Countermeasures (United Kingdom)
Mark A. Richardson, Cranfield University at the Defence Academy of
   the United Kingdom (United Kingdom)
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.

Since the polished shields of antiquity that were used to reflect the sun into the enemy’s eyes, optics and optical systems have been used on the battlefield as a cost-effective countermeasure. 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, that this conference aimed to address.

The conference was packed with 23 quality papers being presented over one and a half days. Interest and attendance were high throughout; the conference room was full from wall to wall for all of the sessions. The importance of the laser in countermeasure technologies was evident by the fact that three of the sessions were focused on laser systems. Additionally, there was a session on beam steering and two sessions on general countermeasures, with topics presented as diverse as smoke modelling to helicopters on the asymmetric battlefield.

The conference kicked off with an excellent keynote address from the Director of the U.S. Department of Defense High-Energy Laser Joint Technology Office, and each session started with an invited paper. All of the papers were well received and created significant interest and subsequent questioning.

At the end, the conference attained such positive and favourable feedback that one delegate stated, “I thought that the countermeasures conference was an outstanding success - the bar has been set high for next year’s event!”

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.

David H. Titterton
Mark A. Richardson