IIW International Conference on “Automation in Welding”

16th/17th September, 2013 | Essen, Germany

linked with

- SCHWEISSEN & SCHNEIDEN 2013
  International Trade Fair Joining Cutting Surfacing
- DVS Congress 2013
- Young Welders’ Competitions
  16th – 21st September, 2013
IIW International Conference on “Automation in Welding”
16th/17th September, 2013 | Essen, Germany

The two-day IIW International Conference will focus on the globally trendsetting topic “Automation in Welding” and will feature invited speakers from the international scientific community and from industry. The current and future status of automation in welding, as well as the present and projected world market situations, will be explored. Applications including the newest and most emerging technologies, methods and processes, will also be presented.

The highlight of the IIW International Conference will be the Portevin lecture:

“Automation in electron beam welding is the key to quality and productivity” presented by Mr. D. von Dobeneck.

DVS is pleased to hold this IIW International Conference during the 66th IIW Annual Assembly of the International Institute of Welding in 2013. Essen will be a perfect place for networking between experts from science and industry and exhibitors from all over the world at SCHWEISSEN & SCHNEIDEN 2013, International Trade Fair Joining Cutting Surfacing.

Come and join us in September 2013!
Welcome to Essen – Willkommen in Essen!
Opening address

W. Kölbl*
Meta Vision Systems Ltd., Oakfield House/United Kingdom

Welcome address

President of IIW (2011 - 2014):
B. Raj*
Coimbatore/India

Sustainability thanks to innovative welding processes for automated applications

C. Fink
EWM HIGHTEC WELDING AUTOMATION GmbH, Oelsnitz/Germany
P. Kuebler*
BOC Ltd., Rocklea/Australia

Implementing new technologies in education and training in welding – A precondition to deal with the future of welding

C. Ahrens
GSI – Gesellschaft für Schweißtechnik International mbH, Duisburg/Germany
S. Keitel*
SLV Halle GmbH, Halle/Germany
Ö. Akcam  
GSI SLV TR, Ankara/Turkey  

Y. Xie  
WTI Harbin, Harbin/P.R. China  

10:30  
Portevin lecture  
Automation in electron beam welding is the key to quality and productivity  
D. von Dobeneck  
pro Beam AG & Co. KGaA, Planegg/Germany  

11:00  
Coffee break  

Session 1  
Monday 16th September, 2013  

Application: Laser and Arc Welding Technology  

Session Chairman:  
U. Reisgen  
RWTH Aachen University, Aachen/Germany  

11:30  
Automated laser manufacturing of hydraulic tanks, switch boxes and control cabinets  
N. Höppe*  
Reis GmbH & Co. KG, Obernburg/Germany  

12:00  
Application of the laser remote welding technology with 3D sensors in ship and civil engineering  
G. Cerwenka*, C. Emmelmann, M. Kirchhoff, J. Wollnack  
Hamburg University of Technology, Hamburg/Germany
12:30  Modern MIG/MAG technologies using alternating current and its applications

T. Dennison
Institute of Modern Welding, Des Moines/United States of America

C. Paul, K.-P. Schmidt
Carl Cloos Schweißtechnik GmbH, Haiger/Germany

M. Wege*
CLOOS Innovations-GmbH, Herborn/Germany

13:00  Automated weld seam inspection and inline seam optimisation

M. Maurer*
VITRONIC GmbH, Wiesbaden/Germany

13:30  Lunch

Session 2  Monday 16th September, 2013

App.: Friction Stir Welding and Resistance Welding

Session Chairman:

P. Mayr
Chemnitz University of Technology, Chemnitz/Germany

14:00  Efficient production of large components using a novel 3D FSW head

G. Figner, T. Weinberger*
Stirzone GmbH, Graz/Austria

P. Freigassner, F. Hampel, S. Hampel
HAGE Sondermaschinenbau GmbH, Obdach/Austria
<table>
<thead>
<tr>
<th>Time</th>
<th>Session Title</th>
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<tbody>
<tr>
<td>14:30</td>
<td>Robotised combined spot welding and gluing process for body components in automotive industry</td>
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<tr>
<td></td>
<td>T. Buschhaus*</td>
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<tr>
<td></td>
<td>Reis GmbH &amp; Co. KG, Obernburg/Germany</td>
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<tr>
<td></td>
<td>C. Clark</td>
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<td>Reis Robotics, Elgin/United States of America</td>
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<td></td>
<td>Reis Robotics, Shanghai/P.R. China</td>
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<td>15:00</td>
<td>Aluminium joining: Friction spot welding and resistance welding – new possibilities for successful joining, experiences and applications</td>
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<td>F. Luidhardt*, A. Oelkers</td>
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<td></td>
<td>Harms &amp; Wende GmbH &amp; Co. KG, Hamburg/Germany</td>
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<tr>
<td>15:30</td>
<td>Coffee break</td>
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<tr>
<td>15:45</td>
<td>Robotic friction stir welding of primary structural elements of a medium-size aircraft</td>
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<tr>
<td></td>
<td>M. Cruz, F. Fernandez, M. Miyazaki, A. Viliotti</td>
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<td>EMBRAER, São José dos Campos/Brazil</td>
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<td>J. F. dos Santos*, A. Roos</td>
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<td></td>
<td>Helmholtz-Zentrum Geesthacht GmbH, Geesthacht/Germany</td>
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<tr>
<td>16:15</td>
<td>Automation in welding – large robotic welding fabrication – high mix – low volume</td>
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<td></td>
<td>D. Akey, C. Boyer, M. Davis, D. Rhoda*</td>
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<td>Wolf Robotics, Fort Collins/United States of America</td>
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<td>16:45</td>
<td>Summary: Applications Session 1/2</td>
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<td></td>
<td>W. Kölbl</td>
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<td></td>
<td>Meta Vision Systems Ltd., Oakfield House/United Kingdom</td>
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Session 3  Tuesday 17th September, 2013

World Markets (1)

Session Chairman:
K. Middeldorf
GSI – Gesellschaft für Schweißtechnik International mbH,
Duisburg/Germany

09:00 Automation – world market, technical highlights and future evolution of the North American robotic welding and cutting industry
M. Oxlade*
ABB Robotics, Auburn Hills/United States of America

09:45 The latest development of welding and automation in P.R. of China
Y. Shang, D. Sun, W. Wang*
Jilin University, Changchun/P.R. China

10:30 Coffee break
Session 4  
Tuesday 17th September, 2013

**Application: Tube Production and Pipeline Welding**

**Session Chairman:**
S. Keitel  
SLV Halle GmbH, Halle/Germany

10:45  **Use of automation & robotics in advanced welding systems in Turkey**  
E. Erdem, H. D. Gençkan, M. Koçak*  
Gedik Welding Inc., Istanbul/Turkey

11:15  **Thermographic weld seam inspection in the production of tubes**  
V. Schauder*  
HKS Prozesstechnik GmbH, Halle/Germany  
B. Wenzel  
Wuppermann Austria GmbH, Judenburg/United States of America  
M. Prassek  
Rafter Equipment Corporation, Strongsville/United States of America

11:45  **Advanced arc processes meet customer needs for automated steel welding**  
B. Jaeschke, G. Wilhelm*  
Lorch Schweißtechnik GmbH, Auenwald/Germany  
B. Stacey, M. Stacey  
Lorch Schweisstechnik Ltd., Cannock/United Kingdom  
M. Weglowski  
RYWAL-RHC, Warsaw/Poland
12:15  Improvements in pipeline welding
S. Rajagopalan*
CRC-Evans Pipeline International Inc.,
(Automatic Welding), Houston/United States of America

12:45  Lunch

Session 5  Tuesday 17th September, 2013

Application: Procedures and Processes

Session Chairman:
K. Dilger
Technische Universität Braunschweig, Braunschweig/Germany

13:15  Robotic SAW welding on narrow gap profiles with the use of laser scanners
A. Gadalov*
ASG Robotics OÜ, Narva/Estonia

13:45  Versatility of welding production systems by fixture free GMA welding and utilisation of cooperating robots
A. Kampker, U. Reisgen*, K. Willms
RWTH Aachen University, Aachen/Germany

14:15  Use of electron beam welding technology for interlinked production lines of the automotive industry
J. Rugh
PTR Precision Technologies, Inc., Enfield/United States of America
14:45 Modern arc welding – a process quantum leap to improve welding automation
S. Egerland, H. Hackl*
Fronius International GmbH, Wels/Austria

15:15 Summary: Applications Session 4/5
K. Dilger
Technische Universität Braunschweig, Braunschweig/Germany
S. Keitel
SLV Halle GmbH, Halle/Germany
W. Köbl
Meta Vision Systems Ltd., Oakfield House/United Kingdom

15:30 Coffee break
Session 6  
Tuesday 17th September, 2013

World Markets (2)

Session Chairman:
U. Dilthey
Aachen/Germany

15:45  
Automation of welding in fabrication sectors – an Indian experience
R. Easwaran, A. Raja*, N. Rajasekaran
Welding Research Institute, Tiruchirappalli/India

16:15  
Research and development of arc welding processes for automation in welding in Japan
Y. Hirata*
Osaka University, Osaka/Japan

17:00  
Summary and final discussion / Closing of the conference
W. Kölbl
Meta Vision Systems Ltd.,
Oakfield House/United Kingdom

K. Middeldorf
GSI – Gesellschaft für Schweißtechnik International mbH,
Duisburg/Germany

* Presenting Author

All attendees of the IIW International Conference are invited to join the GSI Reception (Fair Venue).

Further information regarding the IIW International Conference can be found in the IIW Circular No. 2 www.iiw2013.com.
Conference Chairman:

W. Kölbl, Meta Vision Systems Ltd.,
Oakfield House/United Kingdom

Programme Committee:

U. Dilthey, former IIW President (2008 - 2011) and current Chair of IAB (International Authorization Board), Aachen/Germany

K. Dilger, Technische Universität Braunschweig,
Braunschweig/Germany

U. Füssel, Technical University of Dresden,
Dresden/Germany

S. Keitel, SLV Halle GmbH,
Halle/Germany

P. Mayr, Chemnitz University of Technology,
Chemnitz/Germany

C. Paul, Carl Cloos Schweißtechnik GmbH,
Haiger/Germany

U. Reisgen, RWTH Aachen University,
Aachen/Germany
Corresponding Experts:

G. Buvanashekaran, Welding Research Institute, Bharat Heavy Electricals Ltd., Tiruchirappalli/India

Q. Chen, CWS – Chinese Welding Society, Tsinghua University, Beijing/P.R. China

D. Dehelean, EWF – European Welding Federation, Oeiras/Portugal

Y. Hirata, Osaka University, Osaka/Japan

E. Levert, Lockheed Martin, Dallas/United States of America

M. Mann, EWA – European Welding Association, Paris/France

L. Wang, CWS – Chinese Welding Society, Harbin Welding Institute, Harbin/P.R. China

The corresponding experts are invited to comment on the programme and to prepare statements and questions to stimulate the presentations and discussions in the course of this IIW International Conference.
The Venue

MESSE ESSEN Fair Venue
Congress Center Essen West, Hall Europa
Norbertstraße, 45131 Essen, Germany

Registration Information

Advance Registration

By E-mail or fax
Send your completed registration form to:

DVS – German Welding Society
P.O. Box 10 19 65
40010 Düsseldorf
Germany

Phone: +49 (0) 211 1591 -302/-303
Fax: +49 (0) 211 1591 -300
E-mail: tagungen@dvs-hg.de

Online
You can also register online at www.iiw2013.com. Registration will start on 1st March, 2013. An acknowledgement of registration/invoice will be sent to each attendee.

Payment

All payments must be effected within 48 hours of receipt of the acknowledgement of registration/invoice for the IIW International Conference 2013.

By bank transfer:
DVS – German Welding Society
Commerzbank AG, Düsseldorf
Account no: 212 601 110
Bank sorting code: 300 800 00
IBAN code: DE82 3008 0000 0212 6011 00
Swift code: DRESDEFF300

Any bank charges which may be incurred will be borne by the attendee.
N.B.: All bank transfers must bear the reference “IIW IC 2013” and the name of the attendee.

By credit card:
MasterCard, Visa (accepted)

Cancellations

All cancellations must be requested in writing to DVS. An administrative fee of 15% of the registration fee will be applied to any cancellation made on or before 1st August, 2013. No refunds will be given for cancellations made after 1st August, 2013.

On-Site Registration and Check-in at the Registration Desk

Registered attendees should check-in and collect their registration package at the Registration Desk. The Registration Desk will be located in the Congress Center Essen West, Ground Floor Foyer.

Opening hours for the Registration Desk will be as follows:

<table>
<thead>
<tr>
<th>Date</th>
<th>Opening Hours</th>
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<tbody>
<tr>
<td>15th September, 2013</td>
<td>08:00 – 18:00</td>
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<tr>
<td>16th September, 2013</td>
<td>08:00 – 17:00</td>
</tr>
<tr>
<td>17th September, 2013</td>
<td>08:00 – 17:00</td>
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Registration Fees: (EUR)

<table>
<thead>
<tr>
<th>Attendee</th>
<th>Early Bird by 1st July 2013</th>
<th>Regular 2nd July and later</th>
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<tbody>
<tr>
<td>Attendee</td>
<td>450</td>
<td>500</td>
</tr>
<tr>
<td>Student</td>
<td>250</td>
<td>300</td>
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SCHWEISSEN & SCHNEIDEN 2013
International Trade Fair Joining Cutting Surfacing

All conference badges will include the admission fee for the SCHWEISSEN & SCHNEIDEN 2013, International Trade Fair Joining Cutting Surfacing (16th – 21st September, 2013).

Language

The official language of the IIW International Conference is English.

Parking

Parking will be available within walking distance of the Conference Center Essen.
Catering

Coffee Breaks

Congress Center Essen West (Foyer Hall Europa, 2nd Floor)

Lunch

There is a self-service restaurant (Restaurant Atrium in walking distance) in the Congress Center Essen South (Foyer, Ground Floor).

The venue for the IIW International Conference is:

MESSE ESSEN Fair Venue
Congress Center Essen West, Hall Europa
Norbertstraße, 45131 Essen, Germany

General Contact IIW International Conference

DVS – German Welding Society
Simone Mahlstedt/Brigitte Brommer
General IIW International Conference
Aachener Str. 172, 40223 Düsseldorf, Germany

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