

# JOURNEES NATIONALES DES PROCEDES LASER POUR L'INDUSTRIE

THE INTERNATIONAL CONFERENCE ON INDUSTRIAL LASER PROCESSING IN FRANCE

28, 29 & 30.04.2015 - LA CITE - Centre des Congrès (NANTES - FRANCE)

## CONFERENCE PROGRAM

JNPLI  
2015



The 2015 international conference on industrial laser processing in France (JNPLI) will be held on 28, 29 and 30<sup>th</sup> April at La Cité / Congress Center in Nantes, France. This conference offers an overview of the latest innovations and recently implemented laser applications. The 2015 event is organized by the French **CLUB LASER & PROCEDES** (CLP), in partnership with the **COOPERATION LASER FRANCO-ALLEMANDE** (CLFA) and **MAUPERTUIS INSTITUTE**. The conference program is organized with 6 thematic sessions and provides excellent opportunities for networking. The 2015 edition proposes 34 conferences on 28<sup>th</sup> and 29<sup>th</sup> of April and visits of the TECHNOCAMPUS COMPOSITES and AIRBUS facilities in the morning of 30<sup>th</sup> of April.

JNPLI 2015 is sponsored by **LASER 2000**, **AIR LIQUIDE**, **CLFA**, **IRT Jules Vernes** and the **Région Pays-de-la-Loire**. JNPLI 2015 is also supported by the French Optics Society (SFO), Photoniques magazine, the French committee of International Year of Light, the European Laser Institute (ELI) and the European Photonics Industry Consortium (EPIC).

### Main topics of the conference

The main conference topics deal with **heavy section welding**, **dissimilar materials assembly**, **composite processing**, **laser applications for lightweight design** and **surface processing**. The conference program is detailed in pages 4 & 5.

There will be invited talks given by renowned experts as:

- Stefan Kaierle from **LASER ZENTRUM HANNOVER** on laser-based XXL-production
- Rémy Fabbro from **PIMM (Paris)** on physics mechanism in heavy section welding under low ambient pressure
- Rudolf Weber from **IFSW (Stuttgart)** on high-quality laser processing of CFRP

Furthermore, among others presentations will be given by:

- Fabrice Scandella from **INSTITUT DE SOUDURE** on state of the art in heavy section laser welding
- David Lemaître from **INSTITUT MAUPERTUIS** on laser hybrid welding for shipbuilding
- Wolfgang Knapp from **CLFA** on laser surface treatments for dissimilar materials assembly
- Frank Schneider from **FRAUNHOFER ILT** on comparison of laser sources for processing of CFRP
- Nerea Otero Ramudo from **AIMEN** additive laser-based techniques for surface structuring of 3D-micro replication tools

Other topics such as **laser additive manufacturing**, **laser polishing**, **laser shot peening**, **laser precision micro fabrication**, **gas-assisted laser material processing**, and recent developments in **fiber or diode laser technologies** for precision cutting, welding or cladding will be presented as well.

### Networking evening reception

The evening of April 28<sup>th</sup> will promote networking and exchanges between attendees. You will visit and enjoy the incredible **Galerie des Machines de l'île**, and discover gourmet way of cooking inspired by the French tradition on the floating platform of the **Nantilus restaurant on the Loire River**.

### For more details about the JNPLI event:

Contact: [contact@laserenligne.fr](mailto:contact@laserenligne.fr)

Program et registration form : <http://www.laserenligne.fr/>



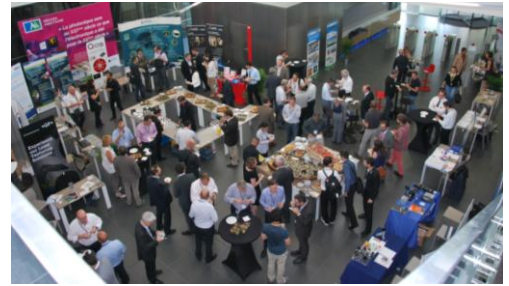
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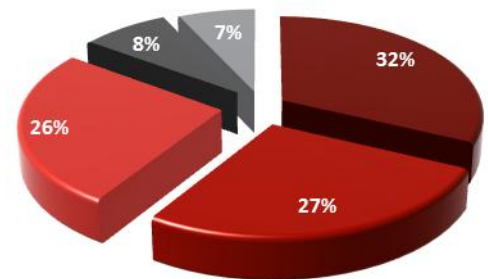
## Why attend JNPLI 2015?

- Unique opportunity in France to meet laser experts or technology providers, and to be aware of recent developments in laser material processing
- More than 100 attendees
- More than 30 conferences on 28<sup>th</sup> and 29<sup>th</sup> of April
- Exhibition area for table-top booth on 28<sup>th</sup> and 29<sup>th</sup> of April
- Visit of Technocampus Composites and industrial facilities on 30<sup>th</sup> April
- Networking evening reception on 28<sup>th</sup> of April
- Simultaneous translation French <-> English



## Who attends JNPLI ?

- **End-users**
- **Technology providers**  
Laser manufacturers, laser systems, components
- **Technological centres**
- **Public research labs**
- **Others: academics, clusters, associations, magazines**



JNPLI 2014 in Bordeaux

## The organizers:

■ **Coopération Laser Franco-Allemande (CLFA)**, The Coopération Laser Franco-Allemande (CLFA) represents in France the Fraunhofer Institut Lasertechnik, Europe's leading institution in the development of laser sources and applications. Since 2014 CLFA has moved to Nantes to cooperate with the IRT Jules Verne, the national research center dedicated to develop new manufacturing technologies. On site CLFA represents the Fraunhofer Lightweight Design Alliance gathering the expertise of 15 Fraunhofer Institutes in Germany. Together with the French partners innovative solutions in manufacturing are developed for local and European industrial partners.

■ **Institut Maupertuis** is a competence center of 10 people located in Bruz near Rennes (35). Equipped with testing facilities, Institut aims at accompanying industrial firms to evaluate, develop and implement new production technologies with a strong expertise in material treatment technologies (laser applications, FSW), robotics and RFID.

■ **Club Laser et Procédés (CLP)** The French association Club Laser et Procédés (CLP) regroups more than a hundred members and gathers French key players in laser material processing, from academia and industry, as well as technology providers and end-users. The CLP is in charge of the information dissemination related to laser technologies and industrial laser material processing, as well as the coordination of the French laser network. The CLP is an independent organization and offers a wide range of services to its members.



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## Industrial sponsors:

■ **LASER 2000** is a company that distributes innovative components and products in the field of laser and optics technologies. Laser 2000 and JSDU have just signed an agreement concerning the commercial release of five multi kilowatt new turnkey fiber laser and direct-diode laser systems for use by machine tool manufacturers for macro-materials processing applications.



■ **L'AIR LIQUIDE FRANCE INDUSTRIE** is the french subsidiary of the Air Liquid Group, production and commercialization of all industrial gases in France. Leader for all laser cutting and laser welding applications, LASAL a range of optimized, gases, equipments. The company proposes technical support and process optimization for cutting and welding processes to its customers. The company has also a R&D Centre for welding and cutting processes.



## Practical information:

You can find details on the event location, travel and accomodations nearby La Cité / Centre des Congrès de Nantes (*congress center*).

[Clic here to download practical information](#)

Further details on the event location, travel and hotel information here:

<http://www.lacite-nantes.com/uk/attend-an-event/coming-to-la-cite.html>

[http://www.lacite-nantes.com/v3\\_dossiers/dossier\\_7/Hotels\\_Nantes\\_FR\\_bis.pdf](http://www.lacite-nantes.com/v3_dossiers/dossier_7/Hotels_Nantes_FR_bis.pdf)



## Registration fees:

	Cost	Early registration*	
■ <b>Speaker</b>	Member	200 € HT	-
	Non member	300 € HT	-
■ <b>Attendee</b>	Member	425 € HT	350 € HT
	Non member	575 € HT	500 € HT
■ <b>Additional attendee</b>		375 € HT	300 € HT
■ <b>Table-top</b>	Member	425 € HT	350 € HT
	Non member	575 € HT	500 € HT
■ <b>Networking reception</b>		95 € HT	95 € HT
■ <b>Advertising insert</b>	from	150 € HT	(contact us for more details)
■ <b>Sponsorship</b>		1500 € HT	(contact us for more details)

\* Early registration until 31<sup>st</sup> of March 2015

[Click here to download the registration form](#)

## Supports :







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## Conference program for Tuesday 28<sup>th</sup> April 2015

<b>MARDI 28 AVRIL 2015 / Tuesday 28<sup>th</sup> April 2015</b>		
<b>ACCUEIL / WELCOMING COFFEE</b>		
08h30	Accueil des participants	Accueil café, visite des stands
<b>OUVERTURE / OPENING SESSION</b>		
09h00	CLFA INSTITUT MAUPERTUIS CLUB LASER ET PROCÉDÉS	Wolfgang Knapp, Directeur Hubert Boury, Directeur John Lopez, Président
<b>SESSION ASSEMBLAGE FORTE EPAISSEUR / HEAVY SECTION WELDING</b>		
09h20	LZH Stefan Kaierle (invited) 	Les applications du soudage de fortes épaisseurs en production <i>Laser based-XXL production</i>
09h50	INSTITUT DE SOUDURE Fabrice Scandella	Etat de l'art du soudage laser de pièces de forte épaisseur <i>State of the art in heavy section laser welding</i>
10h10	INSTITUT MAUPERTUIS David Lemaître	Soudage laser hybride appliquée à la construction navale <i>Hybrid laser welding for ship building</i>
10h30	Pause café & espace d'exposition / Networking coffee	
11h00	Laboratoire PIMM Rémy Fabbro (invited)	Mécanismes physiques lors du soudage laser de forte pénétration sous pression ambiante réduite <i>Physics mechanism in heavy section welding under low ambient pressure</i>
11h30	IRT Jules Verne Fabrice Chaussé	Soudage hybride laser-MAG pleine pénétration sur acier laminé thermomécaniquement <i>Hybrid laser welding on rolled steel</i>
11h50	Fraunhofer ILT M. Dahmen 	Soudage laser d'acier à forte tenue mécanique <i>Laser beam welding of ultra-high strength steels for eco-efficient applications</i>
12h10	AIR LIQUIDE	Utilisation de la technologie de refroidissement cryogénique au CO2 pour améliorer la production en soudage laser <i>Improved production induced by CO2 cryogenic cooling for laser welding</i>
12h30	Déjeuner autour d'un buffet gourmand / Buffet	
<b>SESSION ASSEMBLAGE HETEROGENE / DISSIMILAR ASSEMBLY</b>		
14h00	CLFA / UTMB Wolfgang Knapp / Sophie Costil	Traitement de surface laser pour assemblage des matériaux composites <i>Surface treatment for composites materials assembly</i>
14h30	LASER CHEVAL Claire Chenot	Composites et métaux : assemblage multi-matériaux par laser <i>Composites material-metals dissimilar assembly</i>
14h50	IREPA LASER Pierre Alain Vetter	Assemblage laser matériaux polymères sans additifs <i>Laser assembly of additive-free polymer materials</i>
15h10		
15h30	Pause café & espace d'exposition / Networking coffee	
<b>SESSION FABRICATION ADDITIVE &amp; DEPOT / ADDITIVE MANUFACTURING &amp; CLADDING</b>		
16h00	AIMEN / AMADA  Nerea Otero Ramudo	Fabrication additive laser pour la texturation de moules métalliques 3D <i>Additive laser-based techniques for surface structuring of 3D-micro replication tools</i>
16h20	IREPA LASER Didier Boisselier	Les opportunités technico économiques de CLAD, une solution innovante, industrielle et agile de fabrication sur mesure <i>Technological survey and market opportunity for CLAD- laser additive manufacturing</i>
16h40	COHERENT  Heiko Riedelsberger	Procédé de dépôt à fort rendement par laser à diodes jusqu'à 10kW <i>High deposition rate and large area cladding with direct diode lasers up to 10 kW</i>
17h00	UNIVERSITE DE NANTES Bruno Courant	Analyse géométrique de dépôts monocouches et multicouches d'acier 316L par projection laser <i>Geometrical analysis of steel mono- and multi-layer depositions produced by laser projection</i>
17h20	ALPHANOV Guillaume Lafoy	Traitement d'alliages métalliques par laser shot peening <i>Metallic alloy surface treatment by laser shot peening</i>
<b>SOIREE D'ECHANGES ET DE DECOUVERTE REGIONALE / NETWORKING EVENING RECEPTION</b>		
19h00	Visite de la Galerie des Machines de l'Île & apéritif / Visit of the Machines de l'Île Gallery & appetizer	
21h00	Dîner sur la plateforme flottante du restaurant Nantilus / Diner on the floating platform of the Nantilus restaurant	



Conférence présentée en anglais avec traduction simultanée / Simultaneous translation French <-> English available

CLUB LASER ET PROCÉDES

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## Conference program for Wednesday 29<sup>th</sup> April 2015

MERCREDI 29 AVRIL 2015 / Wednesday 29 <sup>th</sup> April 2015		
08h30	<b>Accueil des participants</b>	Accueil café, visite des stands
<b>SESSION COMPOSITES / COMPOSITES MATERIAL PROCESSING</b>		
08h30	<b>IFSW</b> Rudolf Weber ( <i>invited</i> ) 	Usinage de matériaux composites par laser picoseconde de forte puissance moyenne <i>Efficient processing of CFRP with high-average power ps-laser</i>
09h00	<b>Fraunhofer ILT</b> Franck Schneider 	Comparaison de différentes sources laser pour l'usinage de matériaux composites <i>Comparison of lasers sources for processing of CFRP</i>
09h20	<b>INSTITUT SAINT-LOUIS (ISL)</b> Vadim Allheily	Etude du comportement thermomécanique de matériaux composites issus de structures aéronautiques soumis à une irradiation laser <i>Mechanical characterization of composites materials after laser irradiation</i>
09h40	<b>LZH</b> Richard Stähr 	Usinage laser de matériaux composites <i>Laser processing of high-performance composites</i>
10h00	<b>CORIOLIS</b>	Titre non disponible à ce jour
10h20	Pause café & espace d'exposition / Networking coffee	
10h50	<b>Fraunhofer IWS / AIRBUS G.I.</b> Jan Hauptmann W. von Bestenbostel 	Découpe de matériaux composites par laser de forte puissance moyenne <i>Laser cutting of CRFP with high power lasers</i>
11h10	<b>TRUMPF</b> Marc Kirchhof 	Usinage laser de matériaux composites à matrice organique <i>Laser processing of fiber reinforced plastics</i>
<b>SESSION LASER A FIBRE &amp; LASER A DIODE / FIBER &amp; DIODE LASERS</b>		
11h30	<b>ROFIN BAASEL France</b> Laurent Menuat	Utilisation des lasers à fibre sur les lignes de production <i>Fiber lasers applications on production line</i>
11h50	<b>TERA DIODE</b> Bryce Samson 	Applications des diodes laser à forte brillance <i>High intensity diode laser applications</i>
12h10	<b>ILS / LASERLINE</b> Manuel Mendes	Perspectives d'applications pour les lasers à diode de puissance supérieures à 20 kW <i>Diode Lasers with more than 20 kW Power. Perspectives of applications</i>
12h30	Déjeuner autour d'un buffet gourmand / Buffet	
<b>SESSION POLISSAGE LASER &amp; PROCÉDES AVEC GAS D'ASSISTANCE / LASER POLISHING &amp; GAS-ASSISTED PROCESSING</b>		
14h00	<b>INSTITUT MAUPERTUIS</b> Laurent Dubourg	Influence des paramètres de polissage laser sur la topographie de surface <i>Laser polishing : Influence of laser parameters of surface topography</i>
14h20	<b>ALPHANOV</b> Christophe Arnaud	Polissage laser sur bases acier <i>Laser polishing on steel alloy</i>
14h40	<b>LINDE</b> Stéphanie Trousselle	Gaz pour une installation laser : les bonnes pratiques <i>Gas for laser processing machine : a guide of good practices</i>
15h00	Pause café & espace d'exposition / Networking coffee	
<b>SESSION MICRO / MICRO FABRICATION</b>		
15h20	<b>AMPLITUDE SYSTEMES</b> Julie Guer	Les lasers ultracourts dans le domaine médical <i>Ultrashort pulse lasers for medical applications</i>
15h40	<b>OXFORD LASERS</b> Aurélié Delannoy	Dernières avancées dans le micro-usinage laser de haute précision pour la recherche et l'industrie <i>Recent developments in high precision laser micro machining</i>
16h00	<b>LASEA France</b> Pierre Laygue	Découpe micro : comparatif scanner et buse à gaz <i>Micro cutting : comparison between galvo and gas-assisted processing</i>
<b>CLÔTURE DES JNPLI 2015 / CLOSING SESSION</b>		
16h30	Clôture des JNPLI 2014	



Conférence présentée en anglais avec traduction simultanée / *Simultaneous translation French <-> English available*





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## Visit of TECHNOCAMPUS COMPOSITES and AIRBUS FACILITIES in Nantes

<b>JEUDI 30 AVRIL 2015 / Thursday 30<sup>th</sup> April 2015</b>	
09h00	<b>Accueil / Welcome</b>
09h30	<b>Visite du site TECHNOCAMPUS COMPOSITES et du site AIRBUS à Nantes (inscription obligatoire)</b> Visits of the TECHNOCAMPUS COMPOSITES and AIRBUS facilities in Nantes (registration mandatory)
11h30	<b>Fin de la visite / End</b>

