



# JECamericas

Conferences, Table-Tops and Networking  
**BOSTON, OCTOBER 28, 29, 2014**



Event program

## Design & Engineering

**JEC**  
GROUP

The N°1 Composites Network in the World



> In Partnership with







## Focus On:

- **Conceptual Design on October 28th**
- **Industrial Sectors on October 29th**



Composites design and engineering represent a tough challenge for industries and are a primordial topic to delve into.

From material selection to processing methods and structural studies, our conferences will provide in depth presentations as well as specific cases for major industries such as the aeronautics and automotive.

**The Simulation theme** is the focus throughout the whole event, thanks to the Conferences, the Simulation Composite Circle and the Simulation Innovation Awards that will take place.

This event is a great opportunity to take part in **networking meetings**.

WHAT YOU WILL **LEARN**

## Design & Engineering

with a specific highlight on **Automotive & Aerospace**



Key topics:

virtual design

industrial design | prototyping

virtual engineering and testing

modeling and simulation | metrology

## SUMMARY

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# Key Focus



## Focus On Day 1

### **Changing perspectives in composite design**

Composite design is one of the main preemptive steps when it comes to the production of parts, and is an important tool for time gain, as well as behavioral predictions. It allows for noticeable opportunities to assess producibility of new structures. This quick and accessible optimization of structures is very useful in many major industries such as the aeronautics and automotive ones.



## Focus On Day 1

### **From behavior simulation to product development**

Numerical simulation of the mechanical behavior of composites structures has quickly become a priority in order to optimize the development of specific parts. Performance assessments and therefore product optimization are only two of the many goals of focusing on behavioral simulation. Furthermore, modeling software are becoming increasingly efficient, allowing to improve the accuracy and reliability of virtual prototyping.



## Focus On Day 2

### **Outlook for carbon composites usage in Aerospace**

In the aircraft industry, composite materials are being more and more widely used. Indeed, they have given the possibility to overcome obstacles met when using the materials individually. New generations of aircrafts and an increase in production numbers make the demand for composite materials in this industry very consequent. Carbon fiber presents the dual challenge of often being the best option but needing a decrease in price to be fully profitable.



## Focus On Day 2

### **Outlook for carbon composites usage in Automotive**

The use of composite materials in the automotive industry increases as new technologies and developments occur, but it also faces many challenges. Light-weighting for example, is a major factor in composite materials' success in this industry because it enables less fuel consumption. The mass production of CFRP is a consequential challenge for the automotive industry.







Changing perspectives in composites design  
**10.00 am / 12.30 pm**

## KEY FOCUS

- ⊕ Time gain in composite design
- ⊕ Behavior checking and predictions

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## CHAIRMEN



**Byron Pipes (USA)**  
*Distinguished Professor of Engineering*  
**Purdue University**



**Roger Assaker (Luxembourg)**  
*CEO*  
**E-Xstream engineering**



**Rani Richardson (USA)**  
*CATIA Composites Product Specialist*  
**Dassault Systemes**

## SPEAKERS

### The Composites Design and Manufacturing HUB



**Johnathan Goodsell (USA)**  
*Visiting Assistant Professor*  
**Purdue University**

- ⊕ Opportunities for simulation tools in support of the vision of "certification by analysis" for composite structures
- ⊕ Best practices of composites simulation tools

### Rapid Optimization of Composite Structure that Includes Detailed Analysis and Improved Producibility is Now Possible with Hypersizer® Software



**Craig Collier (USA)**  
*President*  
**Collier Research Corporation**

### Best Practices for Composites Design



**Shawn Ehrstein (USA)**  
*Director CAD/CAM*  
**NIAR University**



**Nathan Shipley (USA)**  
*Assistant Director, CAD/CAM*  
**Wichita University**

### Design for manufacture for airframe structure optimization



**Olivier Munaux (France)**  
*Project Manager*  
**Coriolis Composites**

- ⊕ What are the principal drivers leading to optimal design?
- ⊕ Stress, design and manufacture objectives

### Use of simulation to assess producibility of composites structures during conceptual design



**Goran Fernlund (Canada)**  
*Director of Engineering*  
**Convergent Manufacturing Technologies Inc**



⌚ Networking Coffee Break



**12.30** Networking Lunch





From behaviour simulation to product development  
**2.00 pm / 5.00 pm**

## KEY FOCUS

- ⊕ Performance assessment
- ⊕ Product optimization via predictive simulation
- ⊕ Analytic decision making

CHAIRMAN



**Ronald Krueger**  
*National Institute of Aerospace*  
Senior Research Scientist

## SPEAKERS

> In Partnership with  
**Xstream**  
ENGINEERING

### 1 Application of Digimat Micromechanical Modeling to Short Fiber Filled Polymer Composites



**Jorge Arinez (USA)**  
*Group Manager in the Manufacturing Systems Research Lab*  
**General Motors Global Research & Development**

- ⊕ Micromechanics modeling software
- ⊕ Improve the accuracy of virtual prototyping simulations



### Networking Coffee Break

### 3 Multi-Scale Modeling of Composites – A Paradigm shift in the optimal engineering of composites materials & structures



**Roger Assaker (Luxembourg)**  
*CEO*  
**E-Xstream engineering**

- ⊕ Nonlinear multi-scale modelling
- ⊕ Innovation and optimal design

### 2 Accelerated Insertion of Advanced Materials and Certification for Aircraft Structures and Repair



**Waruna Seneviratne (USA)**  
*Technical Director/Scientist*  
**NIAR / Wichita University**

- ⊕ Efficient and reliable allowable/screening programs
- ⊕ Optimizing structural performance

### 4 Design of Structural Joints using Fast-curing adhesives



**Sana Elyas (USA)**  
*Engineering Manager*  
**Carbures**





# jecawards

 **5.00pm**  Awards Ceremony

## 4 Awards categories:

- Enabling Technologies
- Innovative Application
- Academic Achievement
- Student Award

### An International Recognition from the Global Composite Community

There are multiple benefits for the innovations that are chosen.



# jec composites circle

**5.30pm**  Simulation Composites Circle

ONLY BY INVITATION

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Meet and discuss with the leading international experts from the Simulation sector. During this exclusive networking event, prestigious keynote speakers will present:

Introduction to the event



**Roger Assaker (Luxembourg)**  
CEO  
E-Xstream engineering



Breaking the Development Cost Curve by Using Analysis



**S. Eric Cregger**  
Senior Technical Fellow  
Structural Analysis  
Boeing



Simulation of Composites Materials & Structures (presenting the Composites Survey organised by NAFEMS)



**Ronald Krueger**  
National Institute of Aerospace  
Chair of NAFEMS Composites Working Group



The Latest Academic Advances in Composites Simulation



**Byron Pipes (USA)**  
Distinguished Professor  
of Engineering  
Purdue University





**KEY FOCUS**

- ⊕ Reducing fuel consumption by light-weighting
- ⊕ Innovative wing designs
- ⊕ Next generation jet-engines



Outlook for carbon composites usage  
in Aerospace

**9.00 am / 11.30 am**

**CHAIRMAN**



**John O'Connor (USA)**  
*Director of Product & Market Strategy*  
**Siemens PLM Software**

**SPEAKERS**

**Composites manufacturing simulation chain for high performances components**



**Mathilde Chabin (France)**  
*Composites Business Development & Product Marketing Manager*  
**ESI Group**

- ⊕ Prevent defects upfront in the development process
- ⊕ Optimize manufacturing process (time and cost)
- ⊕ Improve product quality

**Composite Aerostructure Development in the High Performance Enterprise**



**John O'Connor (USA)**  
*Director of Product & Market Strategy*  
**Siemens PLM Software**

- ⊕ Reducing cost and weight of composite aerostructures
- ⊕ Composite design and manufacturing solutions

**New generation of Aircraft Composite fuselage – Development of 3D High thermoplastic molding compound structural part to challenges metallic application**



**Vincent Labatut (France)**  
*R&D - Engineer*  
**Aerolia**



**James Myers (UK)**  
*R&D - Head of Department*  
**Greene Tweed & Co**

- ⊕ Composite 3D Structural Parts
- ⊕ XYCOMP® DLF molding compound technology overview
- ⊕ AEROLIA & GREENE, TWEED R&T project

**Composites Testing 101: Requirements, Options, and Sources Session**



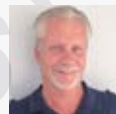
**Andrew DeWolfe**  
*Account Director*  
**Admet**

- ⊕ Outlining the basics of composites materials testing
- ⊕ Identifying the most critical required test specs
- ⊕ In-house versus external composites testing



**Uday Vaidya (USA)**  
*Professor and Associate chair*  
**University of Alabama at Birmingham**

**Advanced Tooling for Carbon Composites in Aerospace**



**Bob Vale (USA)**  
*Composites Manufacturing Technical Engineer*  
**AIP Aerospace**

- ⊕ Design Requirements and Customer Inputs
- ⊕ Advanced Tooling Selection Criteria
- ⊕ Composite Tool Design and Fabrication Methodologies
- ⊕ Invar and Other Metal Tooling Methodologies



**Networking Coffee Break**



**11.30am** **Networking Lunch**



**KEY FOCUS**

- + Nano-composites
- + Lightweight designs
- + What are the new opportunities of the composite market?

> Partnership



Outlook for carbon composites usage in Automotive

**1.00 pm / 4.30 pm**



**Peter Middendorf (USA)**  
*Professor*  
**University Stuttgart**



**Klaus Drechsler (Germany)**  
*Professor*  
**TU Munich (LCC)**

**SPEAKERS**

**ARENA2036 - Lightweight design for future automotive production**



**Peter Middendorf (Germany)**  
*Professor*  
**University Stuttgart**

- + Prevent defects upfront in the development process
- + Optimize manufacturing process (time and cost)
- + Improve product quality

**Tufted composites and nanocomposites for auto applications**



**Antonio Miravete (USA)**  
*Research Scientist*  
**MIT**

- + Reducing cost and weight of composite aerostructures
- + Composite design and manufacturing solutions

**Tailored Fiber Placement LFT-D – Endless Fiber Reinforced Hybrid Composites – Flexible and economical process technology for structural applications**



**Louis Kaptur (Canada)**  
*Process Engineer Researcher*  
**Dieffenbacher North Americas**

- + Flexible and economical process technology for structural applications
- + Material and Process combination for future automotive applications
- + Integrated process chains and automation technology
- + Application examples

**Development of an Eco-friendly final consolidation step using Thermoplastic Fiber Placement**



**Dr. Elisabeth Ladstätter (Germany)**  
*Deputy Head of the Chair for Carbon*  
**TU Munich (LCC)**



**Klaus Drechsler (Germany)**  
*Professor*  
**TU Munich (LCC)**

Efficient and reliable allowable/screening programs  
Optimizing structural performance

**Advanced composite materials for the Automotive industry: Manufacturing challenges & opportunities**



**Jorge Arinez (USA)**  
*Group Manager in the Manufacturing Systems Research Lab*  
**GM Global Research & Development**

- + Mass production of CFRP as a challenge for the automotive industry
- + Future process and material concepts
- + Design approaches for advanced automotive composite applications



**Networking Coffee Break**





# JEC academic zone

This village gathers universities that have an aptitude for: research, training, innovation in the fields of composites materials.

Our long-lasting partnerships with Universities allow them to present their research during JEC conferences, participate with a booth and present their Technical Posters on JEC events. JEC Academy gives the opportunity to academics to take part in JEC events in order to foster their knowledge, meet potential employers and therefore develop their network.



## Some of the participating universities:

- IYRS SCHOOL OF TECHNOLOGY & TRADES
- WICHITA STATE UNIVERSITY
- UNIVERSITY OF MASSACHUSETTS- DARTMOUTH
- UNIVERSITY OF ALABAMA AT BIRMINGHAM
- PURDUE UNIVERSITY

# JEC technical posters



The Technical Posters Sessions highlights the virtuous circle between academic research and industrial fields.

Gathering the world's largest industrial players and high-tech research centers in a dedicated area, these sessions are the opportunity to spot new talent as well as advanced composite materials applications.

For more information, please contact **Antoine Morel**

 [\(morel@jeccomposites.com\)](mailto:morel@jeccomposites.com)



# JEC live demo

## Virtual Reality by ESI Group

ESI Group will demonstrate with IC.IDO the advantages of Virtual Reality for efficient decision making within Virtual Product Engineering. Indeed, you will have a chance to experience live how major companies from the manufacturing industry (aerospace, automotive, heavy industry, energy) use IC.IDO to perform collaborative and immersive design reviews, to evaluate and optimize assembly and disassembly sequences, to verify resources and tooling for both manufacture and maintenance, to support documentation and workflow animation/training.



To organize a live demo (groups: up to 10 people) of IC.IDO during JEC Americas 2014 in Boston, please get in touch with [mathilde.chabin@esi-group.com](mailto:mathilde.chabin@esi-group.com) Our experts look forward to meeting you.

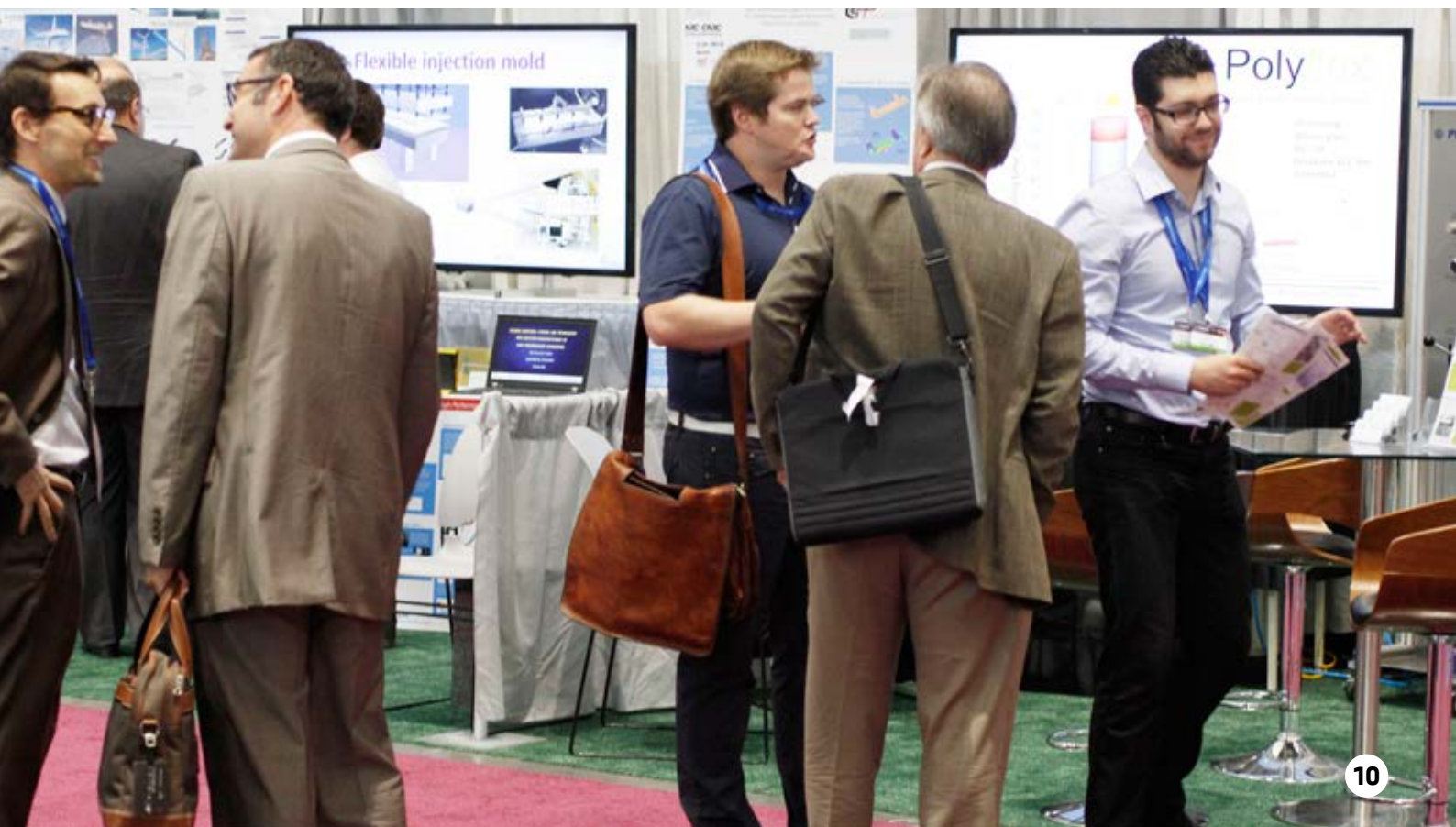
## Exhibitors and Speakers have already confirmed their participation

ADMET  
AEROLIA  
AIP  
BOEING  
CHOMARAT  
CONVERGENT  
DASSAULT SYSTEMES

DIEFFENBACHER  
ESI-GROUP  
E-XSTREAM ENGINEERING  
GENERAL MOTORS  
GREENE TWEED & CO  
HENKEL  
LAMBIENT

MIT  
NAFEMS  
SIEMENS PLM  
SYNASIA  
TUM  
UNIVERSITY OF STUTTGART  
AND MORE...

For more information, please contact **Thomas LEPRETRE**  ([lepretre@jeccomposites.com](mailto:lepretre@jeccomposites.com))





# Pricing and Registration

Delegates Register today to benefit from our special online offer:	2 Days Pass	1-Day Pass Tuesday 28th October	1-Day Pass Wednesday 29th October
Online Offer	\$680	\$350	\$350
Onsite Rate	\$748		
All sessions (Tuesday & Wednesday)	X		
Tuesday's sessions		X	
Wednesday's sessions			X
Academic Zone	X	X	X
Table-Tops	X	X	X
Live Demo	X	X	X
Technical Posters	X	X	X
Award Ceremony	X	X	
Lunch & Coffee breaks	X	X	X
Proceedings	X		

*Please note that there will be a single rate onsite: \$748 for 2 days conferences*  
*Special prices for Academics: starting from \$175 for a 1 day pass*  
**Free for Academic Zone' participants**

Register:

**[www.jecamericas-boston-badges.com](http://www.jecamericas-boston-badges.com)**



## Table Tops

Table-Top is a cost effective way to brand your company to a targeted audience of composite professionals.

### DISCOVERY OFFER

- ☒ Package offer
- ☒ Attractive price

**Package Price Participation : € 1,455**

US\$ 2.000 (Estimated rate on March 6th 2014)

(incl. Conferences Pack - 1 Communication Package - 1 Table Top)

### → Table Top Description

- 6' x 8' booth with pipe and drape
- Standard identification one-line sign (7" x 44")
- Furniture including a draped table, 2 chairs and 1 wastebasket



### → The JEC package of Services

Benefits of an exceptional area in the hall with many advantages:

- Pre-event promotion: in all JEC media
- Conferences Pack, giving access to all the conferences
- On site promotion: your company will be listed in the Program distributed to each delegate and on the event signage



## DISCOVERY OFFER

- ☒ Package offer
- ☒ Attractive price

## → Registration Form



With this completed document sent to :

**M. Thomas LEPRETRE - Account Manager**

**Fax: + 33 (0)1 58 36 15 18**

**Email : lepretre@jeccomposites.com**

**Address : JEC Group, 25 bd de l'Amiral Bruix - 75116 Paris - France**

# JECamericas

Conferences, Table-Tops and Networking

**BOSTON OCTOBER 28,29,2014**

### Your company

Company

Name

First Name

Position

Address

State

Zip code

Town

Country

Phone number\*

Fax number\*

E-mail

Website

Legal Shape

\* please indicate country code. example : +33 (0)1 58 36 15 01

### ☐ Down payment

- ▶ 100% of the total amount deposit is required upon the registration. Your registration will not be taken into account without the 100% down payment and signed application form.

### ▶ Total amount: € 1.455

US\$ 2,000 (Estimated rate on March 6th 2014)

### ☐ Payment by credit card to JEC:

☐ Mastercard



☐ Visa



Holder's name

Card number

Expiry date

/

3 last digits

6,25% Local sales tax for all exhibitors will be added on the final invoice according to the article 259-1° of the Tax Code. 19,6% VAT will be added on the final invoice for French exhibitors only.

The signature indicates that the rules and regulations have been read, and binds the company to all JEC rules, regulations and terms. A booth will not be reserved or assigned to any company without a signed application form.

### ☐ Payment by bank transfer to JEC:

**Beneficiary Name:** JOURNALS AND EXHIBITIONS JEC

**Beneficiary Address:** 25 Boulevard de l'Amiral Bruix  
75116 Paris – FRANCE

**Bank Name:** BANQUE PALATINE

**Bank Address:** SUCCURSALE MATIGNON

12 Avenue Matignon

75008 Paris – FRANCE

**Bank Account:** 40978 / 00022 / 0357315V001 / 72

**BIC:** BSPFFRPPXXX

**IBAN:** FR63 / 4097 / 8000 / 2203 / 5731 / 5V00 / 172

**Place:**

**Date:**

**Signature and company stamp:**