

# Wind Turbine Blade Manufacture

## 2018

*Global conference on MW wind blade design, composites  
manufacturing, performance and maintenance*

**10-12 December 2018**  
**Maritim Hotel, Düsseldorf, Germany**



### SPECIAL OFFER

Save **€200** if you  
register before  
28th September  
2018

Images courtesy of: **LM WIND POWER**  
a GE Renewable Energy business

Headline Sponsor

# Gurit

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# Wind Turbine Blade Manufacture

2018

The 9th annual international Wind Turbine Blade Manufacture will take place from the 10-12 December 2018 at the Maritim Hotel in Düsseldorf, Germany.

Cost of energy continues to decrease thanks to significant progress on blade reliability and manufacturing cost reduction. Novel materials continue to be developed thanks to continuous innovation intended to reduce maintenance and down time. Special attention is given to blade protection but automation is also being assessed by blade manufacturers as a way of increasing blade quality while reducing production cycles.

The conference brings together wind energy farmers, wind turbine producers, blade manufacturers, design engineers, composites manufacturing experts, researchers, developers, service engineers, materials and equipment suppliers. The programme examines the challenges to be overcome in manufacturing and performance of wind blade composites for large wind turbines to continue decreasing cost of energy. Blade design, material selection and production technology are critical factors as longer blades continue to come on to the market.

*Very good event with excellent networking opportunities*

Team Leader Blade Service Technology  
NORDEX ENERGY GmbH

*Outstanding quality of expertise present. Great networking opportunities. Great learning experience*

Scientific Officer,  
EUROPEAN COMMISSION

Headline Sponsor

# Gurit

Gurit is specialized on the development and manufacture of advanced composite materials, related technologies and select finished parts. The comprehensive product range comprises fibre reinforced preregs, structural core materials, gel coats, adhesives, and resins. The Gurit Tooling division is the largest independent manufacturer of wind turbine blade moulds worldwide. More than 500 dedicated employees support customers with design, engineering, manufacture, and service for quality moulds delivered to client specification in short lead times. Mould automation systems and blade transportation solutions complement the comprehensive offering and help customers realize efficient and competitive production of wind blades. For more information, please visit [www.gurit.com](http://www.gurit.com)

## Five good reasons to attend:

- **Hear top experts talk about the latest developments in the wind blades production**
- **Gain technical knowledge - stay current**
- **Network with key professionals**
- **Move your business forward and meet new clients**
- **Source competitive intelligence**

## Sponsors:

Conference bag and prize draw sponsored by:



Conference signage sponsored by:



Conference lanyard sponsored by:



Images courtesy of:



## Ways to get involved:

### Exhibition space

Make it easy for the delegates to find you at this busy event with your own exhibition space. Bring your own display stand, banners or use the space to showcase samples of your products and ensure that you make an impact. The exhibition will run throughout the conference in the exhibition room next to the main meeting room.

Space is limited so to avoid disappointment please register for this service as soon as possible.

### Sponsors

A variety of sponsorship opportunities are available at this conference to help to promote your company's products and services to this highly targeted international audience. Contact the Conference Hotline for further information.

## CONFERENCE HOTLINE

Contact: Rocio Martinez, Conference Team Manager  
Tel: +44 (0) 117 314 8111  
Fax: +44 (0) 117 311 1534  
Email: [rocio.martinez@ami.international](mailto:rocio.martinez@ami.international)

**SAVE €200**

Register before  
28th September  
2018

## Monday 10th December 2018

17.00-19.30 Registration  
18.00-19.30 Networking Cocktail Reception sponsored by:



## Tuesday 11th December 2018

08.00 Registration and welcome coffee sponsored by:  
09.00 Opening announcements



## MARKET OVERVIEW

CHAIR: Ms. Cristina de Santos, Unit Manager - Energy & Infrastructure,  
AMI CONSULTING, United Kingdom

- 09.10 **The market for wind turbine blades**  
Ms. Cristina de Santos, Unit Manager - Energy & Infrastructure,  
AMI CONSULTING, United Kingdom
- 09.40 **Challenges for Chinese blade suppliers**  
Mr. Bart Roorda, CTO,  
SINOMA WIND POWER BLADE Co. Ltd., China
- 10.10 **Requirements for rotor blades from an operators point of view**  
Dr. Simon Pansart, Plant Engineering, Wind Onshore,  
INNOGY SE, Germany
- 10.40 Morning coffee

## SESSION 1 - BLADE DESIGN

CHAIR: Dr. Povl Brønsted, Senior Consultant,  
BRØNSTED MATERIALS CONSULT, Denmark

- 11.20 **Blade design & manufacturing, today's reality, tomorrow's demand**  
Mr. John Korsgaard, Senior Director Engineering Excellence,  
LM WIND POWER, Denmark
- 11.50 **A novel truss based blade design**  
Dr. Rikard Berthilsson, CEO,  
WINFOOR, Sweden
- 12.20 **The use of Open Source CFD to improve blade design**  
Dr. Bernhard Stoevesandt, Head of Department Aerodynamics,  
CFD and stochastic Dynamics,  
FRAUNHOFER IWES, Germany
- 12.50 Lunch sponsored by:



## SESSION 2 - TESTING & QUALITY CONTROL

CHAIR: Mr. Bart Roorda, CTO,  
SINOMA WIND POWER BLADE Co. Ltd., China

- 14.20 **AI for blade manufacturing**  
Dr. Lennart Külmeier, Founder and CEO,  
FINETUNE, Denmark
- 14.50 **From single to multi-axis fatigue testing of large blades**  
Mr. Christian Frier Hvejsel, Project Manager,  
R&D TEST SYSTEMS A/S, Denmark
- 15.20 **FTIR spectroscopy as a tool for quality control in blade production**  
Mr. Derek Ness, Managing Director,  
APPLIED POLYMER DEVELOPMENTS (APD), United Kingdom
- 15.50 Afternoon tea

## SESSION 3 - MATERIALS

CHAIR: Mr. Sandro Di Noi, R&D Manager,  
SULZON ENERGY LIMITED NETHERLANDS, Netherlands

- 16.30 **Uncovering the fatigue degradation mechanisms in composite materials used in wind turbine blades**  
Dr. Povl Brønsted, Senior Consultant,  
BRØNSTED MATERIALS CONSULT, Denmark and  
Dr. Lars Pilgaard Mikkelsen, Head of Section, Associate Professor,  
DTU, Denmark
- 17.00 **New core materials for blade weight, cost reduction & sustainability**  
Mr. Sam Pickard, Wind Energy Technical Support Manager,  
GURIT, United Kingdom

- 17.30 **New unsaturated polyester resins with excellent tensile properties and fracture toughness as an alternative to standard epoxy resins**  
Dr. Sebastian Steffen, Head of Department - Resin Synthesis and Semi-finished Components,  
FRAUNHOFER INSTITUTE FOR APPLIED POLYMER RESEARCH IAP - RESEARCH DIVISION POLYMERIC MATERIALS AND COMPOSITES PYCO, Germany

20.00 Networking Conference Dinner sponsored by:



## Wednesday 12th December 2018

08.30 Registration and welcome coffee  
09.00 Opening announcements

## SESSION 4 - MANUFACTURING

CHAIR: Dr. Povl Brønsted, Senior Consultant,  
BRØNSTED MATERIALS CONSULT, Denmark

- 09.10 **Challenges in design & manufacturing of large wind turbine blades**  
Mr. Pim de Laat, Lead Manufacturing Engineer,  
PONTIS ENGINEERING BV, Netherlands
- 09.40 **Optimization of wind turbine blade manufacturing process using optical projection system**  
Dr. Amir Salimi, Engineering Leader,  
TPI COMPOSITES Inc., United States
- 10.10 **Pultrusion for wind blade spar caps - an assessment of business cases and challenges**  
Mr. Julien Sellier, Managing Director,  
STRUCTTEAM Ltd., United Kingdom
- 10.40 Morning coffee

## SESSION 5 - INDUSTRY 4.0 & AUTOMATION

CHAIR: Mr. Sandro Di Noi, R&D Manager,  
SULZON ENERGY LIMITED NETHERLANDS, Netherlands

- 11.20 **Wind turbine blades digitisation**  
Mr. John Rimmer, Senior Director of Rotor Engineering,  
VESTAS WIND SYSTEMS A/S, United Kingdom
- 11.50 **Analysis of top coating performance in the integration of fibre optics sensors for leading edge erosion monitoring**  
Mr. Enrique Cortes Fibla, Head of R&D,  
AEROX ADVANCED POLYMERS, Spain and  
Dr. Fernando Sanchez Lopez, Director of Institute Research CEU,  
UNIVERSITY CEU CARDENAL HERRERA, Spain
- 12.20 **Automated wind blade health monitoring using robot and drone-deployed inspection systems**  
Mr. Dennis Roach, Senior Scientist,  
SANDIA NATIONAL LABS, United States
- 12.50 Lunch

## SESSION 6 - BLADES IN SERVICE & END OF LIFE

CHAIR: Ms. Cristina de Santos, Unit Manager - Energy & Infrastructure,  
AMI CONSULTING, United Kingdom

Prize draw sponsored by:



- 14.20 **Root cause analysis on blade failures**  
Dr. Amilcar Zambrano, Senior Engineer,  
DNV GL, Spain
- 14.50 **Big data in Rotor blade damage analysis**  
Mrs. Frauke Bungart, Sales and Business Development Manager,  
WKA Blade Service, Germany
- 15.20 **Closing the loop for wind turbine blades**  
Mr. Markku Vilkkii, CEO,  
CONENOR Ltd., Finland and  
Mr. Jelle Joustra, PhD Researcher Circular Product Design,  
DELFT UNIVERSITY OF TECHNOLOGY, Netherlands
- 15.50 Afternoon tea and conference ends

AMI reserves the right to alter the programme without notice.  
The latest programme, including any new speakers, changes to the schedule, and any amendments to pricing and terms and conditions can be viewed on our website: [www.ami.international](http://www.ami.international)



# REGISTRATION FORM

## PLEASE COMPLETE IN BLOCK CAPITALS

Company: \_\_\_\_\_  
Address: \_\_\_\_\_  
\_\_\_\_\_  
Country: \_\_\_\_\_  
Tel: \_\_\_\_\_ Fax: \_\_\_\_\_  
VAT No.: \_\_\_\_\_  
(Must be completed by all EU Companies)  
Company activity: \_\_\_\_\_  
Purchase order No. (if applicable): \_\_\_\_\_  
Invoice address (if different from above): \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

## DELEGATE/EXHIBITOR DETAILS

Title: Mr/Mrs/Dr/Other: \_\_\_\_\_  
First name: \_\_\_\_\_  
Surname: \_\_\_\_\_  
Position: \_\_\_\_\_  
Email: \_\_\_\_\_  
Special dietary requirements: \_\_\_\_\_  
Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Please confirm that you agree to your name being published alongside your company name and job title on the delegate list.

☐ Yes ☐ No

By registering for this event (please tick these boxes):

- ☐ I agree to AMI's privacy policy ([www.ami.international/about/legal](http://www.ami.international/about/legal))  
☐ I agree to AMI's Terms & Conditions ([www.ami.international/about/tac](http://www.ami.international/about/tac))

## PARTICIPATION

### Select a delegate option:

☐ Early bird admission fee: €1215 + 19% = €1445.85 \_\_\_\_\_  
(Until 28th September 2018)

☐ Full admission fee: €1415 + 19% = €1683.85 \_\_\_\_\_

### Upgrade your booking to include:

☐ Exhibition Space: €1585 \_\_\_\_\_

☐ Networking Conference Dinner: €90 \_\_\_\_\_

☐ Networking Conference Dinner: €90 + 19% = €107.10 \_\_\_\_\_  
(Non-German companies)

Total: \_\_\_\_\_

Please note upgrades can only be booked with a delegate place.

All payments to be made in Euros. All delegate registrations have 19% VAT applied as stated by the German government

## METHOD OF PAYMENT

You will be sent an invoice in 7-14 working days.

### ☐ Pay by Credit Card by registering online

We accept: Visa / Mastercard

Alternatively, please provide your contact details and we will send you a link to a secure payment gateway via email.

Name: \_\_\_\_\_  
Email: \_\_\_\_\_

### ☐ Bank transfer quoting: Your invoice and A/C No.

To: National Westminster Bank Plc.

Thornbury Branch, 16 the Plain, Thornbury, Bristol, BS99 5HD

Account number: 06814077 Bank No. 556138

IBAN: GB63 NWBK 6072 0306 8140 77 SWIFT: NWBKGB2L

# WIND TURBINE BLADE MANUFACTURE 2018

10-12 December 2018

Maritim Hotel  
Maritim-Platz 1  
40474 Düsseldorf  
Germany  
Tel: +49 211 5209 0  
Fax: +49 211 5209 1000

## PARTICIPATION OPPORTUNITIES

The registration fee includes attendance at all conference sessions, a set of conference proceedings, entrance into the Networking Cocktail Reception, lunch and refreshment breaks.

### Registration fee

- Early Booking offer: Register by 28th September 2018 for €1215\*
- Full price: Register after 29th September 2018 at the price of €1415\*
- Exhibition space: Upgrade to an exhibition space for €1585
- Networking Conference Dinner: Register at the price of €90\*
- Group discounts: When registering as a group you may be entitled to discounts. Contact Rocio Martinez for more information.

### Exhibition space

The exhibition is an excellent way to enhance your business opportunities and makes it easy for delegates to find you!

- Have an exhibition space in the networking area throughout the conference (includes 1 table, 2 chairs and a power supply)
- Include your company profile in the printed proceedings
- Display new and existing products
- Hand out brochures and promotional items to attendees from your stand

Spaces are allocated on a first-come-first-served basis and sell quickly. Add an exhibition space onto your delegate registration as an upgrade.

### Sponsor this event

A variety of sponsorship opportunities are available at this event that can help to promote your company's products and services to this highly targeted international audience. For further information, please contact the Conference Organiser on: +44 (0) 117 314 8111.

### Social events

The social events organised for Wind Turbine Blade Manufacturer 2018 will provide an ideal setting for delegates and speakers to mix business with pleasure.

#### • Networking Cocktail Reception

A networking cocktail reception will be held on the first evening. This offers an excellent opportunity for delegates to meet with speakers and other colleagues. All delegates are invited to attend and admission is included in the delegate fee.

#### • Networking Conference Dinner

All delegates are invited to attend the Conference Dinner, which will take place at a local restaurant on the evening of 11th December 2018.

### Hotel accommodation

Delegates are responsible for booking their own accommodation. AMI has negotiated a room rate of €169 for a single room and €203 for a double (tax, breakfast and Wi-Fi included) at the Maritim Hotel in Düsseldorf until for a limited time only.

Please make your reservation using the direct hyperlink which can be found on our website [www.ami.international/events](http://www.ami.international/events) (click on 'Wind Turbine Blade Manufacture 2018' followed by Accommodation)

## CANCELLATIONS

Full refunds, less a cancellation charge of €300 will only be made on cancellations received prior to 10th October 2018. Thereafter we regret that no refunds can be made. Delegates may be substituted at any time. Please note that refunds will not be given on exhibition upgrades, sponsorship packages or Networking Conference Dinner places at any time.

\*German VAT rules apply

## CONFERENCE HOTLINE

### ROCIO MARTINEZ, CONFERENCE TEAM MANAGER

AMI

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Twitter: @Contact\_AMI #AMIWind

The latest programme, including any new speakers or changes to the schedule can be viewed on our website: [www.ami.international](http://www.ami.international)