

ESI Delivers its Smart Virtual Prototyping Solutions for Composites at JEC World 2018

Supporting the move toward Industry 4.0

Paris, France – March 1, 2018 – [ESI Group](#), leading innovator in [Virtual Prototyping](#) software and services for manufacturing industries, announces that it will attend [JEC World 2018](#) next month in Paris, France. From March 6 to 8, key actors in the field of composite materials will gather for this international trade show. ESI will present its software solutions for manufacturing composite structures; solutions that help engineers detect and resolve defects early in the product development cycle. Visitors will gain insight into design, engineering and evaluation of the performance of lighter components using advanced light materials and joining technologies. Through live demos and presentations, ESI's team will show visitors some of the most powerful solutions available for a wide range industrial applications.

At ESI's booth (Hall 5, Booth N68) visitors will learn how simulation helps industrial manufacturers replace real prototypes with virtual ones and virtually manufacture, assemble, test and pre-certify their future products.



Image: Left: In partnership with CANNON, ESI started to deploy its Hybrid Twin™ approach applied to the RTM (Resin Transfer Molding) manufacturing chain – Right: the Gazelle Tech car developed and virtually tested with ESI Virtual Performance Solution

Showcasing 15 Live Presentations of Collaborative Innovation Projects

Visitors to booth N68 will have the opportunity to learn of the latest innovations and approaches in Thermoforming, Compression-RTM and Sheet Molding Compound (SMC) methods, and to discover related topics in Big Data and Analytics and Machine Learning. The team will speak of its numerous collaborations with international clients and academics – including TU Dresden, for End-to-End Virtual Prototyping the AIMEN Technology Center, for Thermoplastic Composite and Metal Joining. Participants will have the opportunity to see a USCAR (Ford, GM, and Chrysler) composite element at the ESI booth and attend a live presentation on the design of a composite front bumper crush-can system using virtual prototyping. Case studies and collaborative projects that highlight the power of composites materials include:

- [Electrical Vehicle gearbox demonstrator development](#) - in collaboration with ARRK Shapers'
- [Optimization of dry textiles forming for structural composite applications](#) - in collaboration with IRT M2P
- [Sheet Molding Compound \(SMC\) process modeling](#)
- [Chaining Manufacturing to evaluate Multi-Material Component Performance](#)
- [Accurate C-RTM \(Compression Resin Transfer Molding\) Modeling](#)

Professor Maik Gude, Technische Universität Dresden (Germany); Institute of Lightweight Engineering and Polymer Technology (ILK) and **Frederic Masseria**, Business Development Manager Composite Solutions at ESI Group in Germany will present [a new development approach for 3D hybrid structures](#) at booth N68. They will discuss how the implementation of new composite materials in a large-scale production environment can only be achieved through the design of multi-material components and explain how ESI's virtual prototyping simulation software allows virtual structural assessment of manufactured components.

Introducing ESI's Hybrid Twin™ applications for the Industry 4.0

On the 1st day of the event, **Professor Francisco Chinesta**, President of the Scientific Committee at ESI Group will present the on-going partnership with CANNON, an international engineering solutions supplier. The [Hybrid Twin™ in Composite Factory 4.0](#) project exploits ESI's new vision for a complete virtual representation of a production line, replicating it in a virtual world and allowing real-time control and decision-making. Deployed for the RTM (Resin Transfer Molding) composite manufacturing chain, the Hybrid Twin™ methodology constitutes a new paradigm in simulation-based engineering sciences to support the Factory of the Future. Connecting every step of the manufacturing process ESI and CANNON collaborate to illustrate for manufacturers the power of combining pioneering technologies in System Modeling, Cloud delivery, Data Analytics, and Machine Learning.

Presenting the 1st Gazelle Tech Car Development

Gazelle Tech, a French startup created in 2014, is the first peri-urban composite vehicle manufacturer of its kind. Featuring a composite chassis and body technology that makes it one third the weight of its competition and reduces energy consumption by half, their vehicle is currently under development and the industrial version is expected to be released later this year.



This innovative French company will join ESI's booth to [share their experience of using virtual prototyping to engineer and pre-certify their vehicle](#). As **Gaël LAVAUD**, CEO at Gazelle Tech commented *"ESI Virtual Performance Solution saves us time and money. We are able to validate virtually the performance of our innovative composite vehicle before even manufacturing the first real prototype"*.

For more information about ESI at JEC World 2018, please visit www.esi-group.com/jec-world-2018

For more information about ESI PAM-COMPOSITES please visit www.esi-group.com/Composites

For more information about ESI Virtual Performance Solution for Lightweight engineering please visit www.esi-group.com/Lightweight

To follow ESI Composite Simulation news: www.linkedin.com/company/esi-composite-simulation

For more ESI news, visit: www.esi-group.com/press

ESI Group – Media Relations

[Delphine Avomo Evouna](#)

+33 1 41 73 58 46

For additional information, please feel free to contact our international communications team:

North America

[Leah Charters](#)

+1 248 381 8231

Germany, Austria, Switzerland

[Vanessa Seib](#)

+49 6102 2067 179

South America

[Dannielle Reis](#)

+55 11 3031 6221

United Kingdom

[Kim Melcher](#)

+44 1543 397 905

Italy

[Silvia Stefanelli](#)

+39 051 6335577

Japan

[Nozomi Suzuki](#)

+81 363818486

France

[Elisa Felder](#)

+33 4 7814 1210

Spain

[Monica Arroyo Prieto](#)

+34 914840256

South Korea

[Shinyoung Baek](#)

+822 3660 4507

Eastern Europe

[Lucie Sebestova](#)

+420 511188875

Russia

[Natalia Nesvetova](#)

+7 343 385 8508

China

[Juan Li](#)

+86 18500685938

About ESI Group

ESI Group is a leading innovator in [Virtual Prototyping](#) software and services. Specialist in material physics, ESI has developed a unique proficiency in helping industrial manufacturers replace physical prototypes by virtual prototypes, allowing them to virtually manufacture, assemble, test and pre-certify their future products. Coupled with the latest technologies, Virtual Prototyping is now anchored in the wider concept of the *Product Performance Lifecycle™*, which addresses the operational performance of a product



during its entire lifecycle, from launch to disposal. The creation of a *Hybrid Twin*[™], leveraging simulation, physics and data analytics, enables manufacturers to deliver smarter and connected products, to predict product performance and to anticipate maintenance needs.

ESI is a French company listed in compartment B of NYSE Euronext Paris. Present in more than 40 countries, and addressing every major industrial sector, [ESI Group](#) employs about 1200 high-level specialists around the world and reported annual sales of €141 million in 2016. For more information, please visit www.esi-group.com.

Follow ESI

