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## **GeonX and LPT take modelling of additive manufacturing processes to a new level**

**Gosselies (Belgium) and Erlangen (Germany), September 22, 2016** - GeonX SA and the Institute of Photonic Technologies (LPT) of the Friedrich-Alexander-Universität Erlangen-Nürnberg signed a strategic cooperation agreement to bring the modelling of additive manufacturing technologies to a new era, bridging the gap between the complex physics of the laser-matter interaction and the prediction of deformations and stresses occurring during the process. In the frame of this strategic alliance, the advanced models developed by LPT, capable of simulating the complex phenomena occurring in the melt pool produced by laser irradiation, will be integrated into the new generation solver of GeonX' simulation platform Virfac. Powered by LPT developments, Virfac Additive Manufacturing will be the most advanced and complete simulation solution available on the market, allowing to study additive manufacturing at different scales: from the laser-material interaction to the global distortions of the manufactured part. This alliance will also strengthen the research activity at LPT opening up new opportunities in the macro scale modelling and high performance computing allowing faster and more accurate computations.

*"We are extremely thrilled to cooperate with the researchers of the LPT at the University of Erlangen, who are world-wide renowned for their scientific achievements in melt pool simulations. We are definitely convinced that these new modelling capabilities brought to Virfac will advance the accuracy of simulations and understanding of the additive manufacturing process and create great value for the industry to speed up the creation of parts and reduce scraps and defects." says Dr Michel Delanaye, co-CEO of GeonX SA, in charge of Product Development.*

*"GeonX' products are known for their high quality modelling of production processes. We are excited to work together with such an innovative company and see our research go directly to industrial clients and affect their production processes. At the same time this cooperation will also create new research possibilities for us to deepen our knowledge of additive manufacturing processes and improve these processes." says Prof. Dr.-Ing. Michael Schmidt, head of LPT.*



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### ***About GeonX***

Since 2012, GeonX SA has been developing and providing to its customers best of class scientific software for the modelling of Virtual Manufacturing processes in welding, machining, heat treatment and additive manufacturing. GeonX' main product Virfac® combines a very intuitive CAD based user interface with a powerful non-linear finite element thermo-mechanical solver based on more than 100 man-years of developments. Virfac® will soon embark a “disruptive technology” based new generation solver engine entirely dedicated to the modelling of additive manufacturing. Implemented for multi-core processors such as gaming graphic processing units, the new solver demonstrates speed up factors of more than 1000 compared to more conventional, although parallelized, finite element solvers. The new Virfac Additive Manufacturing module aims to become the true virtual manufacturing simulator side by side to the manufacturing machine. GeonX SA is headquartered in Belgium with offices in France and in the US and major representatives in Korea, China and Japan.

### ***About LPT***

Since 2009, researchers at the Institute of Photonic Technologies (LPT), headed by Prof. Dr.-Ing. Michael Schmidt, aim to establish a link between scientific progress and industrial application in the field of Photonics and Laser Technology. The Simulation & Modeling group has developed a micro scale model for laser material interaction that allows to simulate laser based processes such as welding, cutting, drilling and additive manufacturing. These simulations allow the investigation of the influence of process parameters onto the melt pool and thus the quality of the final product. In addition to the Simulation & Modeling group researchers at LPT investigate these processes experimentally as well. The Institute currently employs 30 academic researchers.