



Altair and Laser Zentrum Nord Sign Strategic Training Agreement to Revolutionize the Design of 3D Printed parts

Engineers, designer and users of 3D printing attending the seminars will learn how to maximize the true potential of the technology by deploying a radically new design methodology

Hamburg/Böblingen, Germany – December 1, 2015 – [Altair](#) and [LZN](#) (Laser Zentrum Nord), one of the most modern laser technology centers worldwide, have announced a training cooperation in which the companies will now jointly deliver expert training in an end2end design process for industrial 3D printing, thus maximizing the true potential of the technology.

3D Printing, often referred to as Additive Manufacturing, offers many new possibilities. The advantages of this technology span from a faster and often less expensive product development process to the possibility to manufacture even very complex structures, which would not be possible or at least be very cumbersome to produce with traditional manufacturing methods. Especially regarding light weight design 3D printing offers so far unknown weight saving potentials. With the right design, material use and the resulting weight of a product can be reduced by up to 80 percent. Using optimization and designs inspired by nature are mandatory for the manufacturing of innovative and structurally efficient lightweight products. How this can be handled in industrial practice has been proven by LZN, jointly with Airbus and Concept Laser in an already developed FCRC bracket for the A350 (see picture). This successful aerospace project was awarded with a nomination for the German Future Award (Zukunftspreis) 2015, handed out by the President of Germany (more Information at: <http://www.deutscher-zukunftspreis.de/de/nominierte/2015/team-2>).

For now the companies are scheduling one day seminars, which will provide the attendees with a general overview on 3D printing, including pre- and post-processing, the set up and function of industrial 3D printers, parameters and materials as well as the entire process chain, including cost calculation. In addition, the attendees will learn about basic design principles for 3D printing, which will give them insights into unused light weighting potential.

"This initiative is one of a kind and has its finger on the pulse of time," said Prof. Dr.-Ing. Emmelmann from Laser Zentrum Nord. "3D printing becomes increasingly more popular in all industries because the advantages speak for themselves. This technology shortens product development and enables the manufacturing of even very complex structures based on design principles inspired by nature. In addition it offers a huge potential for light weighting. Though many users already have a certain theoretical knowledge, they often lack practical experience in the use of and the design for 3D printing. These seminars aim to close this experience gap. With Altair we have an experienced partner at our side, with which we, in addition to the practical side of 3D printing, can also offer the needed know-how in design and optimization for 3D printing."

Four of the seminars scheduled for 2016 will take place at the German Altair Engineering GmbH offices in Böblingen, Munich and Cologne. All other seminars are planned within the facilities of the Light Academy at the LZN in Hamburg. Please find a list of the seminars taking place within the Altair offices here:

- Feb. 16, 2016, Böblingen
- May, 31, 2016, Unterschleißheim/Munich
- Sept. 13, 2016, Böblingen
- Nov. 22, 2016, Cologne

In addition to the seminars, Altair also plans a one day Inspire training for each following day, during which attendees of the seminars of the first day and other users have the chance to learn more about the software Inspire itself and how to use it for design and optimization purposes, to fully leverage the advantages of 3D printing. Later in the year the cooperation will be



extended to cover four day practical courses, which will cover design inspired by nature for industrial 3D printing in more depth. During these courses the attendees will learn more about the entire process chain, from software based topology optimization to the final 3D printed component.

“We are very happy about this cooperation,” said Dr. Pietro Cervellera, Managing Director of Altair Engineering GmbH. “With the possibilities and the industrial know-how of the LZN in 3D printing and our expertise in optimization and simulation, we will be able to provide the attendees with a complete introduction into the subject - from using our software up to the production of the actual component.”

Additional information about the [seminars](#) and additional training offers can be found at: www.altairhyperworks.de/training and www.lzn-hamburg.de/.

About LNZ

The Hamburg based Laser Zentrum Nord (LZN), one of the most modern laser technology centers worldwide, understands itself as the connecting element between basic research and industrial applications. All our practice seminars are given by the competent Light experts of the LZN, who have a long standing expertise in 3D printing, especially for the aerospace industry. The attendees benefit from the versatile infrastructure of the LZN and can gain hands on experience with 3D printing by using the modern high-tech printers available onsite. For more information please visit: www.lzn-hamburg.de

About Altair

Altair is focused on the development and broad application of simulation technology to synthesize and optimize designs, processes and decisions for improved business performance. Privately held with more than 2,600 employees, Altair is headquartered in Troy, Michigan, USA and operates more than 45 offices throughout 24 countries. Today, Altair serves more than 5,000 corporate clients across broad industry segments. To learn more, please visit www.altair.com.

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