

Fabrication Additive

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GENERALITES

3D Systems partners with GF Machining Solutions to refine the factory of the future

09/08/2018 - 3dprintingindustry.com

3D Systems , has announced a strategic partnership with GF Machining Solutions , a division of Switzerland-based manufacturing company Georg Fischer , to deliver a new concept in factory automation that will improve metal parts production. "With the combined experience and expertise of 3D Systems and GF Machining Solutions, we are well positioned to bring to our customers new manufacturing solutions based on 3D printing.

AEROSPATIAL

Lockheed Martin : une impression 3D record pour un réservoir de satellite

14/08/2018 - www.primante3d.com

Lockheed Martin compte parmi les poids lourds de l'impression 3D dans l'aérospatial. Des pièces d'engins spatiaux aux composants de missiles, Lockheed Martin fait régulièrement la démonstration de son savoir faire en fabrication additive. Son dernier fait d'armes est un réservoir de carburant pour satellite. L'utilisation de l'impression 3D par Lockheed Martin s'inscrit dans cette logique. Les réservoirs de carburant pour satellite sont en effet très long à fabriquer.

NASA awards \$127K STTR Grant to PADT and ASU for biomimicry 3D printing research

17/08/2018 - www.3ders.org

That is why NASA just awarded PADT and Arizona State University, a Phase 1 STTR grant to explore how to make just this type of geometry. Recently, PADT partnered with Lockheed Martin and Stratasys to help NASA develop over 100 3D printed parts for its manned-spaceflight to Mars, the Orion Mission. Summary of Cellular Geometries in Nature and 3D Printing. "PADT has been an excellent partner to ASU and its students as we explore the innovative nature of 3D printing," said Ann McKenna, school director and professor, Ira A. Fulton Schools of Engineering, Arizona State University.

Une maison imprimée en 3D pour vivre sur Mars?

17/08/2018 - www.3dnatives.com

Elle a conçu un logement imprimé en 3D pour vivre sur Mars et a reçu un prix de près de \$21 000. Le "3D-Printed Habitat Challenge " organisé par la NASA depuis 2014 a pour objectif de promouvoir le développement d'habitations durables fabriqués avec des matériaux locaux, avec des possibilités d'exportation du modèle au-delà des limites terrestres. (vivre sur mars) L'intérieur des habitations imprimées en 3D. Que pensez-vous de la présence de maisons imprimées en 3D sur Mars?

- 3D Printing Production Parts with ULTEM® 9085 Pro
- LLNL and Virginia Tech develop new process to 3D print graphene objects in far finer detail

MARKET / BUSINESS

- Titomic to open Kinetic Fusion R&D facility at new Australian training centre
- Innovate UK grants £6M to national aerospace additive manufacturing project
- Rostec allocates \$44.5 million to introduce additive manufacturing to Russian aerospace
- RSA Global enters 3D printing Virtual Warehouse partnership with Immensa Technology Labs
- H.C. Starck Anticipates Further Improvement in Core Markets in 2018

EVENEMENTS / ETUDES

- Euro PM2018 Congress & Exhibition attracts record number of abstracts
- Asiamold 2019's '3D Printing Asia Zone' will address needs of China's growing AM industry
- Additive Manufacturing on the agenda at the 8th Aviation Forum Hamburg

REGLEMENTATION / BREVETS

- Osseus Fusion Systems achieves FDA clearance for 3D printed spinal implants

CONCEPTION

How Connected Controls Can Make Your First Part a Good Part

23/08/2018 - www.engineering.com

"CNC controls are an integral part of the digital thread that extends from cutting tools to ERP systems," observed Peter R. Eelman, Vice President of Exhibitions & Business Development at The Association for Manufacturing Technology (AMT), which owns and produces IMTS. Examples include missing hole for the next threading application, broken drill in the part, part not clamped correctly in a vice or on pallet, wrong engraved part number on the part and wrong part on the pallet.

Addition Design & Research to offer one-day Additive Manufacturing training course

23/08/2018 - www.metal-am.com

(Addition Design & Research to offer one-day Additive Manufacturing training course) The first in Addition Design & Research's series of one-day training courses will take place in September . Additive Manufacturing solutions provider Addition Design & Research, Sheffield, UK, is to offer a one-day introductory training course on Additive Manufacturing from the Advanced Manufacturing Park Technology Centre in Sheffield.

TECHNOLOGIES

Hobbyist 3D prints open source CNC machine for under \$200

15/08/2018 - 3dprintingindustry.com

Marioarm built the Cyclone PCB CNC machine with 3D printed parts downloaded from file sharing sites such as Thingiverse and the GitHub repository Cyclone PCB Factory. Marioarm's machine is a combination of 3D printed and non-3D printed parts. (A PCB milled with marioarm's 3D printed CNC machine. Photo via Imgur) A PCB milled with Marioarm's 3D printed CNC machine. In 2016, Mohammed Abu Mattar , a Glia project member working in Gaza, circumvented a ban on 3D printer imposed by the Israeli government.

KIT expands portfolio of erasable 3D printer inks

16/08/2018 - 3dprintingindustry.com

Microfabrication at KIT is performed used a Photonic Professional GT two-photon lithography 3D printer from Nanoscribe GmbH . The scale of the 3D micro structures produced in this particular study is below 50 µm – the average width of a human hair. In conclusion, "...we submit that the class of photoresists presented here hold large potential and will allow for the fabrication of a variety of complex and multifunctional 3D nano- and microstructures that are presently inaccessible using current state of the art photoresists and/or subtractive manufacturing methodologies.

Senvol granted \$100k to ease additive manufacturing materials characterization

23/08/2018 - 3dprintingindustry.com

National Institute of Standards and Technology (NIST) has awarded Senvol , the largest online database of 3D printing systems and materials, a total sum of \$99,946 for a project applying data analysis to additive manufacturing processes. This will make it easier for manufacturers

to analyse their additive manufacturing processes, resulting in faster qualification for 3D printed products that better matches the rate of traditional manufacturing processes

Stratasys lance une imprimante 3D industrielle pour le carbone

24/08/2018 - www.primante3d.com

Pour répondre à l'utilisation croissante de composites dans tous les secteurs, le géant américain Stratasys a donc développé une imprimante 3D carbone : La Fortus 380mc Carbon Fiber Edition. La Fortus 380mc CFE est enfin annoncée comme deux et cinq fois plus rapide qu'une imprimante 3D à prix comparable utilisant la fibre de carbone. Le compartiment de fabrication de l'imprimante 3D mesure 355 x 305 x 305 mm. Dans cette gamme de prix, le pionnier de l'impression 3D carbone Markforged propose sa X7 pour environ 60 000 €.

MATERIAUX

Tethon 3D awarded means to develop ceramic/metal DLP 3D printer

16/08/2018 - 3dprintingindustry.com

Tethon 3D, a ceramic 3D printing material specialist headquartered in Nebraska, has received a grant to develop a multi-material DLP 3D printer. Technical help from the University of Nebraska's Department of Mechanical & Materials Engineering will include, engineer Bai Cui, Prahalada Rao, Ph.D. Featured image shows a ceramic material 3D print.

Betatype demonstrates optimised high-volume metal AM for the automotive industry

16/08/2018 - www.metal-am.com

Stacking can be very difficult during LPBF manufacturing, due to the thermal stresses involved in the process, but Betatype stated that it was able to achieve this by intelligently designing the structure to reduce thermal stresses, minimising thermal distortion. This could in turn allow metal Additive Manufacturing to compete with conventional manufacturing technologies in key markets, marking a major step toward its broader industrialisation.

NRC Canada and AP&C develop new method of metal powder analysis

17/08/2018 - 3dprintingindustry.com

According to Louis-Philippe Lefebvre, Powder Forming Team Lead at the NRC's Medical Devices Research Centre, "As a leader with over 30 years of experience in powder metallurgy and additive manufacturing, the National Research Council is pleased to have joined forces with AP&C to improve the reliability of the manufacturing process and metal powder behavior.

World's first-ever 4D printing for ceramics

18/08/2018 - www.sciencedaily.com

"The whole process sounds simple, but it's not," said Professor Lu. Like squeezing icing on a cake, there are a lot of factors that can affect the outcome, ranging from the type of cream and the size of the nozzle, to the speed and force of squeezing, and the temperature. Ceramic materials have much better performance in transmitting electromagnetic signals than metallic materials. Riding on the breakthrough in material and 4D-printing technique advancement, Prof Lu said the next step is to enhance the mechanical properties of the material, such as reducing its brittleness.

3D Printing Production Parts with ULTEM® 9085 Pro

23/08/2018 - www.stratasysdirect.com

3D Printing Production Parts with ULTEM® 9085 Pro In a production environment , the need for consistent builds and mechanical properties can pose a challenge to additive manufacturing (AM). ULTEM 9085 Pro and Aircraft Interiors As the most experienced user of ULTEM 9085 with additive manufacturing, aerospace companies are perfectly positioned to leverage the benefits of ULTEM 9085 Pro alongside their existing production specifications as well as expand the use of 3D printing with this material for a broad array of components within aircraft interiors.

LLNL and Virginia Tech develop new process to 3D print graphene objects in far finer detail

24/08/2018 - www.3ders.org

This porous graphene structure is called a graphene aerogel. Breaking the graphene oxide hydrogel with ultrasound and adding light-sensitive acrylate polymers, researchers could use projection micro-stereolithography to create the desired solid 3D structure with the graphene oxide trapped in the long, rigid chains of acrylate polymer. One of the major challenges of the project was coming up with a graphene aerogel resin compatible with the micro-stereolithography process.

MARKET / BUSINESS

Titomic to open Kinetic Fusion R&D facility at new Australian training centre

07/08/2018 - www.metal-am.com

A smart factory designed to make use of advanced automated robotic systems will also be launched at the centre to create cyber-physical systems for the commercial Additive Manufacturing of speciality bespoke metal alloy products using Titomic Kinetic Fusion. This will result in the creation of cutting-edge material advancements and commercial manufacturing systems that are based on Industry 4.0 to enhance the Titomic Kinetic Fusion process as a viable commercial manufacturing integrated system.

Innovate UK grants £6M to national aerospace additive manufacturing project

15/08/2018 - 3dprintingindustry.com

Funding from Innovate UK has been shared out between each body with TWI receiving the lion's share of \$2 million. With an estimated project cost of \$1.7 million, Cranfield University was granted 100% of the proposed from Innovate UK. a functioning demonstration of the method's capabilities, or Manufacturing Capability Readiness Level (MCRL) 4/5, "Capability to produce the technology in a laboratory environment" or "Capability to produce prototype components in a production relevant environment.

Rostec allocates \$44.5 million to introduce additive manufacturing to Russian aerospace

17/08/2018 - 3dprintingindustry.com

Russian state-owned industrial technology holding conglomerate Rostec is allocating \$44.5 million (£3 billion) to the development of a specialist additive manufacturing technology center. Chernyshev CAC is to introduce additive manufacturing to the serial production of Russian gas turbine engines, servicing both national and international aerospace business.

The Russian state has also developed its own large format 3D printer. For more of the latest additive manufacturing updates from around the world subscribe to the 3D Printing Industry newsletter.

RSA Global enters 3D printing Virtual Warehouse partnership with Immensa Technology Labs

17/08/2018 - 3dprintingindustry.com

In a new partnership with Immensa Technology Labs , a company dedicated to the advancement of 3D printing throughout the United Arab Emirates (UAE) RSA Global plans to develop a 'Virtual Warehouse' for 3D printable parts. Similarly, in January, FedEx announced a new, 3D printing oriented, company named FedEx Forward Depots which will provide same-day delivery for local 3D printed parts. Keep up with all latest news in 3D printing by subscribing to the 3D Printing Industry newsletter. ... field ... physical ...

H.C. Starck Anticipates Further Improvement in Core Markets in 2018

17/08/2018 - www.azom.com

The strategic further development of the STC Division will continue under the leadership of Swedish metal powder manufacturer Höganäs AB, an ideal strategic partner for the STC business. Starck Surface Technology and Ceramic Powders GmbH to Sweden-based Höganäs AB will open up new opportunities in strategic further development for the company (see <https://www.hoganas.com/en/news-centre/news/2018/hoganas-acquires-surface-coating-division-from-h.c.-starck/>).

EVENEMENTS / ETUDES

Euro PM2018 Congress & Exhibition attracts record number of abstracts

16/08/2018 - www.metal-am.com

A Critical Analysis of the Press & Sintering Technology - Functional Materials: Soft and Hard Magnetic Materials - EIT RawMaterials: Competitive and Sustainable Powder Metallurgy Industry - Hard Materials/Hardmetals – Micromechanical Testing of HM - Additive Manufacturing – Success Case Studies in Production and Future Preview of Metal AM - Hot Isostatic Pressing & Additive Manufacturing – Microstructure and Mechanical - Properties and the Effect of Combined HIP and Heat Treatment Cycles Compared to Conventional Processing - Hot Isostatic Pressing – HIP and Heat Treatment of.

Asiamold 2019's '3D Printing Asia Zone' will address needs of China's growing AM industry

17/08/2018 - www.metal-am.com

Asia Zone' will address needs of China's growing AM industry) Asiamold will take place in March 2019 at the China Import and Export Fair Complex in Guangzhou, China (Courtesy Guangzhou Guangya Messe Frankfurt Co Ltd). This year's Asiamold exhibition will feature a '3D Printing Asia Zone' to address the needs of China's rapidly developing Additive Manufacturing industry. ... metal ...

Additive Manufacturing on the agenda at the 8th Aviation Forum Hamburg

22/08/2018 - www.metal-am.com

The 7th Aviation Forum Hamburg, held in 2017, attracted more than seven hundred participants from twenty-two countries

REGLEMENTATION / BREVETS

Osseus Fusion Systems achieves FDA clearance for 3D printed spinal implants

23/08/2018 - 3dprintingindustry.com

Texan medical device company Osseus Fusion Systems , has received FDA clearance for its family of 3D printed spinal implants known as Aries. They are the first example of Osseus' new line of 3D printed products, with several other 3D printed medical devices planned for the near future. Similarly, spinal device development company, Centinel Spine , received FDA clearance for its 3D printed spinal implants, known as FLX devices. Keep up with the latest advancements in additive manufacturing by subscribing to the 3D Printing Industry newsletter.

Service Information Numérique - Pôle IES

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