



Rapid.Tech 3D

14– 16 May 2024, Messe Erfurt, Germany

3D Pioneers Challenge 2024 Finalists have been announced Experience the collaborative mindset at this year's special exhibition

(Erfurt, 16 April 2024) The ninth edition of the international competition 3D Pioneers Challenge (3DPC) is being expanded this year for the first time to include the category "Industrial" and is looking for creative innovations that drive the implementation of advanced technologies in the established manufacturing industry, always with a focus on sustainability.

The exhibition and award ceremony of the award takes place at Rapid.Tech 3D at Messe Erfurt, which will offer a platform for additive technologies for the 20th time from 14 to 16 May 2024 and provide significant impulses for the sector.

This year's competition focuses on the "Collaborative Mindset", which aims to open up the vision for projects that drive forward pioneering methods, materials and processes and create groundbreaking applications for additive manufacturing in order to create opportunities for economy, industry and sustainability.

The numerous entries in the 11 categories came from students, universities, start-ups and industrial companies. The jury had the challenging task of selecting the 43 finalists from submissions from 25 countries and 5 continents. Further hotspots in Europe were identified - not least thanks to new supporters of the 3DPC such as BASF AM Forward, Hewlett Packard and IAM3DHUB.

"Responsible production through the use and development of sustainable materials and circular processes is a clear focus for the finalists of this year's 3D Pioneers Challenge." The organisers Simone and Christoph Völcker comment on the exhibition of the finalist projects. WILLOWPRINT, for example - a young start-up from Germany is developing printable material from wood waste and realising seating as the first applications that can be returned to the cycle or completely composted. Innovation pioneer BOSCH presents a new process that combines injection moulding technology and 3D printing. Injection moulding materials as well as industrial waste can be used as recycled granulate - a major advantage for market acceptance: certifications are no longer a barrier and the path for circular processes in the manufacturing industry is also paved for additive technologies. Co-operations between established industry and AM enthusiasts make all of this possible. The necessary joint approach driving innovation is also the basis for the international collaboration between designers from the USA and a hospital in Israel. In a pioneering move for the medical sector, the digital specialists are working on the "Patient-specific Femoral Implant with Osseointegration" project using AI to generate a customised implant to replace the bone destroyed by cancer. The team at the hospital uses 3D printing technologies and further 3d-printed surgical tools to realise this directly on site. A Mindset like this also enables the democratisation of new digital technologies. The PeaCok platform is designed to enable engineers easily to design their developments with unprecedented performance. Therefore the platform offers digital tools with libraries ranging from artificial intelligence-supported structures to quasi-crystals freely available to everyone. Other highlights for example at FashionTech include the "Chromatic Dress", whose integrated LEDs react to movement. The first 3D-printed house to be built in Europe will also be presented to the jury in the final round.

From 14 to 16 May 2024, the AM community will meet in Erfurt, where the "collaborative mindset" can also be experienced within the 3DPC network.

FACTS 3DPC 2024

EXHIBITION and AWARD CEREMONY

The finalists and winning projects will be exhibited in the special 3DPC area at Rapid.Tech3D. The award ceremony will take place as a highlight on the second day of the trade fair.



In addition, talks by the Finalists will also provide exciting insights on stage in Hall 2.

AWARDS

Participants can look forward to prizes totalling over €175.000. This makes the 3D Pioneers Challenge one of the world's most highly endowed competitions for innovation, additive manufacturing processes and pioneering technologies.

The prize money of €35,000 is provided by the Thuringian Ministry of Economic Affairs Science and Digital Society.

The "Main Winner" wins the "3DPC Trophy". The limited edition design object was created especially for the 3DPC in cooperation with Designer Ross Lovegrove, Hyperganic and Materialise.

Prizes will be provided in the "Digital Tools" area to further develop the contributions and take them to the next level.

Two winners get "nTop Full versions" design software licences from nTopology.

The "Best Industrial Project" will be awarded a "Software & Consulting Package" from 3YOURMIND.

CASTOR awards the "Sustainability benefit- award". The winner will receive training from CASTOR and access to the CASTOR software for a sustainability analysis of his applications.

The "Best Start-Up" wins a customised coaching with AM Ventures, the leading venture capital fund in industrial 3D printing. Their team provides input on "pitch coaching", "business model" or "scaling".

One winner can look forward to "Meet the Experts" with 10xDNA, an expert discussion with Paul Schmidt and Frank Thelen.

Autodesk, the 3DPC long-term partner, recognizes excellence under the scope of „Special Mention by Autodesk Technology Centers“ by providing the opportunity for three winners to join the Autodesk Technology Centers Oversight Network - a global community of industry leaders, entrepreneurs, and researchers building future-focused technology.

Avedition, the publishing house for architecture and design, rounds off the prize packages with their inspiring book prizes.

During the application period, submitters could once again benefit from the "Special Feature by nTopology". This means that nTopology was making its platform for forward-looking design and engineering software available free of charge. With this innovative tool, ideas and concepts for the competition could be realised and taken to the next level. Accompanying tutorials were offered by nTop. With this cooperation, 3DPC starts early in the process chain and wants to support education.

FOCUS 2024

Collaborative Mindset

Cutting-edge processes, materials and procedures are creating ground-breaking applications in Additive Manufacturing and thus offering chances for the economy, industry and sustainability, for a responsible production.

Implementation in the established manufacturing industry however demands a "collaborative mindset" - the mutual, open attitude of working cooperatively and courageously towards common goals. Where are realistic applications in the industry and what best practices are already in progress?

This open mindset becomes apparent in the convergence of advanced technologies. When robotics, smart materials, cloud technologies or blockchain interact with additive processes, this leads to disruptive concepts and sharpens the focus for strategy changes and pave the way for meaningful advancements.

A gaze upon the impressively vibrant developments in Artificial Intelligence, such as automated image generation, provides a glimpse of the possible when AI generates three-dimensional products that are then translated from the digital to the real world through additive processes.

The **3D Pioneers Challenge** seeks and supports the pioneers pursuing these ground-breaking approaches.



CATEGORIES 2024

With regard to this year's focus, the "Industrial" category was also announced for the first time in 2024. This discipline and the 10 others - "Design", "Digital", "Architecture", "FashionTech", "Materials", "MedTech", "Mobility", "Electronics", "Machinery" and "Sustainability" - are derived from the questions "WHAT, HOW and WHY... we design and make".

JURY and PARTNER

Participants had the opportunity to present their ideas and projects to the competition's network of partners and jury. The international partners and jury members are characterised by their diverse perspectives, which helps to comprehensively reflect the quality and range of the award - in line with the eleven disciplines announced. Until the award ceremony, the submitted entries were reviewed by the 30 jurors. The judges look beyond the horizon of 3D printing and contribute their expertise and experience from science, industry, politics, design, the press and sustainability. This mix of experts from inside and outside the sector of new technologies helps to ensure a multi-faceted assessment. The internationality of the jury members helps in the evaluation of the worldwide submissions.

In 2024, new partners also contributed jury members, including Ralf Anderhofstadt (Daimler Truck) and Brian Ingold (HP), as well as Martin Back (BASF- Forward AM) acting as an interface to the industry. Sherri Monroe from AMGTA supported the focus on sustainability. Other partners include FKM Sintertechnik with the juror Dr. Dirk Simon, the media platforms like Wevolver, Voxelmatters and the innovation hub for additive technologies from Barcelona, IAM3DHUB.

Facts 3DPC 2024

Jury 3DPC 2024

Ralf Anderhofstadt_AM & AMS Daimler Truck AG
Martin Back_BASF AM Forward
Frank Beckmann_Fraunhofer IAPT
Prof. Christiane Beyer_OVGU University Magdeburg
Dr. Shajay Bhooshan_Zaha Hadid Architects
Stefanie Brickwede_DB, Mobility goes Additive
Lutz Dietzold_German Design Council
Stephan Galozy_3YOURMIND
Sarah Goehrke_Additive Integrity
Arno Held_AM Ventures
Dr. Karsten Heuser_Siemens Digital Industries
Thomas Hundt_Jangled Nerves
Brian Ingold_HP
Carina Lebsack_Adolf Würth GmbH & Co. KG
Marie-Lucie Linde_Sustainable Natives, nextblooming

Ulf Lindhe_ADAXIS
Ross Lovegrove_Lovegrove Studio
Dr. Cora Lüders-Theuerkauf_Medical goes Additive e.V
Alana Mongkhounsavath_Autodesk Research
Sherri Monroe_AMGTA
Kristin Mulherin_Women in 3D Printing
Joris Peels_SmarTech Analysis, 3DPrint.com
Sonja Rasch_Materialise
Paul Schmidt_10xDNA
Dr.-Ing. Sascha Schwarz_TUM Venture Lab AM
Dr. Dirk Simon_FKM Sintertechnik GmbH
Peter Storey_Autodesk Research Industry Future Team
Joachim Stumpp_raumPROBE
Andreas Velten_IFA3D Medical Solutions
Christoph Völcker_Innovation Lab AM, Würth Elektronik

Partner 3DPC 2024

Thuringian Ministry of Economic Affairs Science and Digital Society; Rapid.Tech 3D; Messe Erfurt GmbH, 10xDNA, 3D natives, 3D Point, 3DPrint.com, 3D Printing Industry, 3Druck.com, 3YourMind, aed e.V., ALL3DP, AMGTA, AM Ventures, Autodesk, av edition, BASF Forward AM, CASTOR, Daimler Truck, DB Deutsche Bahn, Designspotter, FKM Sintertechnik GmbH, Formlabs, Fraunhofer IAPT, German Design Council, Haute Innovation, HP, IAM3DHUB, Jangled Nerves, MakerBot, Materialise, Medical goes Additive e.V., Mobility goes Additive e.V., ndion_News on Design, nTopology, raumPROBE, Siemens, TUM Venture Lab Additive Manufacturing, UltiMaker, Verband 3DDruck e.V., VoxelMatters, Wevolver, Women in 3D Printing, Würth GmbH & Co KG



About Rapid.Tech 3D

In two decades, Rapid.Tech 3D has developed into one of the leading AM trade events in Central Europe. In addition to the congress as the centrepiece, the focus is on the exchange of additive innovations between industry and science. Once again this year, there will be high-class and clearly user-orientated congress contributions and keynotes from Brent Stucker, ASML, BMW and Innosyn, for example, as well as comprehensive exhibitor offerings along the additive process chain.

The special 3D Pioneers Challenge area is another highlight of Rapid.Tech3D 2024.

About 3D Pioneers Challenge

The international competition for Additive Manufacturing processes and Advanced Technologies is the most prestigious award of its kind and is one of the most highly endowed worldwide. The annual announcement and presentation of the finalists is considered to be the innovation monitor of the industry. Unique in its structure, the competition has been addressing specialists who think outside the box since 2015 - **pushing boundaries!**

3DPC Platform

The Challenge has become a platform with a global network and is an interface for creative future-makers, pioneers of advanced technologies and innovators from research and industry.

3DPC & Friends

Under the umbrella of 3DPC & Friends, 3DPC brings together the creative minds and high-tech pioneers of the 3DPC platform in an interdisciplinary way, resulting in new, ground-breaking projects in which everyone can contribute and live out their expertise - design rethought! The 3DPC shows today what tomorrow will bring - **pushing boundaries.**

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