



## Winner of the "3D Pioneers Challenge 2020 during the Digital Awards Ceremony.

(Erfurt, July 16, 2020) The 3D Pioneers Challenge (3DPC) 2020 takes place digitally in its fifth year and once again demonstrates how the platform has established itself in the industry. The international competition has a growing and remarkable range of submissions, these come from 28 countries, from 6 continents and the interest of the participants unites students, young professionals and established companies alike.

*The initiators of the 3D Pioneers Challenge summarize the trend for 2020:*

*"With the call for entries, we have started the promising year 2020 with great enthusiasm and have received a great response - including submissions to science fiction scenarios that can become reality today using new technologies. Then everything turned out differently. And yet, Additive Manufacturing technologies have come into focus this year and have caused a attention and recognition worldwide. We can also sense this in the orientation of the submissions and their quality. This would not have been possible a few years ago. Especially in medical technology as well as in material developments, pioneering achievements are once again evident. However, these will not remain the leading categories, because mobility and electronics were very strongly represented and make use of new interdisciplinary technologies - a clear trend in up-and-coming, potential business areas. The digital implementation of the award ceremony challenged us, but once again we were able to use the platform's great network to give the participants an innovative stage. The jury panel worked very closely together this year- and at the greatest distance. We are very proud of this and of our cooperation partners. The cross-industry experts grew even closer together, making the 3DPC the most far-reaching competition of its kind. This is also clearly reflected in the new '3DPC&Friends' concept – under which we connect the jury and finalists to push innovation."*

After the Corona-related cancellation of Rapid.Tech 3D in May 2020, the 3D Pioneers Challenge was continued as a digital format. In addition, the organizers, Simone and Christoph Völcker, used the globally active 3DPC platform to connect COVID-19-affected people in need with 3D experts for creative solutions regarding the pandemic. "It was impressive how the industry and the community are pulling together here and moving good things forward together," the organizers said.

This year's verticals of Design, Digital, Architecture, Materials, FashionTech, MedTech, Mobility, Sustainability and, for the first time, Electronics were complemented by the COVID-19 category to give appropriate attention to the respective submissions of the 3D initiatives.

The finalists and winners were selected by the 21 members of the international jury in a multi-stage selection process, mostly using digital communication channels via remote. The digital format made it possible for the first time to select 52 finalists.

The highlight, the virtual award ceremony, was streamed on July 15th on several portals, when it was time again for: "...and the winner is...! Michael Kynast, Managing Director of Messe Erfurt, took the opportunity to wish the participants good luck for the decisions. Wolfgang Tiefensee, Economics and Science Minister in the Thuringian Ministry of Economics, Science and Digital Society, also pointed out the importance of the competition and the truly great success.



The 3DPC team was supported on stage for the first time. The moderator Anja Lange, herself a native of Erfurt, led charmingly through the afternoon. Background information about the Challenge was exchanged with the initiators. The jury members, who were streamed from all over the world, presented their statements to the winners and special mentions, which were presented with films about their projects.

The supporting programme of the awards ceremony was rounded off with an interesting conversation between star designer Ross Lovegrove and TEDxTalk speaker Lin Kayser (Hyperganic) on the subject of "A Paradigm Shift in Design".

In total, the winners received prizes worth more than € 40,000.

The prize money of € 35,000 was donated by the Thuringian Ministry of Economics, Science and Digital Society. This makes the 3D Pioneers Challenge one of the world's highest endowed design awards for innovation in 3D printing.

In addition to book prizes from avedition, publishers for architecture and design, and 3D Hubs, all prize winners also received Autodesk licenses from Fusion 360 and NetFabb.

Autodesk gave the "Special Mention by Autodesk" award three projects to participate in the prestigious "Autodesk Technology Centers Residency Program" in San Francisco, Boston, or Toronto.

The award winners "Reimagined electric motor", "Flow fabrication", "World's first block pavement" from Canada, the USA and Austria now have the opportunity to continue their pioneering work on site at the technology centers. They will have access to the advanced manufacturing technology parks, training courses and the network of industry experts and the local community.

A special highlight was awarded to the main winner for the first time: the "3DPC Trophy" produced with additive manufacturing processes! This cooperation project was developed within the network of the '3DPC & Friends'. Last year's winner "Hyperganic", star designer and juror Ross Lovegrove and partner Materialise came together to develop the '3DPC Trophy'.

The "1st Prize Winner" of the 3DPC 2020 was the University of Toronto's "ReverTome Handheld Bioprinter", the project by Richard Cheng, Gertraud Eylert, Jean-Michel Gariepy, Sijin He, Yizhou Gao, Hasan Ahmad, Marc Jeschke and Axel Guenther. ReverTome is a handheld surgical instrument that uniformly delivers skin precursor sheets over large full-thickness burns to improve wound healing. It was clear to the jury that this project in the MedTech category had to be the overall winner of the 3DPC 2020, announced Arno Held of AM Ventures: "This mature functional device, that is being used in one of the most important sectors of mankind, combines innovative additive technologies and revolutionary new materials." The team around Richard Cheng was awarded with the prize money of € 10.000. In addition, the "3DPC Trophy", which was awarded for the first time, will start its journey to Canada.

The jury decided to also select a winner in the corresponding sub-category COVID-19 through this year's submissions on the current developments around Corona. The pioneer in this respect was the Italian project "Isinnova - Easy Covid19" by Cristian Fracassi, Alessandro Romaioli, Marco Ruocco, Lorenzo Abeni and Davide Sabaini.

The creation of a 3D printed valve as an open source file, to connect a snorkeling mask with an oxygen dispenser, to create an emergency respiratory mask, tried to catch bottlenecks in medical care - it was the starting point for further initiatives in the Corona crisis. Sonita Lontoh from HP awarded the prize money of € 5,000 with the jury comment: "The team of Isinnova was able to



translate their compassion, empathy and ingenuity into real action that is saving lives. Furthermore showcasing the role of 3D printing in ensuring that mission critical applications can be quickly designed and produced during tough times like this.“

The best student work was "Re-Textiles 3D" by Ganit Goldstein from the London Royal College of Art in the discipline FashionTech.

With her contribution of a fully customized 3D printed dress produced from 100% PET recycled plastic bottles waste filament which is printed directly on natural fabric, she received the prize money of € 2.500 and additionally the 3D printer "MakerBot Replicator+".

The other 8 winners could look forward to a prize money of € 2.500 each in addition to the book and licence prizes.

The submission "ATLANT 3D NANOFABRICATOR™ ATOMIC LAYER 3D PRINTER" by Maksym Plakhotnyuk, Ivan Kundra and Julien Bachmann, of the Danish company ATLANT 3D Nanosystems, was the winner in the vertical Electronics.

The first 3D printer for rapid prototyping of nano-devices for advanced electronics and sensors that is 10x faster, cheaper and allows more design flexibility, convinced the jury.

In the category Architecture, the Swiss entry "Augmented Additive Fabrication" by Fadri Furrer, Timothy Sandy, Abel Gawel, Fabio Gramazio, Matthias Kohler, Kathrin Dörfler, Daniela Mitterberger and Foteini Salveridou of ETH Zurich\_incon.ai won. With the custom visual-inertial tracking system, it's possible to track individual objects and to guide a worker to form an input 3D model using augmented reality.

With their submission "Dual-metal laser powder bed fusion" the Belgian cooperation project of Aerosint SA and Aconity 3D GmbH convinced in the discipline Material. This is the first-ever dual metal part produced with "laser powder bed fusion technology" made of 316 L stainless steel and CuCrZr.

nTopology and with it Fabian Grupp, Maiki Vlahinos and Ryan O'Hara won in the vertical Digital. Submitted was "Fuel Cooled Oil Cooler", the Computational design of fuel-cooled oil cooler FCOC, using nTop Platform and ANSYS CFX, printed in Aluminum 7A77.60 alloy from HRL Laboratories.

The French team of "HEXA Surfboard", is reinventing surfboard manufacturing. They offer durable, tailor-made surfboards that are made from bio-based materials. Léo Bouffier, Sylvain Fleury and Mylene Wang were awarded in the Design category by Ross Lovegrove.

The US pioneers Emerging Objects, with Ronald Rael, Virginia San Fratello, Sandy Curth, Logman Arja and Danny Defelici, won in the category Sustainability. With "Mud Frontiers", they explore the use of local materials for the development of 3D printed architecture using custom robotics and software on-site.

The URWAHN Engineering GmbH around Sebastian Meinecke scored in the discipline Mobility with their "Platzhirsch", the first serial 3D-printed e-bike which convinced with sophisticated design resulting in a unique organic frame shape and a multitude of integrated technical refinements.

In 2020 it became clear how strongly each category was represented, as pioneering achievements in all 10 disciplines could be selected and awarded.

The roadshow, during which the finalists will subsequently be presented at various national and international locations and events, will be planned depending on further developments and corona regulations. In cooperation with the association Verband 3DDruck e.V., the first stop of the roadshow will already take place at the 3DKonzeptLab in Berlin from 17 to 18 September.



Tender documents for the 3DPC 2021 will be published in November 2020. with exhibition at Rapid.Tech 3D from 4-6 May 2021. At Rapid.Tech 3D 2021 (4-6 May 2021) also the 3DPC 2020 finalists will be presented.

The digital award ceremony is also available afterwards at [www.3dpc.io](http://www.3dpc.io), [www.rapidtech-3d.com](http://www.rapidtech-3d.com), and on the 3D Pioneers Challenge YouTube channel: [www.youtube.com/channel/UCJ4Yt8M936R0hp\\_CjflziYQ](http://www.youtube.com/channel/UCJ4Yt8M936R0hp_CjflziYQ) .  
The individual contributions to the virtual event are available separately.

#### Facts 3DPC 2020

- 5<sup>th</sup> time of 3D Pioneers Challenge
- Amount Jury: 21 experts
- Amount verticals: 10: **Architecture, Design, Digital, Electronics, FashionTech, Material, MedTech, Mobility, Sustainability, Covid-19**
- Amount Partners: 29 Big Player from industry, press, design, medicine, education and software
- Amount countries of submissions: 28
- Amount continents: 6
- Amount finalists: 52
- Prize money: 35.000 €, donated by the Thuringian Ministry of Economics, Science and Digital Society
- 1<sup>st</sup> prize winner: 10.000 €
- Overall winner received additionally „3DPC Trophy“
- Best Student: Makerbot awards the 3D printer
- Special Mention by Autodesk: 3 winners have the opportunity to continue their pioneering work on site at the technology centers. T (San Francisco, Boston oder Toronto) fortzuführen.
- 10 winners in 10 verticals
- additional prizes by 3DPC partners Autodesk, 3D Hubs and avedition

#### Jury 3DPC 2020

- Stefanie Brickwede\_Deutsche Bahn, Mobility goes Additive e.V.
- Diana Drewes\_Haute Innovation
- Prof. Dr. Claus Emmelmann\_Fraunhofer IAPT
- Arno Held\_AM Ventures
- Marco Kormann\_adidas
- Prof. Dr. Manuel Kretzer\_Anhalt University of Applied Sciences in Dessau
- Andrej Kupetz\_German Design Council
- Sonita Lontoh\_HP, 3D Printing Business
- Ross Lovegrove\_Lovegrove Studio, GB
- Dr. Cora Lüders-Theuerkauf\_Medical goes Additive e.V.
- Prof. Shlomo Magdassi\_Hebräische Universität Jerusalem, ISR
- Dr. Marco Nock\_EOS Innovation Management
- Silvia Olp\_aed e.V., Architecture,Engineering and Design
- Jessica Rosenkrantz\_Nervous System, USA
- Prof. Patrik Schumacher\_Zaha Hadid Architects, GB
- Vanessa Sigurdson\_Autodesk Technology Centers, USA
- Dr. Dirk Simon\_FARSOON Europe
- Joachim Stumpp\_raumPROBE
- Andreas Velten\_IFA3D Medical Solutions
- Christoph Völcker\_Würth Innovation Lab - Advanced Manufacturing
- Janine Wunder\_German Design Council

#### Partner 3DPC 2020

Thuringian Ministry of Economics, Science and Digital Society, 3Druck.com, 3dbpm, 3DHubs, 3Dnatives, aed e.V. - Architecture, Engineering and Design Stuttgart, AI People, ALL3DP, AM Ventures, Autodesk, av edition, canto, eos, designspotter, Deutsche Bahn, Farsoon Europe, FIT AG, Fraunhofer IAPT, Haute Innovation, hp, MakerBot, materialise, Medical goes Additive e.V., Mobility goes Additive e.V., ndion\_News on Design, German Design Council, raumPROBE, Stratasys, Studio Deussen, Verband 3DDruck e.V., Würth

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#### **About Rapid.Tech 3D**

**Rapid.Tech 3D** is the leading European congress and exhibition in the field of Additive Manufacturing. Under the motto „Understanding, Seeing, Experiencing“, developers, users and experts from the scene will come together from 4 to 6 May 2021 to inform themselves and exchange information about progress and specialist knowledge in Additive Manufacturing. With user-oriented presentations at the trade congress, the 3D Printing Conference, numerous networking opportunities and over 200 exhibitors at the trade exhibition, Rapid.Tech 3D is a top-class meeting place for the industry that is unique in this form.

#### **About 3DPC**

3DPC - the international platform for pioneers in 3D printing - offers with the competition for Additive Manufacturing processes the stage for all enthusiasts who deal with new technologies using 3D printing to push their projects.

#### **3DPC and friends**

The 3DPC platform lives the paradigm shift in design - with its worldwide network of high-tech pioneers. "3DPC & Friends" connects these creative minds with the industry in a targeted manner, generating new, groundbreaking projects in which everyone can live out their expertise. "Lock creative minds together in a room, shake the place up and see what happens." Design rethought! So the 3DPC shows today what tomorrow will bring. -Pushing boundaries.

#### **About d.sign21**

The design and consultancy company with a wealth of experience in developing and organising design challenges. Its expertise in design, additive technologies and the global network supports the 3D Pioneers Challenge.

**Save the Date:** Messe Erfurt, Rapid.Tech3D 2021: 4-6 May 2021!

Tender documents for the **3DPC 2021** will be published in November 2020

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