iGEM 2015

iGEM COMPETITION

The international Genetically Engineered Machine (iGEM) competition is the largest synthetic biology competition for collegiate students. It aims to combine and create novel biological (genetic) parts, which can be incorporated in an organism, thereby equipping it with new functions.

This year our work will be presented at the Giant Jamboree to the international scientific community in Boston in September 2015. An iGEM project consists of lab work, modeling, policy & practice and public outreach with results being documented on a wiki page.

AWARDS

2008 **Best wiki page**
Temperature sensing *E. Coli*

2009 **Best information project**
Cell-to-cell communication system

2010 **FINALIST | Best presentation**
Cleaning oil spills with bacteria

2012 **Best debate**
A modular system for detecting volatile compounds

2013 **Gold medal**
Antimicrobial peptides to kill antibiotic resistant MRSA

2014 **Best Microfluidics project**
Detection of landmines

THE PROJECT

Different species of bacteria, algae and fungi can produce biofilms. Biofilms are microorganisms living in cell clusters on surfaces, such as dental placque. Within a biofilm the microorganism benefits from increased protection from antibiotics and the immune system.

Antibiotic resistance and insufficient methods for removing biofilms are still an issue, for example in medical implantations. Hence, profound investigation of biofilm formation and its removal is essential in medical sciences and commercial products.

We will engineer bacteria that can be linked to each other through nanowires with the goal of generating a well-defined biofilm structure using a 3D printer. The fast and efficient formation of a biofilm using a 3D printer promises improved reproducibility and experiment consistency, which may lead to advances in anti-biofilm products.

3D MICRO(BE) PRINTING

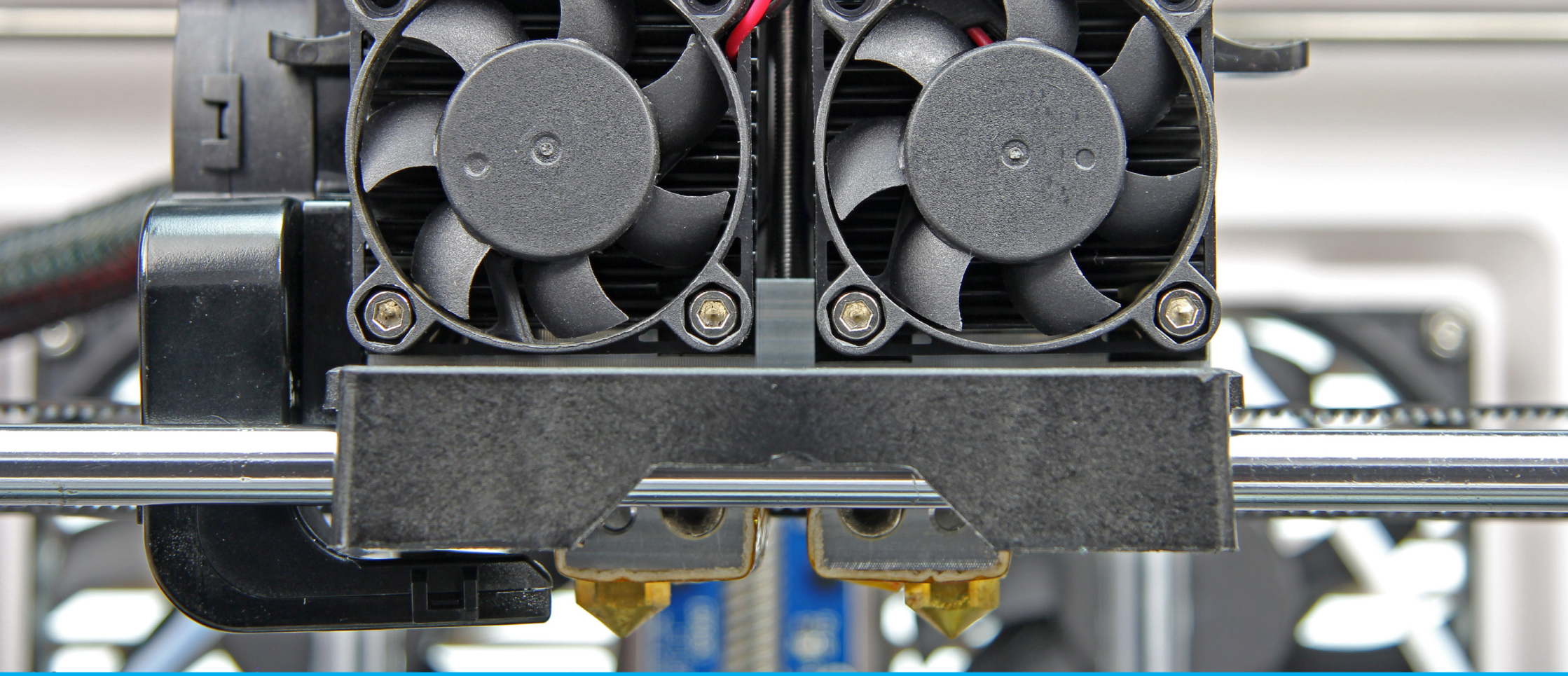
Another novel application of this technique is the immobilization of enzymes on the nanowires using affinity binding, which overcomes substrate uptake limitations by cells and improves reusability of the enzymes.

The mechanical stability and adhesive properties can be improved by integrating this technique with specific mussel proteins, which are employed by nature to attach the mussel to surfaces as an underwater adhesive. We envision this to be used in medical applications and environmental biotechnology.

THE TEAM

Our team consists of nine ambitious students with interdisciplinary backgrounds from Delft University of Technology and Rotterdam University of Applied Sciences. The team is advised by experts in the fields of biotechnology, bionanoscience and applied physics.

Max van 't Hof | Stefan Marsden
Tudor Vlas | Samantha Basalo Vázquez
Héctor Sangüesa Ferrer | Michelle Post
Liana Uilecan | Marit van der Does
Anne Rodenburg



iGEM: A TU DELFT DREAM TEAM

As our sponsor, you have the chance of adding a group of intelligent, high-achieving students to your professional network. Your investment will allow you to position yourself as a possible employer in this diverse field not only within our team, but throughout our extended network. The iGEM Delft team is well known among students and its progress and success is followed by 500 users on Facebook, 400 on Twitter and on LinkedIn. We will keep our followers up to date with regular reports on our progress and information of our supporters.

Finally, with our prototype of a 3D biofilm printer in hand, we will travel to Boston to take part in the Giant Jamboree, a grand event hosting over 2100 attendants. This final event expands our audience to the global synthetic biology community during our presentations and workshops hosted in Boston.

Promotion of biotechnology as part of public relation efforts is a central concept of the iGEM competition. Over the past years TU Delft iGEM teams have successfully attracted national media attention with articles in the online portals of Ad.nl, Telegraaf.nl, kennislink.nl, a two-page article in NRC Handelsblad and a report on NOS in 2014. In the spirit of previous years, our intention is to raise public awareness and promote our project via large newspapers, TV and social media.

SPONSOR POSSIBILITIES

As our sponsor, you gain public attention through our multiple channels and benefits of direct contact with the talented students and supervisory body of our team. Therefore, your partnership with us translates into excellent networking and media opportunities! We are interested in both financial support and in kind donations. We propose a set of packages that indicate privileges depending on the contribution amount. Privileges and sums can be negotiated.

Benefits	Supporter	Sponsor	Partner
Contribution	€ 750	€ 1500	€ 3000
Logo on our website	S	M	L
Logo on Facebook page	●	●	●
Choice of a featured post on one of our media channels	●	●	●
Mention in press releases as official sponsor		●	●
Contact with entire iGEM team and CV access		●	●
Featured post on social media (Twitter, Facebook)		●	●
Logo on final competition T-shirts		●	●
Invitation to outreach events and/or promotional material distribution			●
Logo on banners and outreach materials			●
iGEM team presence at company event			●

CONTACT

If you still have questions, do not hesitate to contact us!

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