

## EXCELLENCE NEWSLETTER

2 July 2018

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## Dear Readers,

The final Future Lab for the time being took place on 31 May 2018. During a total of six events of this kind held between **January and May 2018**, key questions were discussed, **envisioning** the TUD anniversary year of 2028 and concerning the proposal in the University of Excellence funding line of the German Federal and State Governments.



**So, what are the next steps and what happens to the ideas and suggestions collected?** From the minutes, documentations are being drawn up and made **available online for all members of TUD**. The documentations form the basis for deriving recommendations for action and for preparing concepts. A number of suggestions from the Future Labs can be implemented quickly, while some medium and long-term topics will be, in part, incorporated into the new University of Excellence proposal, preparations for which are already in full swing.

The “lift” generated by the Future Labs will provide an inspiring basis for the coming months up until the application deadline of **10 December 2018**. Now, it is a matter of keeping our fingers crossed until **27 September 2018**: that is when the announcement will be made which of our **six proposals for Clusters** have been approved and whether we are entitled to apply for the “University of Excellence” funding line.

## Trefftz Programme Restructured

In 2018 and 2019, TUD's **Trefftz Programme** will continue to enable **temporary visiting professorships for women** at faculties and in central academic units.

The programme supports the strategic recruitment of outstanding female scientists in those faculties where medium-term appointments are planned, and makes an early screening of potential candidates possible. As part of the restructuring, the programme now also offers help with the active search for potential guest researchers.

Please address inquiries and applications to **Katrin Saure** at the **Staff Unit Diversity Management**.

## New Visiting DRESDEN Fellows

TUD would like to welcome **seven new visiting scientists**: under the **DRESDEN Fellowship Programme**, they have **started their stays of up to six months at TUD** in recent weeks in order to further develop scientific collaborations and joint research projects.

## DDc Science Exhibition Now in the Rectorate Garden

After stopping in Dresden, London, Wrocław and Prague, the **DRESDEN-concept (DDc) Science Exhibition** has found its way back to Dresden and has now been given a location on the central campus: the interactive exhibition can be visited for at least the next two years in the front garden of the Rectorate Building at **Mommsenstraße 11**.

## DDc Tram Operational from August

The **DRESDEN-concept (DDc) research alliance** will be sending a **specialty designed tram** on to Dresden's tram tracks from August 2018. The tram will be operating for one year as part of the regular scheduled service of Dresden's public transport company (DVB). It will also be used by DDc partners for special trips.

In addition to the **inaugural trip** for international guest researchers and DDc German scholarship holders on **3 August 2018**, there will be workshops, science slams and individual city tours, passing by the sites of the DDc partners. More information is available on the **DDc website**.

## Ship Ahoy with DRESDEN-concept

400 (junior) scientists and institute directors from almost all **DDc partner institutions** spent four hours sailing up the River Elbe and back to Dresden on 20 June 2018. Whether you are a biologist, a mechanical engineer, a business engineer or a political scientist, it is a rare occurrence to encounter all subject areas of the university in such a confined space. High-spirited conversations, music by the band Tumbacaria, and the route along the Elbe castles created a special atmosphere that inspired the passengers to think laterally and to network.

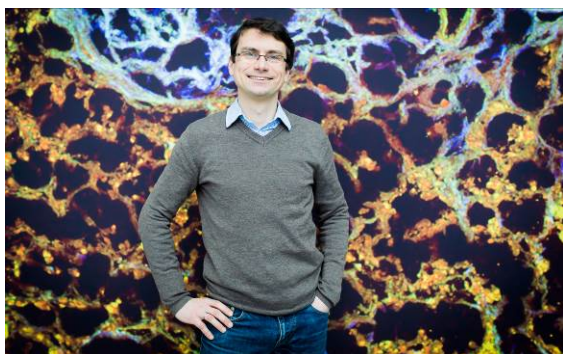
## DLR Institute is New Partner in DDc Alliance

The **DLR Institute of Software Methods for Product Virtualization** has been based in Dresden since August 2017 and is the latest **new partner in the DRESDEN-concept alliance**. This means that the science and culture network, which is unique in Germany, now has 27 partners.

## cfaed Researcher Wants to Investigate Muscle Formation

The contraction of a muscle occurs when so-called myofibrils contract simultaneously in each individual muscle cell. Each of these fibrils represents an exact pattern of hundreds of identical units, consisting of different protein molecules. It is still not understood how these individual building blocks seem to arrange themselves into **highly regular patterns** "of their own volition" during embryonic development or healing processes.

An **international team including physicist Dr. Benjamin Friedrich**, head of the Biological Algorithms Group at the Center for Advancing Electronics Dresden (cfaed), has acquired a major research contract with the "Human Frontier Science Program" to investigate this question.



Dr. Benjamin Friedrich (Photo: Katharina Knaut)

### cfaed Explores Dynamic Processes Behind Power Grid Failures

Chain reactions of failures in various technical infrastructures are the cause of many "blackouts" of entire networks, such as large parts of the European power grids. The **modelling of these kind of cascading failures** has so far been concentrated primarily on the investigation of failures in individual infrastructures – however, the dynamics between these events have not been taken into account.

The cfaed Chair of Network Dynamics (Prof. Marc Timme), together with other European partners, has investigated this topic and now presented an analysis scheme that also includes the specific network dynamic influences in the calculation. The related work was recently published by Nature Communications.

### cfaed Group Leader Receives Mentoring Prize

cfaed Research Group Leader Dr. Thorsten-Lars Schmidt (DNA Chemistry research group) has won the "**Outstanding Mentor**

**Award"** of the Dresden International PhD Program (DIPP). This prize is awarded by a doctoral candidates committee to outstanding mentors of the DIPP and the International Max Planck Research School for Cell, Developmental and Systems Biology.

### cfaed Moves into New Building

The new building for the Center for Advancing Electronics Dresden (cfaed) in the south wing of the Barkhausen Building is almost complete. Many of the previously scattered cfaed groups have already moved in: the Chairs of Organic Devices, Compiler Construction, Network Dynamics, and Processor Design as well as the research groups "Biological Algorithms" and "Networked Embedded Systems" can now be found at **Helmholtzstraße 18**. The Dresden Center for Nanoanalysis (DCN) team has already moved in, too. Also, cfaed's administration is now located in the new building.

### Internship for School Pupils at CRTD

From 16 to 27 April and from 19 April to 3 May 2018, a total of 14 pupils from Dresden's "Romain Rolland" grammar school (9th grade) and the "Ernst Lößnitzer" vocational school centre (11th grade) visited the Center for Regenerative Therapies Dresden (CRTD) for a two-week industrial internship, during which they **got to know various departments and conducted small experiments**.

### Humboldt Professorship for Michael Sieweke

Prof. Michael Sieweke was awarded one of ten Alexander von Humboldt Professorships on 8 May 2018. The idea behind these professorships – each endowed with five million euros – **is to attract top international researchers to German universities**. TU Dresden and the CRTD have now successfully achieved this in the person of internationally renowned immunologist Michael Sieweke. Prof. Sieweke heads the group

“Stem Cell and Macrophage Biology” at the CRTD and will dedicate his Humboldt Professorship to research into declining tissue regeneration in old age.



Ceremony on 8 May in Berlin (from left to right): Anja Karliczek (Federal Minister of Education and Research), Prof. Michael Sieweke, Prof. Hans-Christian Pape (President of the Humboldt Foundation)  
(Photo: Humboldt Foundation/ Svea Pietschmann)

## Dementia Action Day at the CRTD a Success



(Photo: CRTD)

More than 100 inquisitive Dresdeners attended the second Dresden Dementia Action Day at the CRTD on 16 May 2018. This event is organised jointly by the CRTD, the German Center for Neurodegenerative Diseases, the Volkshochschule Dresden and the University Hospital Carl Gustav Carus.

The organisation team was very pleased with the event, and also with the newly arising opportunities for co-operation between exhibitors. The next Dementia Action Day will take place in **May 2019**.

## Voluntary Social Year at CRTD

For the third time now, the CRTD is offering ten places for a voluntary social year (FSJ), which will start in September 2018. The CRTD is one of only three research institutions in Germany to offer the chance to spend a year as a volunteer in a scientific context.

Participants gain **insights into everyday work in the lab**, where they experience the daily routines and tasks of scientists and laboratory technicians. The voluntary service thus provides **orientation for the future choice of a university course and a profession**.

The FSJ at the CRTD is offered in collaboration with the German Red Cross (DRK). Applications are currently being viewed.

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