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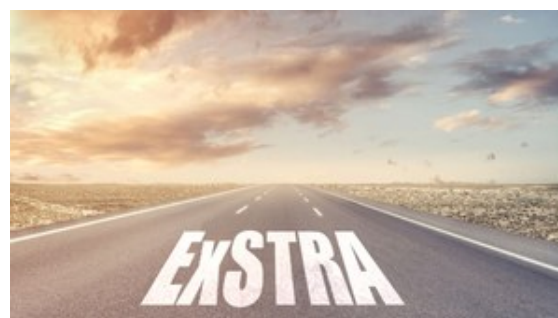
CLUSTERS OF EXCELLENCE

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Dear Readers,

Since 1 January 2019, funds have been flowing from the [Excellence Strategy](#) for the **three new Clusters of Excellence** at TU Dresden. The Centre for Tactile Internet (CeTI), the Cluster "Physics of Life" (PoL) as well as the Cluster qt.qmat, jointly acquired with the University of Würzburg, have started their work and are currently building up their teams.

Information on **current job vacancies** can be found on the respective cluster websites.



A decisive milestone in the ongoing competition for the [Excellence Strategy \(ExStra\)](#) is scheduled for **20 and 21 February 2019**. An on-site evaluation will take place at TU Dresden by an international committee of experts from the [German Council of Science and Humanities \(Wissenschaftsrat\)](#). Preparations for this two-day evaluation have already been under way for months. The basis for this evaluation is the **"University of Excellence" proposal** submitted on 10 December 2018. The proposal can now be viewed in the internal area of the TUD website (for university members with ZIH login only).

After the evaluation it is time to be patient: Only on **19 July 2019** will we know whether the hard work of recent months and years has been crowned with success and whether TUD has been able to defend its excellence status.

Five New TUD Young Investigators Appointed

Since December last year, the University Executive Board has appointed **five new TUD Young Investigators** to the Faculties of Physics, Chemistry and Food Chemistry as well as Computer Science:

- Dr. Florian Jug
- Dr. Katerina Falk
- Dr. Franziska Lissel
- Dr. Abhinav Sharma
- Dr. Christoph Zechner

The "TUD Young Investigator" status introduced as part of TUD's *Institutional Strategy* strengthens the position of excellent, **independent research group leaders** by integrating them more closely into the faculties and offering them a range of qualifications tailored specifically to their needs.

Register Now for SprInt Language Courses

Registration for the **new English courses** within the *SprInt Programme* has now started. Registration is open until **11 March 2019**, and courses are expected to start on 8 April. All registration information is available online.

Application Phase for TUD Staff Training Week Under Way

For the fourth time, a **Staff Training Week** for science managers of international universities or research institutes takes place at TU Dresden.

Under the title "**Navigating the Challenges of Modern Universities**", participants will have the opportunity from **3 to 7 June 2019** to exchange ideas and receive further training in four subject areas at TU Dresden.

Further information and the registration form are available online. Registration is open until **28 February 2019**.

Prof. Eckhard Beyer Is New DDC Managing Director

Professor Eckhard Beyer is a founding member of **DRESDEN-concept (DDC)** and played a decisive role in the strategy of the worldwide unique research alliance.



Prof. Eckhard Beyer (left.), Prof. Ludwig Schultz (Photo: DDC)

Now he succeeds Professor Ludwig Schultz as Head Office Manager of **DRESDEN-concept**. In this function, Prof. Beyer assumes a **mediating role** between politics, business, other scientific institutions and the research alliance **DRESDEN-concept**.

Dresden Physicists Develop Labels of the Future

A team of physicists led by *cfaed*-investigator **Prof. Sebastian Reineke** has succeeded in **storing information in fully transparent foils in a completely new way**.

This innovative idea promises **broad application options**: Information such as bar codes, product numbers or addresses can be hidden specifically and read out only when required. At the same time, the invisible labels also offer new possibilities for document authentication and forgery protection.

Electrical Conductivity in Doped Organic Semiconductors Identified

Organic semiconductors permit a wide range of electronic applications. In order to break into further market segments, however, there is still a need to improve performance. Doping is the answer; that is the targeted introduction of foreign atoms into the semiconductor material. To date, there has been no fundamental physical understanding of charge transport in doped organic semiconductors.

Researchers from the [Dresden Integrated Center for Applied Physics and Photonic Materials \(IAPP\)](#) and the [Center for Advancing Electronics Dresden \(cfaed\)](#) at TU Dresden, in co-operation with Stanford University (USA) and the Institute for Molecular Science in Okazaki (Japan), have now identified the key parameters that influence electrical conductivity in doped organic conductors.

Alexander von Humboldt Fellows Visit TUD

In January 2019, two young researchers began their work at TUD as part of a Humboldt Research Fellowship for Postdoctoral Researchers. Their hosts are two investigators at the [Center for Advancing Electronics Dresden \(cfaed\)](#).

Prof. Xinliang Feng welcomed **Dr. Haixia Zhong** from the Changchun Institute of Applied Chemistry (China). The scientist specialises in **electrochemistry** and will spend two years working on the topic "Synthesis of 2D-organic molecular structures and their application in electrocatalysis".

Prof. Thomas Heine welcomed **Dr. Miroslav Polozij** from the Charles University in Prague. Dr. Polozij works in the field of **"Theory and Modelling"** and will also spend two years at cfaed. His topic is "Single-device molecule detectors based on two-

dimensional framework/two-dimensional crystal heterostructures".

The Humboldt Foundation awards approximately 450 to 500 [Humboldt Research Fellowships](#) annually to postdoctoral researchers. With this programme, a self-chosen, **long-term research project** (6-24 months) can be carried out in co-operation with a self-chosen scientific host at a research institution in Germany.

Dr. Mareike Albert Is New CRTD Research Group Leader



Dr. Mareike Albert (Photo: CRTD)

Dr. Mareike Albert is new research group leader at the [Center for Regenerative Therapies Dresden \(CRTD\)](#). As a scholarshipholder of the Emmy Noether Programme of the German Research Foundation (*Deutsche Forschungsgemeinschaft*), she is heading the research group on **"Gene regulatory mechanisms of the evolution of the neocortex"**.

Dr. Sandoval-Guzmán is mentee of the Maria Reiche Programme

Dr. Tatiana Sandoval-Guzmán has been research group leader at the [Center for Regenerative Therapies Dresden \(CRTD\)](#) since 2017. Now she is a mentee in the current rotation of TUD's [Maria Reiche Programme](#).



Dr. Tatiana Sandoval-Guzmán (Photo: CRTD)

"The programme included workshops on various topics such as career planning, scientific communication, networking, third-party fundraising, presentation, etc. I have been able to further develop my personal skills and have gained a more solid view of my scientific career".

The **Maria Reiche Programme** is aimed at female habilitated and postdoctoral students at TU Dresden and has been in existence since 2012. The aim of the programme is to offer women who have chosen a path in science **long-term support by experienced professors**. In addition to access to relevant networks and individual counselling, participants benefit from a wide range of **training opportunities** and an individual **funding budget**.

Dr. Sandoval-Guzmán also reported on her experiences as Maria Reiche mentee in the 15 January-issue of the University Journal (only available in German).

New Microscopy System for CMCB

The technology platform of the Center for Molecular and Cellular Bioengineering (CMCB) is attractively expanded by a new large-scale facility. The new **microscopy system** - a Leica SP8 DIVE FALCON LIGHTNING system with photo manipulation - is expected to be installed in the CMCB Service Facility for Light Microscopy (LMF) in summer 2019 and will be available to all scientists at TUD and beyond.

The most innovative technology that the new system will offer is **fast fluorescence lifetime measurement after one or two photon excitation**. This technology allows the determination of intracellular metabolites as well as the measurement of numerous biophysical parameters in living cells.

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