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10 October 2019

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Dear Readers,

The last month of funding as part of the Excellence Initiative has begun. From **1 November 2019**, the funds of the [Excellence Strategy](#) will flow and the implementation of the measures from our Excellence Application "TUD 2028 – Synergy and beyond" will start.

Two New Interdisciplinary FLiK Modules in the Winter Semester

The Centre for Interdisciplinary Learning and Teaching (ZiLL) is organising two "FLiK" modules ("Research and Learning in an Interdisciplinary Context") in the 2019/20 winter semester:

The module "Invectivity" deals in its introductory lecture series (Tuesdays, 2.50-4.20 pm, HSZ/403) with **insults, disparagements and abuse in social communication**. The course is aimed in particular at students of history, art history, sociology, German studies, Italian studies and classical philology, who will learn to better understand and classify disparagement and abuse from the perspective of various disciplines. **Prof. Gerd Schwerhoff** (Chair of Early Modern History) is responsible for the module, enrolments are still possible.

The FLiK module "Human-Machine-Interaction in Industrial Production Systems" addresses the question of **how humans and machines in complex industrial production systems are challenged in their interactions** and how these challenges can be shaped by digitalisation technologies and other interventions.

In the research workshop with accompanying methodology seminar (both on Fridays, 2.50-6.10 pm, HSZ/103/U), individual research projects are developed, discussed and implemented in interdisciplinary working groups with expert support. The module is primarily aimed at students of processing

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and textile machine construction, vocational education, automation technology and human performance in socio-technical systems. **Dr. Romy Müller** (Chair of Engineering Psychology and Applied Cognitive Research) is responsible for the module, enrolments are still possible.

New Sprint Workshops in the Winter Semester

The new **intercultural workshops** within the **Sprint Programme** have been available for registration on the **Sprint website** since **Monday, 7 October, 10 am**. Registration for the courses is always possible.

ERC Starting Grant for TUD Young Investigator



For the "3D-Part-Form" project, **Dr. Julian Thiele** has secured an ERC Starting Grant from the **European Research Council (ERC)** amounting to approx. **1.5 million euros**. Over the next five years, the ERC will support the development of a **novel approach in additive manufacturing** that meets the complex requirements of polymer materials in sensor technology, information processing, robotics and bio-inspired structures.

Since 2015, Dr. Thiele has been working as an independent junior research group leader at the **Leibniz Institute for Polymer Research Dresden (IPF)**. The University Executive Board awarded him the status of **TUD Young Investigator** in 2017.

„Processes of Ageing“ – SAN Kick-Off on 29 October

DRESDEN-concept (DDc) launches another **Scientific Area Network (SAN)** on the subject of ageing. During the kick-off event on **29 October 2019, 5-8 pm in the Klemperer-Saal of the SLUB**, research results of various DRESDEN-concept partner institutions will be presented.

In addition to **biomedical basic research**, aspects of **lifestyle and nutrition** that can influence ageing processes will be examined. Rising life expectancy also requires new approaches to the **living environment and the participation of the elderly** in our society. **Art historical and cultural science aspects** provide insights into the perception of old age in different epochs and regions of the world.

Registration for participation is **possible at any time** via www.sanaltern.eventbrite.de. The event will be held in German and English. The kick-off event will be followed by more events to intensify networking with the aim of initiating concrete research projects.

“Meine grüne Stadt und ich” in the DDc Tram Again

Due to the large crowd at the first appointment in May, the special tour **“Meine grüne Stadt und ich”** will be repeated in the **DRESDEN-concept-Tram** on **4 November 2019 at 5 pm**. The tour starts at **Straßburger Platz** (stop of line 10 in the direction of Messe).

Scientists from the **Hygiene Museum**, the **Senckenberg Collection**, the **Leibniz Institute of Ecological Urban and Regional Development** and **TU Dresden** will show what the Dresden science community can contribute to making the city even greener and what we can do ourselves to preserve and enhance urban green spaces.

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As always, tickets are **free of charge** and can be reserved at greenride-no2.eventbrite.de.

Synthesis of 2D Polymers Successful for the First Time at cfaed

Scientists at the Center for Advancing Electronics Dresden (cfaed) have for the first time succeeded in **synthesising sheet-like 2D polymers by a bottom-up process**, a targeted step-by-step structure of the molecule layers. A novel synthetic reaction route was developed for this purpose. The 2D polymers consist of only a few single atomic layers and, due to their very special properties, are a **promising material for use in electronic components** and systems of a new generation.

The research result is a collaborative work of several groups at TU Dresden and the University of Ulm. The **cfaed Chair for Molecular Functional Materials** (Prof. Xinliang Feng) was in charge of the project. The **cfaed Chair for Organic Devices** (Prof. Stefan Mannsfeld) also contributed to the groundbreaking results.

The study was recently published in two related articles in the scientific journals "**Nature Chemistry**" and "**Nature Communications**".

Dr. Nicolas Lorente Researched as Dresden Fellow at the cfaed

Dr. Nicolas Lorente from the "Centro de Física de Materiales" and the "Donostia International Physics Center (DIPC)" joined the **Center for Advancing Electronics Dresden (cfaed)** in September 2019 as a Dresden Senior Fellow as part of the **Dresden Fellowship Programme**. He was hosted by cfaed Research Group Leader Dr. Francesca Moresco (**Single Molecular Machines Group**).

His research interest focuses on **quantum phenomena on surfaces**. On 18 September, he gave a public guest lecture on "Weakly-

bound supramolecular structures: calculations for understanding experiments with the scanning tunneling microscope".

Dr. Natalia Rodríguez Muela Is New Research Group Leader at the CRTD



Before **Dr. Natalia Rodríguez Muela** came to Dresden, she conducted research at the **Department of Stem Cell and Regenerative Biology** at Harvard University (USA) and at the **Biological Research Center of the Spanish National Research Council (CIB-CSIC)** in Madrid.

Her research focuses on **neurodegeneration** and the question of why neurons of the same type react differently to neurodegenerative diseases. Dr. Natalia Rodríguez Muela has obtained an **ERC Starting Grant** for her research work.

As research group leader, Dr. Muela will work both at the **German Center for Neurodegenerative Diseases (DZNE)** and at the **Center for Regenerative Therapies Dresden (CRTD)**.

CRTD is on the Trail of Regeneration Processes

Mammals, including the humans, are able to regenerate the outermost finger-limb while body-parts lying further to the torso don't regenerate. Why is man limited in his regeneration? And is it possible to promote the ability to regenerate?

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These questions are the focus of the scientific work of **Dr. Tatiana Sandoval Guzmán** (photo) and her research group at the [Center for Regenerative Therapies Dresden \(CRTD\)](#).

With the support of the [German Research Foundation \(DFG\)](#), the group can now investigate in detail [how bones are formed during the regeneration process](#). To this purpose, the research group receives a three-year grant from the DFG.

GWT Open House with ct.qmat on 7 November

The GWT Open House event on 7 November 2019 will be dedicated to the Cluster of Excellence "Complexity and Topology in Quantum Materials" (ct.qmat). Under the title "[New Materials for the Technologies of the Future](#)", the new cluster will present itself and introduce perspectives and visions for the work of the coming years.

The event starts at **4.30 pm** and takes place at the [Center for Molecular Bioengineering \(B CUBE\)](#), Tatzberg 41.

Please register by sending an e-mail to:
veranstaltungen@gwtonline.de

Official Kick-Off Event of the ct.qmat Cluster of Excellence

The Cluster of Excellence "Complexity and Topology in Quantum Materials" (ct.qmat), which is operated in cooperation with TU Dresden and the University of Würzburg, started its work in January 2019.

On **28 August 2019**, there was time to celebrate the joint success in the Excellence Strategy: The [official inauguration of the Bavarian-Saxon cluster took place](#) in the Fürstensaal of the Würzburger Residence.

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