MAPEX CALENDAR 2019

2 September	MAPEX Lunch Meeting for early career researchers
1 October	MAPEX Lunch Meeting for early career researchers
1 October	Neighbour visit BIAS
23 October	MAPEX General Assembly
1 November	MAPEX Lunch Meeting for early career researchers
5 November	9th MAPEX Early Career Researcher Workshop – science meets industry
2 December	MAPEX Lunch Meeting for early career researchers

More events, seminars, and talks related to MAPEX topics:
www.uni-bremen.de/en/mapex > what's new? > calendar

Universität Bremen

MAPEX Bremen
Material. Process. Excellence.

www.uni-bremen.de/mapex

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NEWSletter

MAPEX RESEARCH LANDSCAPE

Materials Informatics – new research area
During the last general assembly, the MAPEX members expanded the MAPEX research landscape to include the newly emerging field of Materials Informatics.

MATERIALS

- Soft and hybrid materials
- Metals
- Porous materials
- Nanomaterials
- Semiconductors

TECHNO-LOGIES

- Manufacturing engineering
- Materials engineering
- Process engineering
- Energy-related technologies
- Photonics

METHODS

- Materials synthesis and characterization
- Process modelling
- Materials modelling
- Materials informatics
- System integration

International Advisory Board enlarged

Since last year, Anke Kleinschmit and André Walter are new members of the MAPEX International Advisory Board. Both of them are highly distinguished personalities from industry, whose support and guidance will be of invaluable benefit for MAPEX. André Walter, who recently became head of plant and industrial site for Airbus Operations GmbH in Hamburg, joined the MAPEX general assembly in October 2018. Anke Kleinschmit, executive board member development at ANDREAS STIHL AG & Co. KG since May 2019, visited MAPEX earlier this year and was impressed by the manifold research activities in the different groups and institutes.

MAPEX Associate Investigator – new member category

It is now possible for scientists in a leading position, who do not meet the eligibility criteria for PIs or ECIs, to become a MAPEX Associate Investigator (AI). They need to hold a doctoral degree and be able to proof their scientific independence, e.g. by autonomous publications, own acquisition of funding, or decision-making authority in the frame of scientific projects.

Navigare Career Coaching for International Females in Science – new group

navigare
Career Coaching for International Females in Science

Starting in November 2019 a new group of female early career researchers will get the chance to participate in the one-year programme navigare – Career Coaching for International Females in Science. The programme addresses female early career researchers (doctoral candidates, postdocs) who aim for a professorship or gaining a leadership position in science. The participants will acquire important competences for their own career management in science in an international context. ‚navigare' is a joint initiative by MAPEX and the running coordinated DFG programmes in cooperation with the office for equal opportunities. For more information, please visit the MAPEX website or contact Hanna Lührs.

Uni KLEX – flexible childcare for early career researchers

UNI KLEX

Uni KLEX supports early career researchers in combining their family tasks with their scientific career. For this purpose, the university offers funding for flexible childcare, supplementing the regular care, for an initial pilot period of three years (2019 – 2022). Initiated by a group of MAPEX ECIs, the project is now administered by the office for equal opportunities. MAPEX as well as the coordinated DFG programmes financially support the project.

Go diverse
Professional, gender- and diversity-based personnel selection in science

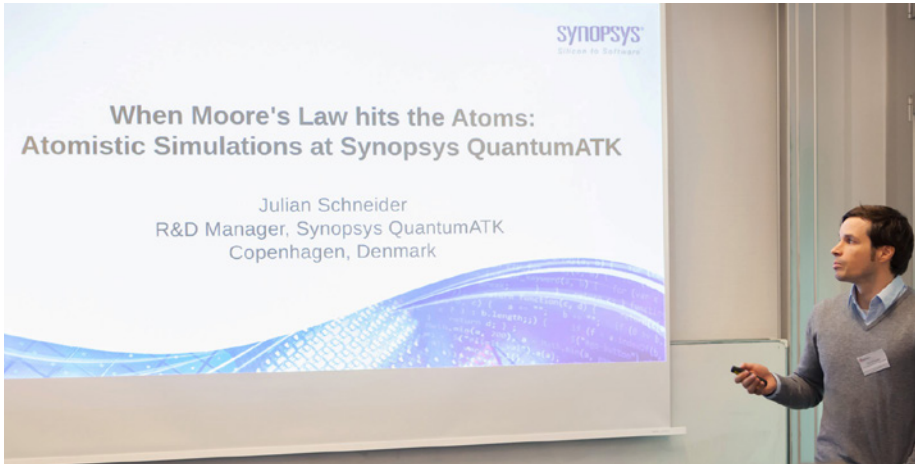
With the aim of avoiding discriminatory prejudices during the selection of personnel, 14 MAPEX members spent two half days working on the various steps of the personnel selection process, from the position advertisment all the way to the personal interview. The workshop was organised together with the go diverse project group.

7th MAPEX EARLY CAREER RESEARCHER WORKSHOP

Science meets Industry
Cooperation projects and career path in(to) the industry | 25. October 2018

7 MAPEX Early Career Researcher Workshop

MAPEX was the host of previous graduates from the University of Bremen for the 7th MAPEX Early Career Research workshop. These graduates are now members of industry and presented details of their current employment focusing on roles in their employment, current research and projects, and new and emerging technologies driven by scientific and technical needs. These presentations revealed that graduates of MAPEX members are working worldwide and have become leading experts in areas such as metallurgy, corrosion, numerical analysis and simulations, metal printing, advanced cosmetics, extreme high precision machining and tooling. Apart from learning about these areas of their employment, the audience was entertained by fascinating stories involving personal career progression and how to achieve this success. Many stories made clear how the community at the University of Bremen was key to their introduction to their current and previous positions. The more than 50 participants listened and asked many questions regarding research, employment, and life after leaving university. During break time, participants took great advantage of the time to discuss further insight into professional and personal life beyond university. Exchanges of business cards and ideas could be heard in all parts of the science lounge. In addition to the focus of this workshop, Charlotte Simmat and Wiltrud Hoffmann from the Bremen Business StartUp and Job Entry, presented the support services of the universities transfer unit such as BRIDGE and the job-oriented mentoringprogramme "Fokus Berufseinstieg".



II MAPEX @ SCIENCE GOES PUBLIC

Lots of entertaining science in amusing 30 minutes. SCIENCE GOES PUBLIC! satisfies your thirst for knowledge. Twice a year, original scientific topics are presented in selected pubs and bars in Bremerhaven and Bremen in a varied and humorous way. For MAPEX Iwona Piotrowska ('Superficial mathematics'), Christof Büskens ('In math, I was below average on average') and Lucio Colombi Ciacchi ('About real materials and their digital twins') have already had this enlightening experience.

II MAPEX METHODS WORKSHOP III

Mechanical Materials Testing
13 February 2019

The third edition of the MAPEX Methods Workshop took place on 13 February 2019, with mechanical characterization techniques as its main focus. Around 40 PhD students, postdocs and MAPEX members gathered to discuss about the testing capacities available at the University of Bremen. The workshop started with a brief lecture by Brigitte Clausen on the basics of mechanical testing. Afterwards, nine speakers gave the audience an overview of the available methods, ranging from mechanical tests with in-situ microstructural monitoring, micro/nano-scale tests and specific characterization techniques for metals, fibres, composites, adhesive joints, as well as multilayer structures like computer boards. This time, the workshop also counted with the presence of an external speaker, Henry Ovri from Helmholtz-Zentrum Geesthacht, who reported on the nano mechanical test facilities of his institute. In general, the workshop was a great opportunity for researchers to exchange experiences and learn about different mechanical testing techniques, which may lead to future collaborations.

II 8th MAPEX EARLY CAREER RESEARCHER WORKSHOP

"Building Bridges" across faculties and institutes | 29 April 2019

With multidisciplinary contributions from early career researchers, the 8th MAPEX Early Career Researchers Workshop aimed at flattening the existing borders between faculties and institutes even further. Taking place in Bremen, the one-day workshop hosted more than 40 guests from almost all parts of the MAPEX research landscape that encompasses the investigation of materials with numerous theoretical and applied methods as well as process- and production-oriented technologies.

Early career researchers were given the opportunity to present their work to the audience in condensed flashlight-talks before

explaining it in further detail during several extensive poster sessions. The programme was complemented by a supportive session about different funding possibilities for scientific projects and an introduction to the do's and don'ts of open-access publishing provided by the State Library. Many prolific discussions arose in the coffee breaks and it can be expected that new scientific collaborations have resulted from this workshop.
Finally, an impressive plenary lecture on advances in gear manufacturing held by Prof. Bernhard Karpuschewski concluded the workshop leaving no doubt about the high importance of materials science for today's and tomorrow's world.

II MAPEX SYMPOSIUM 2019

Excited Materials – field-induced out-of-equilibrium phenomena

'Excited Materials' were in the focus of the MAPEX Symposium 2019, touching topics from electronic structure modelling to electrical power devices. Over the two days, more than 50 MAPEX members and guests followed the 26 contributions on 'field induced phenomena' in 2D semiconductors, in electrical power devices, in organic functional materials as well as during electron induced reactions or laser-induced thermomechanical surface smoothing.
In the opening lecture, David Field from Aarhus University reported on his idea of THz emission from spontaneously electrical solids. How to use two-dimensional electronic spectroscopy to probe ultrafast nonadiabatic dynamics in organic photovoltaic materials was demonstrated by Antonietta de Sio from the University of Oldenburg. During the first day's flashlight session early career researchers from the research training group QM³ – Quantum Mechanical Materials Modelling presented their projects, giving short presentations that were discussed in depth during the subsequent poster session. After contributions from Nando Kaminski and Fabio La Mantia, the first day closed with an inspiring talk by Georg Pesch, who exploits dielectrophoretic forces for material-selective particle separation with the final aim of detecting cancer cells in human blood.
The second day started with a lecture on electronic and optical properties of atomically thin semiconductors by Frank Jahnke and was followed by six keynote talks as well as a poster session with corresponding flashlight presentations. A special highlight was the talk of Andreas Rosenauer, who showed how to measure electrical polarization on the atomic scale using STEM. Furthermore, Ruchira Pereira impressively demonstrated how self-reporting micro-fibre can be produced by centrifugal force spinning. The programme was rounded off by the welcome address of Nicola Marzari, the new U Bremen Excellence Chair from EPFL in Lausanne.