

APMM 2019

16–19 September 2019
Dresden, Germany



Topics:

Relevant topics include (but are not limited to):

- Electro-active Materials
- Hydrogels and Microgels
- Synthesis and Characterization, Material Properties
- Responsive and Adaptive Systems
- Hydrogel-based Sensors, Actuators, Devices and Microsystems
- Soft Robotics
- Microfluidics
- System Integration, Additive Manufacturing
- Modeling and Simulation



Ralf Winkler, alias **A. R. Penck** (1939 – 2017, born in Dresden) was a German painter, printmaker, sculptor and jazz drummer. Being an exceptional exponent of German neo-expressionism he is famous for his naive, semi-abstract style. The hotel as well as each hotel room present a large collection of his work.

Keynotes

Iain Anderson, University of Auckland, NZ
“Dielectric Elastomer Sensors and Actuators at the Biomimetic Lab.”

Anna C. Balazs, University of Pittsburgh, US
“Modeling Adaptive and Responsive Gels.”

Thomas Hellweg, Bielefeld University, DE
“Smart microgel based surfaces and free standing membranes.”

Dirk Kuckling, University of Paderborn, DE
“Responsive Dual-Cross-linked Networks.”

John Madden, University of British Columbia, CA

Marko Mailand, IDT Europe GmbH, DE
“An integrated Microfluorimeter Interface to fluorescent Hydrogel based Analyte Sensors.”

Martin Moeller, DWI Aachen, DE
“Directed and time controlled nonequilibrium actuation for interactive materials.”

Maurizio Porfiri, New York University, US
“Modeling Actuation of Ionic Polymer Metal Composites: where we are and where we should be.”

Helmut Schlaak, TU Darmstadt, DE
“Maturity of Dielectric Elastomer Transducers - Technology, Properties and Applications”

Carmen Scholz, University of Alabama in Huntsville, US

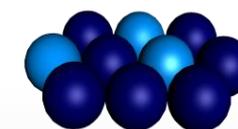
Sebastian Seiffert, University of Mainz, DE
“Dynamics and Relaxation of Supramolecular Polymer-Network Gels in View of their Microstructure.”

G. Julius Vancso, University Twente, NL
“Redox-active Poly(ferrocenylsilane)s as Actuators and Memory Hydrogels.”

APMM 2019

Active Polymeric Materials and Microsystems

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Venue:
Penck Hotel Dresden

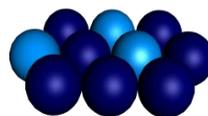
More Information and Contact:

<https://tu-dresden.de/ing/elektrotechnik/ife/graduiertenkolleg/apmm-2019>

Abstract Submission Deadline:
31 May 2019

APMM 2019

16–19 September 2019



The **APMM 2019** conference provides an excellent opportunity for researchers and scientists at all levels of experience to meet colleagues and to share new ideas and knowledge about Active Polymeric Materials and Microsystems. The conference is organized by the Research Training Group “Hydrogel-based Microsystems”, a DFG-funded research center to promote young researchers within the framework of a focused research program and a structured training strategy. APMM 2019 is technically co-organized by Technische Universität Dresden and the Leibniz Institute of Polymer Research Dresden (IPF).

Important Dates and Deadlines:

Abstract submission date: 31 May 2019
 Acceptance notification date: 07 June 2019
 Early bird registration deadline: 15 June 2019
 Poster submission deadline: 31 June 2019

Program:

16 September 2019: Tutorials
 17–19 September 2019: Conference

Social Program:

16 September 2019: Welcome Reception
 18 September 2019: Conference Dinner

Fee	Before	After
	15 June 19	15 June 19
Regular Attendee:	350 €	400 €
Full-Time Student:	250 €	300 €

Tutorials, Monday, 16 September 2019:

10:30:

Welcome (G. Gerlach)

10:35 – 12:50:

Hydrogels: Materials, Applications, Modeling:

Dirk Kuckling:

Tayloring of hydrogels for targeted sensor properties

G. Julius Vancso:

Smart, non-ergodic hydrogels

Andreas Fery:

AFM for measuring interactions and mechanics

12:50 – 14:00:

Lunch break

14:00 – 15:30:

Andreas Richter:

Technology, concepts and design of hydrogel-based microfluidics

Julian Thiele:

Microfluidics for polymer material design

15:45 – 18:00:

Electroactive Polymers: Materials and Modeling

Markus Henke:

Fundamentals of multifunctional dielectric elastomers

Maurizio Porfiri:

Modeling actuation and sensing of ionic polymer metal composites

Thomas Wallmersperger

Chemo-electro-mechanical modeling of ionic EAP

Conference Chair:

Gerald Gerlach, TU Dresden

Conference Co-Chairs:

Andreas Fery, IPF Dresden

Margarita Guenther, TU Dresden

Stefan Odenbach, TU Dresden

Andreas Richter, TU Dresden

Julian Thiele, IPF Dresden

Brigitte Voit, IPF Dresden

Thomas Wallmersperger, TU Dresden

International Steering Committee:

Iain Anderson, University of Auckland, NZ

Thomas Hellweg, University of Bielefeld, DE

Dirk Kuckling, University of Paderborn, DE

Angel Licea-Claverie, University of Tijuana, MX

John Madden, University of British Columbia, CA

Jules J. Magda, University of Utah, US

Martin Moeller, DWI Aachen, DE

Maurizio Porfiri, New York University, US

Walter Richtering, RWTH Aachen, DE

Sebastian Seiffert, University of Mainz, DE

Carmen Scholz, University of Huntsville, US

Luisa Torsi, Università degli Studi di Bari, IT

Marek Urban, Clemson University, US

Regine von Klitzing, TU Darmstadt, DE

Andreas Walther, University of Freiburg, DE