6TH FORUM EXPERIMENT!, JULY 12-13, 2021

FORUM EXPERIMENT! 2021

XPLANATORIUM HERRENHAUSEN, HANOVER, GERMANY

PROGRAM

MONDAY, JULY 12, 2021

11:30 a.m.  Registration and Coffee

12:00 p.m.  Welcome
            ULRIKE BISCHLER
            Program Director,
            Volkswagen Foundation

SESSION 1: BIOMEDICAL SCIENCES

12:10 p.m.  The krait way of snakebite prevention: deriving repellents from a predator of vipers
            ULRICH KUCH
            University Hospital Frankfurt/Main

12:30 p.m.  Voltage on Implants - Preventing thrombus formation as the most fatal risk of medical devices with blood contact by applying a high frequency alternating current
            ULRICH KERTZSCHER
            Charité Universitätsmedizin Berlin

12:50 p.m.  Non-coding RNAs as the fountain of youth
            ANDREAS KELLER
            Saarland University

1:10 p.m.   The role of environmental microplastic as an independent risk factor for human health
            KONRAD ADEN
            University Hospital Schleswig-Holstein, Kiel

1:30 p.m.   Lunch

SESSION 2: BIOLOGY & ENVIRONMENT

2:30 p.m.   Tracking evolution of Life? - Laboratory evolution of a mesophilic microorganism from a thermophilic ancestor
            MIRKO BASEN
            University of Rostock

2:50 p.m.   Stress management by plants: a decision-making case?
            MARIA PIMENTA LANGE
            Technical University Braunschweig

3:10 p.m.   Can we breed heat resistant corals for reef restoration?
            FRANK MEZLER
            GEOMAR – Helmholtz Centre for Ocean Research Kiel

3:50 p.m.   Coffee Break

SESSION 3: MATERIALS & GEOSCIENCES

4:20 p.m.   Novel Materials Printed Actuators Capable of Controlled Complex 3D Motions
            HOLGER STEBB
            University of Stuttgart

4:40 p.m.   4D modular micro-origami: cooperative self-folding of multiple polymer sheets (MODUL-ORIG)
            ARPAN BISWAS, LEONID IONOV
            University of Bayreuth

5:00 p.m.   Solar Hydrogen for Antarctica: Water Splitting under Extreme Conditions
            MATTHIAS MAY
            Helmholtz-Zentrum Berlin (HZB) für Materialien und Energie

5:20 p.m.   Illuminating the speed of sand – quantifying sediment transport using optically stimulated luminescence
            WOLFGANG SCHWANGHART
            University of Potsdam

5:40 p.m.   Dinner

HERRENHAUSEN GARDEN (UNGUIDED)

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TUESDAY, JULY 13, 2021

SESSION 4: INFECTION BIOLOGY
9:30 a.m. Monoterpenoid acids as potential Achilles heel-targeting arrows in antibiotic treatments
MARKUS BUCHHAUPT
DEHEMA-Forschungsinstitut (DFI), Frankfurt/Main

9:50 a.m. Fighting resistant bacteria with their own weapons: β-lactamase-responsive nanogels for selective delivery of antibiotics
DANIEL KLINGER
Freie Universität Berlin

10:10 a.m. Chain-transfer agents as an entirely novel class of antibiotics and cytotoxins for the treatment of parasitic infections and malignant tumors
BERND MOOSMANN
University of Mainz

10:30 a.m. Plastic as a promoter of bacterial virulence
ALBERT HAAS
University of Bonn

10:50 a.m. Coffee Break
Foyer

SESSION 5: PHYSICAL SCIENCES
11:20 a.m. Plasma-electric Converter (PECs)
LUKA ZURAK, THORSTEN FEICHTNER
University of Würzburg

11:40 a.m. Finite Projective Geometry of Space-Time-Matter
KLAUS MECKE
University of Erlangen-Nürnberg

12:00 p.m. Switchable Contrast Agents for MRI: Entangling Ultrasound and Hydrogen Relaxation
BENEDIKT KLOBES
University of Applied Sciences Bremerhaven

12:20 p.m. Lunch
Festsaal

SESSION 6: NEUROSCIENCE & COMPUTING
1:20 p.m. Look and touch: establishing the first insect model for visually guided reaching
ANNA STOCKL
University of Würzburg

1:40 p.m. Metastable neurophysiological processes: A novel framework for understanding thought and action
CHRISTIAN BESTE
Technical University Dresden

2:00 p.m. An Analytic Computational Solver for Integer Programming
ULF FRIEDRICH
Technical University Munich

2:20 p.m. Visual Scrambler
ALEXEY PAK
Fraunhofer Institute of Optronics, System Technology and Exploitation (IOSB), Karlsruhe

2:40 p.m. Closing
PAVEL DUTOW
Program Director, Volkswagen Foundation

2:45 p.m. DEPARTURE

OPTIONAL: HERRENHAUSEN GARDEN (UNGUIDED)