**TENTATIVE PROGRAM (as of 24/02/2021)**

**Conference Time Zone – New York, USA (EST)**


**Tuesday (23/02/2021)**

08:50 – 09:00: Opening - Welcome and Introduction

**Antonio Correia** (Phantoms foundation, Spain) / **James Hone** (Columbia University, USA) / **Mauricio Terrones** (PennState University, USA) / **Vincent Meunier** (Rennsselaer, USA) / **Luigi Colombo** (UTDallas, USA)

09:00 – 09:30: **Jun Lou** (Rice University, USA)

Electrochemical Behaviors of Two-Dimensional Materials for Energy and Environmental Applications

09:30 – 10:00: **Francesco Bonaccorso** (BeDimensional, Italy)

Large-scale production of 2D crystals for energy applications

10:00 – 10:30: **Richard Kaner** (UCLA, USA)

Graphene Synthesis and Applications in Supercapacitors

10:30– 11:00: Break / ePoster session / Exhibition

**PARALLEL SESSION 1**

11:00 – 11:20: **Gordon Harling** (CMC Microsystems, Canada)

Accessing Infrastructure for Prototyping and Measurement

11:20 – 11:40: **Gordon Rinke** (AMO GmbH, Germany)

Wafer Scale Integration of Graphene - 2D Experimental Pilot Line at AMO

11:40 – 12:00: **Elías Torres Alonso** (Graphenea, Spain)

Graphenea Foundry: a platform for the manufacture of graphene-based devices

12:00 – 12:10: **Niels Wijnaendts van Resandt** (Heidelberg Instruments, USA)

Direct Write Lithography Tools and Applications

12:10 – 12:30: **Mario Lanza** (KAUST, Saudi Arabia)

Wafer-scale integration of two-dimensional materials in high-density memristive crossbar arrays for artificial neural networks

12:30 – 12:50: **An Chen** (Semiconductor Research Corporation, USA)

Nanoelectronics Research for Computing beyond CMOS

12:50 – 13:00: **Mohamed Boukhicha** (BNL, USA)

Large-scale Lithium-intercalated Multilayer Graphene Production

**PARALLEL SESSION 2**

11:00 – 11:20: **Adina Luican-Mayer** (University of Ottawa, Canada)

Visualizing 2D materials at the atomic scale

11:20 – 11:30: **Andrey Krayev** (HORIBA Scientific, USA)

Nanoscale Structural Peculiarities in Mono- to Few-Layer Crystals of Ti3C2Tx MXene Revealed by TERS.

11:30 – 11:50: **Sonia Conesa Boj** (TU Delft, The Netherlands)

From crafting to visualization: low-dimensional TMD nanostructures under the electron microscope lamppost

11:50 – 12:10: **Avik Ghosh** (University of Virginia, USA)

Unconventional switching using topological properties of electrons in graphene based heterostructures
12:10 – 12:30: Bruno Dlubak (CNRS/Thales, France)
Spin filtering in graphene based magnetic tunnel junctions

12:30 – 12:50: Aida Ebrahimi (Pennsylvania State University, USA)
All-Ink Dopamine Sensors with Ultralow Detection Limit Enabled by One-Step Annealing of Graphene Ink

12:50 – 13:00: Salvatore Polverino (Università degli studi di Genova, Italy)
Few-layer graphene-based sustainable cement mortar

13:00 – 14:00: Lunch Break

14:00 – 14:30: Dmitri Efetov (ICFO, Spain)
Competing phases of correlated Chern insulators in Superconducting Twisted Bilayer Graphene

14:30 – 15:00: Emanuel Tutuc (The University of Texas at Austin, USA)
Correlated Insulators and Topological Transport in Twisted Double Bilayer Graphene

15:00 – 15:30: Arend Van der Zande (University of Illinois, USA)
Electromechanical systems enabled by interfacial slip in 2D material heterostructures

15:30 – 16:00: Abhay Pasupathy (Columbia University, USA)
Quantum phenomena in moire heterostructures

16:00 – 16:30: Break / ePoster session / Exhibition

16:30 – 17:00: Matthew Yankowitz (University of Washington, USA)
Tunable correlated and topological states in twisted monolayer-bilayer graphene

17:00 – 17:10: Fida Ali (Sungkyunkwan University, South Korea)
Density of Interface States in Layered-WSe2 Semiconductor

17:10 – 17:20: Tien Dat Ngo (Sungkyunkwan University, South Korea)
Fermi-level de-pinning at the intrinsic WSe2-metal junction via van der Waals bottom contacts

17:20 – 17:30: Pawan Srivastava (Sungkyunkwan University, South Korea)
Resonant tunneling through twisted black phosphorus homostructures

18:00 End of day 1

Wednesday (24/02/2021)

08:30 – 09:00: Robert Wallace (The University of Texas at Dallas, USA)
An update on contact reactions with TMDs

09:00 – 09:30: Joan Marie Redwing (The Pennsylvania State University, USA)
Progress in epitaxial growth of wafer-scale TMD monolayers

09:30 – 10:00: Zhihong Chen (Purdue University, USA)
2D Materials for Back-end-of-line Interconnect Application

10:00 – 10:05: Filippo Giubileo (CNR-SPIN Università di Salerno, Italy)
Transition metal dichalcogenide monolayers as gate controlled field emitters

10:05 – 10:30: Break / ePoster session / Exhibition

10:30 – 11:00: Philip Kim (Harvard University, USA)
Josephson Junctions based on van der Waals heterostructures

11:00 – 11:30: Kaustav Banerjee (University of California, USA)
Next-generation integrated electronics uniquely enabled by van der Waals materials and heterostructures

11:30 – 11:40: Folkert de Vries (ETH Zurich, Switzerland)
Gate-Defined Josephson Junctions in Magic-Angle Twisted Bilayer Graphene

11:40 – 12:10: Jim Schuck (Columbia University, USA)
Nonlinear twistoptics at symmetry-broken interfaces

12:10 – 12:40: Jia Li (Brown University, USA)
Tuning moirè flatband in magic-angle twisted bilayer graphene

12:40 – 13:10: Stephan Roche (ICREA/ICN2, Spain)
Topological Spin Transport in Quantum Materials and Entanglement
13:10 – 13:20: **Pablo Piskunow** (Catalan Institute of Nanoscience and Nanotechnology, Spain)
Hinge Spin Polarization in Magnetic Topological Insulators Revealed by Resistance Switch

13:20 – 14:00: **Lunch Break**

14:00 – 14:10: **Stephen Power** (Trinity College Dublin, Ireland)
Manipulating valley currents in graphene nanostructures

14:10 – 14:20: **Megan Steves** (The Pennsylvania State University, USA)
Correlating nonlinear optical properties with atomic-level structure in 2D-polar metals

14:20 – 14:30: **Andrea Tomadin** (Università di Pisa, Italy)
Microscopic theory of plasmon-enabled resonant terahertz detection in bilayer graphene

14:30 – 14:40: **Raúl Guerrero** (Centro de Físiica de Materiales, Spain)
Rhombohedral Phase in Trilayer-graphene

14:40 – 15:10: **Ado Jorio** (Universidade Federal de Minas Gerais, Brazil)
Phonon localization in low-angle twisted bilayer graphene

15:10 – 15:40: **Jerzy Sadowski** (Brookhaven National Laboratory, USA)
Interlayer coupling effects in the 30deg-twisted bilayer graphene

15:40 – 16:40: **Break / ePoster session / Exhibition**

16:40 – 17:10: **Jamie Warner** (University of Texas at Austin, USA)
Air Stable Noble Metal Dichalcogenide 2D layered Materials

17:10 – 17:40: **Rodney Ruoff** (UNIST/CMCM, South Korea)
F-diamane from AB-stacked graphene

17:40 – 18:10: **Michael Fuhrer** (Monash University, Australia)
2D Topological Insulators for Low-Energy Electronics

18:10: **Closing**