22nd Brazilian Workshop on Semiconductor Physics

FROM	TO	MONDAY 19	TUESDAY 20	WEDNESDAY 21	THURSDAY 22	FRIDAY 23
08:00	09:00	**REGISTRATION**				
09:00	09:20	**OPENING CEREMONY**	**INVITED** | Tuning Light with Materials and Materials with Light FELIPE H. DA JORNADA - STANFORD UNIVERSITY	**INVITED** | Defects, Interfaces, and Strain as Design Principles for Emergent Semiconductor Physics ANDERSON JANOTTI - UNIVERSITY OF DELAWARE	**INVITED** | Flexible electronics based on conjugated polymers, oxides and 2D materials. LUCIMARA STOLZ ROMAN - UNIV. FED. DO PARANÁ	**INVITED** | Tailoring the electronic states of topological materials compatible with compound semiconductors RACHEL S GOLDMAN - UNIVERSITY OF MICHIGAN
09:20	09:40	**INVITED** | Electroluminescence in van der Waals heterostructures MACIEJ MOLAS - UNIVERSITY OF WARSAW				
09:40	10:00		**ORAL** | Real-Space Imaging of Moiré-Confined Excitons in Twisted Bilayer MoS2 RODRIGO AROUCA - BRAZILIAN CENTER FOR RESEARCH IN PHYSICS	**ORAL** | Engineering Quantum Phases in Two Dimensions via Vacancy-Induced Electronic Reconstruction EMMANUEL VICTOR CAIRES LOPES - CENTRO NACIONAL DE PESQUISA EM ENERGIA E MATERIAIS	**ORAL** | Manufacture of organic light-emitting diodes with cellulose acetate contained in cigarette filters MÍRIAM DE FÁTIMA SOARES - UNIV. FED. DE MINAS GERAIS	**ORAL** | A Topological Insulator Field Effect Memristor FABIAN HARTMANN - JULIUS-MAXIMILIANS-UNIVERSITÄT WÜRZBURG
10:00	10:20	**ORAL** | Magnetic proximity effects in MoSe2/CrPS4 heterostructures YARA GALVÃO GOBATO - UNIV. FED. DE SÃO CARLOS	**ORAL** | Gate tunable trion g-factor in monolayer MoSe2: Coupling and hybridization of trion states. CAIQUE SERATI DE BRITO - CENTRO DE TECNOLOGIA DA INFORMAÇÃO RENATO ARCHER	**ORAL** | Theoretical study of polaron photoexcitations in Nb-doped rutile TiO2 MARILIA J. CALDAS - INSTITUTE OF PHYSICS, UNIVERSITY OF SÃO PAULO	**ORAL** | Conjugated Polymer Nanoparticles of Poly (9,9-di-n-dodecylfluorene 2,7-diyl) and MEH-PPV: Photoluminescence Properties, β-phase Formation and Morphology CAIO HENRIQUE VIANA DA SILVA - UNIV. FED. DE VIÇOSA	**ORAL** | Growth of PbTe nanowires for topological quantum devices ANDERSON KENJI OKAZAKI - CENTRO NACIONAL DE PESQUISA EM ENERGIA E MATERIAIS
10:20	10:40	**ORAL** | Unveiling Thickness and Twist Angle Dependence of Magnetic Proximity and Charge Transfer Effects in CrSBr/Monolayer-WS2 Magnetic Heterostructures LUCAS LIBERAL FONSECA - UNIVERDADE FED. DE SÃO CARLOS	**ORAL** | Aharonov-Bohm Interference in moiré MoS2 ANDREIJ C. GADELHA - BRAZILIAN CENTER FOR RESEARCH IN PHYSICS	**ORAL** | Understanding the Oxygen Reduction Reaction and Oxygen Evolution Reaction in Metal Intercalated Biphenylene Bilayers HENRI GONÇALVES MENDONÇA - UNIV. FED. DE UBERLÂNDIA	**ORAL** | Stacking-Order-Dependent Transport in $TiSe_2$/TiO_2 Hybrid Memristive Devices LAURA DETONI BAÊTA DE MELO CANÇADO - UNIV. FED. DE MINAS GERAIS	**ORAL** | Berry Phase and Nonlinearity in Shubnikov–de Haas Oscillations OLAVO VIOLA - UNIV. FED. DE UBERLÂNDIA
10:40	11:10	**COFFEE BREAK**	**COFFEE BREAK**	**COFFEE BREAK**	**COFFEE BREAK**	**COFFEE BREAK**
11:10	11:30	**INVITED** | Advanced Theoretical Insights into 2D III-V Honeycomb Lattices: Optical, Excitons, Carrier Mobility, Thermoelectrical Conductivities, and Moiré-Induced Modulation TELDO A. S. PEREIRA - UNIV. FED. DE MATO GROSSO	**INVITED** | Raman studies of two-dimensional quantum materials under pressure LUIZ GUSTAVO PIMENTA MARTINS - MASSACHUSETTS INSTITUTE OF TECHNOLOGY, UNIV. DE SÃO PAULO	**INVITED** | First-Principles Design of Functional Materials for Spintronics and Batteries ANGELA BURLAMAQUI KLAUTAU - UNIV. FED. DO PARÁ	**INVITED** | Bridging Computational Nanoscience, Advanced Biosensing, and Scientific Outreach: From Molecular Modeling to Societal Impact SOLANGE BINOTTO FAGAN - UNIV. FRANCISCANA	**ORAL** | Room-temperature quantum confinement and surface segregation: unravelling the onset of self-assembled MnTe nanostructures on MnBi2Te4 EDUARDA POLICARPO MAGALHÃES CAMPOS - UNIV. FED. DE MINAS GERAIS
11:30	11:50					**ORAL** | Geometric control of superfluid weight and flat-band superconductivity in Lieb-Kagome interpolating lattices DIEGO RABELO DA COSTA - UNIVERSIDADE FEDERAL DO CEARÁ
11:50	12:10	**ORAL** | Hybrid polaritonic phenomena in natural and van der Waals materials INGRID DAVID BARCELOS - BRAZILIAN SYNCHROTRON LIGHT LABORATORY, CENTRO NACIONAL DE PESQUISA EM ENERGIA E MATERIAIS	**ORAL** | Magneto-Excitonic Layered Properties of CrSBr IGOR DE SOUZA LANA ANTONIAZZI - UNIVERDADE FED. DE SÃO CARLOS, WARSAW UNIVERSITY	**ORAL** | Defect Engineering as a tool for optimizing ozone sensing performance of Co-Doped ZnO Thin Films MARCIO PERON FRANCO DE GODOY - UNIV. FED. DE SÃO CARLOS	**ORAL** | EaseHam: A Modern Fortran Framework for Self-Consistent Electronic Structure Calculations in Heterostructure GUILHERME MATOS SIPAHI - UNIV. DE SÃO PAULO	**ORAL** | Chiral states induced by symmetry-breaking terms in α – T3 lattices under the absence and presence of magnetic fields JOÃO PEDRO GOMES DO NASCIMENTO - UNIV. FED. DO CEARÁ
12:10	12:30	**ORAL** | Dipoles near 2D materials: Where Dicke superradiance meets polaritonics VICTOR GABRIEL MORELE DUARTE - INST. TECNOLÓGICO DE AERONÁUTICA	**ORAL** | Large-area sputtered 2H-MoS2 thin films for spin and orbital charge conversion ANDRIELE DA SILVA VIEIRA - UNIV. FED. DE VIÇOSA	**ORAL** | Devices that remember and glow: Nonlinear physics in 2D materials VICTOR LOPEZ-RICHARD - UNIVERDADE FED. DE SÃO CARLOS	**ORAL** | Physical Pictures for Quasisymmetry n Crystals BRYAN DOUGLAS NUNES ASSUNÇÃO - UNIV. FED. DE UBERLÂNDIA	**CLOSING CEREMONY**
12:30	14:00	**LUNCH**	**LUNCH**	**LUNCH**	**LUNCH**	
14:00	14:40	**INVITED** | Quantum Technologies at the Brazilian Center for Research in Physics: fabricating transmon qubits and other devices IVAN S. OLIVEIRA - BRAZILIAN CENTER FOR RESEARCH IN PHYSICS	**INVITED** | Crystal Engineering of 2D Hybrid Metal Halide Perovskites for Tailored Optical Properties ALEJANDRO PEDRO AYALA - UNIV. FED. DO CEARÁ	**INVITED** | Wafer-Scale 2d Semiconductors and Dielectrics AMALIA PATANE - UNIVERSITY OF NOTTINGHAM	**INVITED** | Mid-Infrared Semiconductor Platform for Integrated Sensing ROLF SZEDLAK - TU WIEN	
14:40	15:00	**ORAL** | It possible to detect quantum entanglement by analyzing the weights of an artificial neural network? MARDONIO JO CARVALHO DE FRANÇA - UNIV. FED. DE UBERLÂNDIA	**ORAL** | Genetic Algorithm Optimization and Experimental Characterization of Quantum Bragg Mirror Detectors PEDRO HENRIQUE PEREIRA - UNIV. FEDERAL DO ESTADO DO RJ	**ORAL** | Leveraging superconductor geometry for cryogenic quantum hardware engineering DAVI A. D. CHAVES - CENTRO BRASILEIRO DE PESQUISAS FÍSICAS	**ORAL** | STEM and FIB Characterization Platform for Semiconductors and Quantum Materials at Inmetro BRAULIO SOARES ARCHANJO - INST. NACIONAL DE METROLOGIA, QUALIDADE E TECNOLOGIA	
15:00	15:20	**ORAL** | Jittery Quantum Boomerang PEDRO DORNELAS - UNIV. FED. DE UBERLÂNDIA	**INVITED** | Van der Waals epitaxy of quantum materials LEONARDE DO NASCIMENTO RODRIGUES - UNIV. FED. DE VIÇOSA	**INVITED** | Kesterite-type semiconductors for energy harvesting applications EDGARDO SAUCEDO - UNIV. POLITÈCNICA DE CATALUNYA	**INVITED** | Unveiling Exciton Dynamics in TMDC Heterobilayers and Heterotrilayers on Chirped Distributed Bragg Reflectors STEPHAN REITZENSTEIN - TECHNISCHE UNIVERSITÄT BERLIN	
15:20	15:40	**ORAL** | Biased twisted bilayer anisotropic 2D electron gases under external fields JOÃO MÍLTON PEREIRA JUNIOR - UNIV. FED. DO CEARÁ VIRGÍLIO DE CARVALHO DOS ANJOS - UNIV. FED. DE JUIZ DE FORA				
15:40	16:10	**COFFEE BREAK**	**COFFEE BREAK + POSTERS**	**COFFEE BREAK + POSTERS**	**COFFEE BREAK + POSTERS**	
16:10	16:30	**ORAL** | Tribute to Professor Fernando Cerdeira VIRGÍLIO DE CARVALHO DOS ANJOS - UNIV. FED. DE JUIZ DE FORA				
16:30	16:50	**TUTORIAL** | PM2.14DMG - Spin Physics in 2D Materials: Designing Quantum Matter by Stacking and Twisting JAROSLAV FABIAN - UNIVERSITÄT REGENSBURG	**ORAL** | The influence of asymmetry on InGaAs/InAlAs quantum Bragg mirror detectors GERMANO MAIOLI PENELLO - UNIV. DE SÃO PAULO	**ORAL** | Wide-Bandgap Phyllosilicate Materials as Quantum Platforms ALISSON RONIERI CADORE - CENTRO NACIONAL DE PESQUISA EM ENERGIA E MATERIAIS	**ORAL** | Tailoring optoelectronic properties in monolayer transition metal dichalcogenides via focused ion beam lithography LETÍCIA MARA VIEIRA ILDEFONSO - INST. NACIONAL DE METROLOGIA, QUALIDADE E TECNOLOGIA, UNIV. FED. DE JUIZ DE FORA	
16:50	17:10		**ORAL** | Thermoelectric effects in GaAs hydrodynamic channel YURI PUSEP - INSTITUTE OF PHYSICS OF SÃO CARLOS	**ORAL** | Gate-Controlled Negative Magnetoresistance in Tellurene: Quantum Geometry, Polarity, and Weyl-Band Transport MARCELLO BARBOSA DA SILVA NETO - UNIV. FED. DO RIO DE JANEIRO	**ORAL** | Unraveling Surface and Electronic Signatures of Altermagnetic NiAs-type MnTe Islands on Bi_2Te_3 EVERTON P. ANDRADE - UNIV. FED. DE MINAS GERAIS, UNIV. FED. DE VIÇOSA	
17:10	17:30		**ORAL** | Photo-Induced Memcapacitor Effect in HfO2-x/GaAs Structures ANA LUIZA COSTA SILVA - UNIV. FED. DE SÃO CARLOS	**ORAL** | Fabrication of nanodevices for magnonic and orbitronic studies on the semiconductor HoFeO3 and piezoelectric LiNbO3 OBED ALVES SANTOS - CENTRO BRASILEIRO DE PESQUISAS FÍSICAS	**ORAL** | Surface structural and chemical modelling in two-dimensional materials by crystal truncation rod analysis ANGELO MALACHIAS - UNIV. FED. DE MINAS GERAIS	
17:30	17:50	**COCKTAIL**	**FLASH TALKS**	**FLASH TALKS**	**FLASH TALKS**	
17:50	20:00					

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