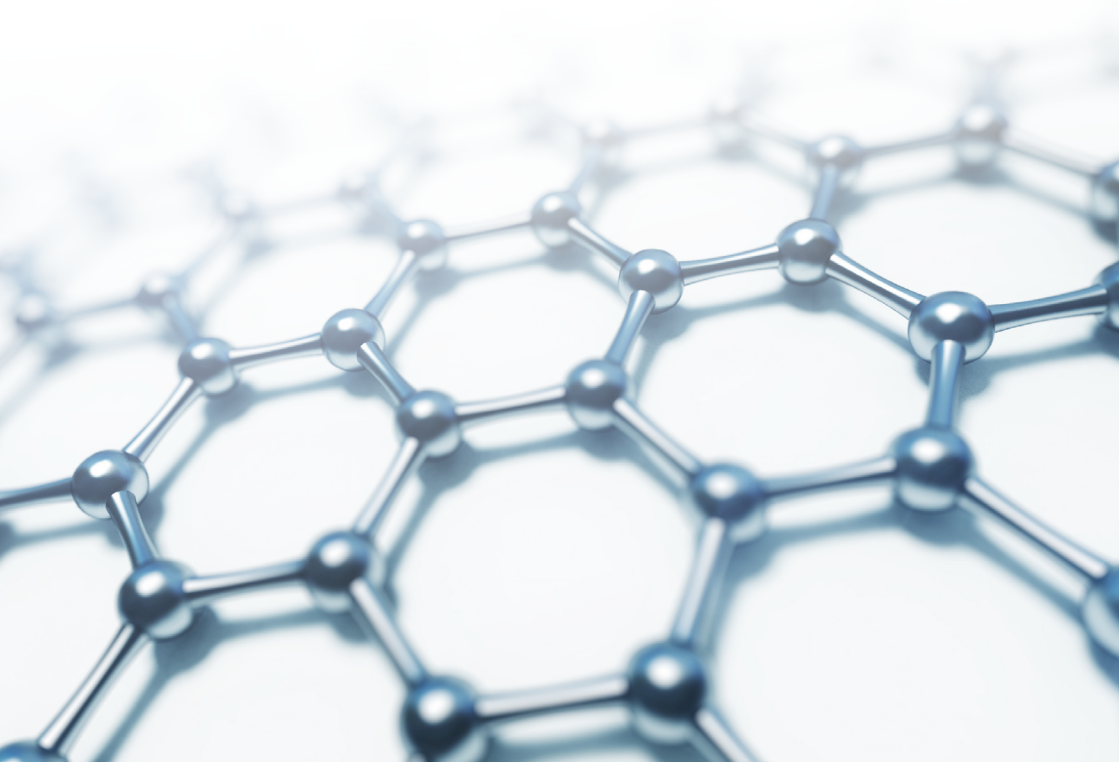


# IBS-APCTP Conference on

## Advances in the Physics of Topological & Correlated Matter



# Program

| [DAY1] MONDAY, 19 SEPTEMBER |                                                                                                        |                                                                                |
|-----------------------------|--------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|
| 10:00 – 10:40 (KST)         | Registration                                                                                           |                                                                                |
| 10:40 – 11:00 (KST)         | Opening Remarks                                                                                        |                                                                                |
| 11:00 – 12:30 (KST)         | Chairperson : Sergej Flach                                                                             |                                                                                |
|                             | Changyoung Kim                                                                                         | Unusually Large Anomalous Hall Conductivity in CoS <sub>2</sub> and Its Origin |
|                             | Masatoshi Sato                                                                                         | Bulk-Boundary Correspondence in Point-Gap Topological Phases                   |
| 12:30 – 14:00 (KST)         | Lunch                                                                                                  |                                                                                |
| 14:00 – 15:30 (KST)         | Chairperson: Daniel Leykam                                                                             |                                                                                |
|                             | Takashi Oka                                                                                            | Floquet Engineering and Topological Nonlinear Optics                           |
|                             | Gil-Ho Lee                                                                                             | Steady Floquet–Andreev States in Graphene Josephson Junctions                  |
| 15:30 – 16:00 (KST)         | Discussions & Coffee Break                                                                             |                                                                                |
| 16:00 – 17:30 (KST)         | Chairperson: Daniel Leykam                                                                             |                                                                                |
|                             | Andrew Pierce                                                                                          | Local Thermodynamic Measurements of Topological States in Magic Angle Graphene |
|                             | Robert-Jan Slager<br> | Geometry and Multi-Gap States                                                  |
| 17:30 – 19:30 (KST)         | Welcome Reception                                                                                      |                                                                                |

| [DAY2] TUESDAY, 20 SEPTEMBER |                                               |                                                                                                                                            | [DAY3] WEDNESDAY, 21 SEPTEMBER                              |                                                                        |
|------------------------------|-----------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------|------------------------------------------------------------------------|
| 09:00 – 10:30 (KST)          | Chairperson: Ki-Seok Kim                      |                                                                                                                                            | Chairperson: Bohm-Jung Yang                                 |                                                                        |
|                              | Philip Kim<br><a href="#">Online</a>          | Induced Superconductivity in the Fractional Quantum Hall Edge in Graphene Heterostructures                                                 | Haruki Watanabe                                             | Topological Material Search via Symmetry Indicator and Filling Anomaly |
|                              | Riccardo Comin<br><a href="#">Online</a>      | Electronic Topology and Correlations in Kagome Metals                                                                                      | Charles Tschirhart / Andrea Young<br><a href="#">Online</a> | Electrical Switching of Magnetic Order in Intrinsic Chern Insulators   |
| 10:30 – 11:00 (KST)          | Discussions & Coffee Break                    |                                                                                                                                            |                                                             |                                                                        |
| 11:00 – 12:30 (KST)          | Chairperson: Ki-Seok Kim                      |                                                                                                                                            | Chairperson: Bohm-Jung Yang                                 |                                                                        |
|                              | Frank Pollmann<br><a href="#">Online</a>      | Quotient Symmetry Protected Topological Phenomena and Quantum Criticality                                                                  | Franco Nori<br><a href="#">Online</a>                       | Topological Non-Hermitian Origin of Surface Maxwell Waves              |
|                              | Aris Alexandradinata                          | A Topological Principle for Photovoltaics                                                                                                  | Daniel Leykam                                               | Persistent Homology Analysis of Phase Transitions                      |
| 12:30 – 14:00 (KST)          | Lunch                                         |                                                                                                                                            |                                                             |                                                                        |
| 14:00 – 15:30 (KST)          | Chairperson: Gil Young Cho                    |                                                                                                                                            | Excursion                                                   |                                                                        |
|                              | Jun Sung Kim                                  | Large Magnetotransport Responses of Topological Van Der Waals Magnets                                                                      |                                                             |                                                                        |
|                              | Benjamin Wieder                               | Spin-Resolved Topology, Partial Axion Angles, and Half Quantum Spin Hall Surface States in Higher-Order Topological Crystalline Insulators |                                                             |                                                                        |
| 15:30 – 16:00 (KST)          | Discussions & Coffee Break                    |                                                                                                                                            |                                                             |                                                                        |
| 16:00 – 17:30 (KST)          | Chairperson: Gil Young Cho                    |                                                                                                                                            |                                                             |                                                                        |
|                              | Emil J. Bergholtz<br><a href="#">Online</a>   | Quantum Geometry and Fractional Chern Insulators in Moiré Materials                                                                        |                                                             |                                                                        |
|                              | Mathias S. Scheurer<br><a href="#">Online</a> | Zero-Field Superconducting Diode Effect in Twisted Trilayer Graphene                                                                       |                                                             |                                                                        |
| 17:30 – 18:30 (KST)          | Poster Session                                |                                                                                                                                            |                                                             |                                                                        |
| 19:00 – 20:30 (KST)          | -                                             |                                                                                                                                            | Banquet                                                     |                                                                        |

# Program

| [DAY4] THURSDAY, 22 SEPTEMBER |                                                    |                                                                                                       | [DAY 5] FRIDAY, 23 SEPTEMBER                |                                                                              |
|-------------------------------|----------------------------------------------------|-------------------------------------------------------------------------------------------------------|---------------------------------------------|------------------------------------------------------------------------------|
| 09:00 – 10:30 (KST)           | Chairperson: Aris Alexandradinata                  |                                                                                                       | Chairperson: Moon Jip Park                  |                                                                              |
|                               | Joseph George Checkelsky<br><a href="#">Online</a> | Natural Superlattice Design of Quantum Materials                                                      | Eun-Ah Kim<br><a href="#">Online</a>        | Machine Learning Quantum Emergence                                           |
|                               | Dam T. Son<br><a href="#">Online</a>               | Nonlinear Bosonization of Fermi Surfaces: The Method of Coadjoint Orbits                              | Nuh Gedik<br><a href="#">Online</a>         | Ultrafast Charge Order Dynamics in a Kagome Metal                            |
| 10:30 – 11:00 (KST)           | Discussions & Coffee Break                         |                                                                                                       |                                             |                                                                              |
| 11:00 – 12:30 (KST)           | Chairperson: Aris Alexandradinata                  |                                                                                                       | Chairperson: Moon Jip Park                  |                                                                              |
|                               | Moon Jip Park                                      | Twisted Bilayer Magnets CrI3                                                                          | Zhong Wang<br><a href="#">Online</a>        | Recent Progress in Non-Hermitian Physics beyond One Dimension                |
|                               | Jeongwan Haah<br><a href="#">Online</a>            | Topological Phases of Discrete Unitary Dynamics                                                       | Chen Fang<br><a href="#">Online</a>         | The Topological Origin of Non-Hermitian Skin Effect                          |
| 12:30 – 14:00 (KST)           | Lunch                                              |                                                                                                       |                                             |                                                                              |
| 14:00 – 15:30 (KST)           | Chairperson: Benjamin Wieder                       |                                                                                                       | Chairperson: Ryo Hanai                      |                                                                              |
|                               | Gil Young Cho                                      | Metrology of Band Topology via Resonant Inelastic X-ray Scattering                                    | Yayu Wang<br><a href="#">Online</a>         | Emergence of Local Pairing and Global Phase Coherence in Underdoped Cuprates |
|                               | Ryo Hanai                                          | Non-Reciprocal Frustration: Time Crystalline Order-by-Disorder Phenomenon and a Spin-Glass-like State | Roderich Moessner<br><a href="#">Online</a> | Dynamical Fractal and Anomalous Noise in Clean Magnetic Crystal              |
| 15:30 – 16:00 (KST)           | Discussions & Coffee Break                         |                                                                                                       | Closing & Discussions                       |                                                                              |
| 16:00 – 17:30 (KST)           | Chairperson: Benjamin Wieder                       |                                                                                                       |                                             |                                                                              |
|                               | Yong Baek Kim                                      | Fractonic Spin Liquids in Frustrated Magnets                                                          |                                             |                                                                              |
|                               | Binghai Yan<br><a href="#">Online</a>              | Chirality-Driven Electronic Topology in DNA-Type Chiral Materials                                     |                                             |                                                                              |
| 17:30 – 18:30 (KST)           | Poster Session                                     |                                                                                                       |                                             |                                                                              |