

# **Chez Pierre Seminar Series**

by Condensed Matter Group

**Mondays at noon ET in the Duboc Seminar Room (4-331) unless otherwise stated.**

**Fall 2022**

**September 12, 2022**

**Speaker: Yu He, Yale University**

**Title: “Lattice fluctuation and electron-phonon coupling in a “failed” excitonic insulator”**

**[https://physics.mit.edu/wp-content/uploads/2022/09/Yu-He\\_-Chez-Pierre\\_announcement-poster.pdf](https://physics.mit.edu/wp-content/uploads/2022/09/Yu-He_-Chez-Pierre_announcement-poster.pdf)**

**Host: Long Ju**

**September 19, 2022**

**Speaker: Xiaodong Xu, Department of Physics, Department of Materials Science and Engineering, University of Washington**

**Title: “Interacting Opto-Moiré Quantum Matter”**

**[https://physics.mit.edu/wp-content/uploads/2022/09/Xiaodong-Xu\\_-Chez-Pierre\\_announcement-poster.pdf](https://physics.mit.edu/wp-content/uploads/2022/09/Xiaodong-Xu_-Chez-Pierre_announcement-poster.pdf)**

**Host: Liang Fu**

**September 23, 2022 (Friday, Special Chez Pierre Seminar)**

**Speaker: Charles Kane, University of Pennsylvania**

**Title: “Topology of the Fermi Sea”**

**[https://physics.mit.edu/wp-content/uploads/2022/08/Charles-Kane\\_-Chez-Pierre\\_announcement-poster-3.pdf](https://physics.mit.edu/wp-content/uploads/2022/08/Charles-Kane_-Chez-Pierre_announcement-poster-3.pdf)**

**Host: Liang Fu**

**September 26, 2022**

**Speaker: Eun-Ah Kim, Cornell University**

**Title: “Quantum Fractional Insulator with fractons in twisted bilayer graphene”**

**[https://physics.mit.edu/wp-content/uploads/2022/09/EunahKim-Chez-Pierre\\_announcement-poster2.pdf](https://physics.mit.edu/wp-content/uploads/2022/09/EunahKim-Chez-Pierre_announcement-poster2.pdf)**

**Hosts: Joe Checkelsky**

**September 30, 2022 (Jointly Physics +DMSE special Chez Pierre seminar )**

**Speaker: Barbaros Oezylmaz, National University of Singapore**

**Title: “Synthesis and properties of monolayer amorphous carbon and cobalt doped black phosphorus“**

**[https://physics.mit.edu/wp-content/uploads/2022/09/Barbaros-Oezylmaz\\_Chez-Pierre\\_announcement-poster-3.pdf](https://physics.mit.edu/wp-content/uploads/2022/09/Barbaros-Oezylmaz_Chez-Pierre_announcement-poster-3.pdf)**

**Hosts: Pablo Jarillo-Herrero**

**<br>October 3, 2022**

**Speaker: Yasin Ekinici, Paul Scherrer Institute**

**Title: “Advancing the lithography for more Moore and more than Moore”.**

**[https://physics.mit.edu/wp-content/uploads/2022/09/Yasin-Ekinici\\_Chez-Pierre\\_announcement-poster-3.pdf](https://physics.mit.edu/wp-content/uploads/2022/09/Yasin-Ekinici_Chez-Pierre_announcement-poster-3.pdf)**

**Host: Nuh Gedik**

**<br>October 10, 2022 (Holiday: Indigenous People’s Day. No Chez Pierre seminar)<br><br>**

**<br>October 11, 2022 (Tuesday, Special Chez Pierre seminar)**

**Speaker: Cenke Xu, University of California, Santa Barbara**

**Title: “An exotic metal-insulator transition and a quantum bad metal”.**

**[https://physics.mit.edu/wp-content/uploads/2022/09/Cenke-Xu\\_Chez-Pierre\\_announcement-poster-3.pdf](https://physics.mit.edu/wp-content/uploads/2022/09/Cenke-Xu_Chez-Pierre_announcement-poster-3.pdf)**

**Host: Liang Fu**

**<br>October 12, 2022 (Wednesday, Special Chez Pierre seminar)**

**Speaker: Erez Berg, Weizman**

**Title: “Exotic Superconductivity in Graphene Multilayers.”**

**[https://physics.mit.edu/wp-content/uploads/2022/10/Erez-Berg-Chez-Pierre\\_announcement-poster.pdf](https://physics.mit.edu/wp-content/uploads/2022/10/Erez-Berg-Chez-Pierre_announcement-poster.pdf)**

**Host: Liang Fu**

**<br>October 17, 2022**

**Speaker: Matthieu Le Tacon, Karlsruhe Institute of Technology (KIT)**

**Title: “Nematic liquid and unconventional charge-density-waves in BaNi<sub>2</sub>As<sub>2</sub>”.**

**[https://physics.mit.edu/wp-content/uploads/2022/09/Matthieu-Le-Tacon-Chez-Pierre\\_announcement-poster-3-Read-Only.pdf](https://physics.mit.edu/wp-content/uploads/2022/09/Matthieu-Le-Tacon-Chez-Pierre_announcement-poster-3-Read-Only.pdf)**

**Host: Riccardo Comin**

**<br>October 24, 2022**

**Speaker: Kevin Slagle, Rice University**

**Title: “A New Picture of Quantum Dynamics and A New Kind of Tensor Network”.**

**[https://physics.mit.edu/wp-content/uploads/2022/10/Kevin-Slagle-Chez-Pierre\\_announcement-poster-3.pdf](https://physics.mit.edu/wp-content/uploads/2022/10/Kevin-Slagle-Chez-Pierre_announcement-poster-3.pdf)**

**Host: Liang Fu**

**<br>October 31, 2022**

**Speaker: Nicholas Read, Yale University**

**Title: “Some recent results in the rigorous theory of short-range spin glasses”.**

**[https://physics.mit.edu/wp-content/uploads/2022/10/Nicholas-Read-Chez-Pierre\\_announcement-poster-3.pdf](https://physics.mit.edu/wp-content/uploads/2022/10/Nicholas-Read-Chez-Pierre_announcement-poster-3.pdf)**

**Host: Senthil Todadri**

**November 7, 2022**

**Speaker: Shiwei Zhang, Flatiron Institute**

**Title: “Magnetic orders, stripes, and superconductivity – insights from computations on the Hubbard model“.**

**[https://physics.mit.edu/wp-content/uploads/2022/10/Shiwei-Zhang-Chez-Pierre\\_announcement-poster-3.pdf](https://physics.mit.edu/wp-content/uploads/2022/10/Shiwei-Zhang-Chez-Pierre_announcement-poster-3.pdf)**

**Host: Liang Fu**

**November 8, 2022 (Tuesday, Special Chez Pierre Seminar)**

**Speaker: Leonid Glazman, Yale University**

**Title: “Disorder in Andreev reflection of a quantum Hall edge”.**

**[https://physics.mit.edu/wp-content/uploads/2022/10/Leonid-Glazman-Pierre\\_announcement-poster-3.pdf](https://physics.mit.edu/wp-content/uploads/2022/10/Leonid-Glazman-Pierre_announcement-poster-3.pdf)**

**Host: Liang Fu**

**November 10, 2022 (Thursday, Special Chez Pierre seminar)**

**Speaker: Chandra Varma, UC Berkeley**

**Title: “Quantum-Criticality and superconductivity in Twisted Bi-layer Graphene”.**

**[https://physics.mit.edu/wp-content/uploads/2022/11/Chandra-Varma-Chez-Pierre\\_announcement-poster-3.pdf](https://physics.mit.edu/wp-content/uploads/2022/11/Chandra-Varma-Chez-Pierre_announcement-poster-3.pdf)**

**Host: Liang Fu**

**November 14, 2022**

**Speaker: Debanjan Chowdhury, Cornell University**

**Title: “Superconductivity and competing orders in the flat-band limit.”**

**[https://physics.mit.edu/wp-content/uploads/2022/11/Debanjan-Chowdhury-Chez-Pierre\\_announcement-poster-3-1.pdf](https://physics.mit.edu/wp-content/uploads/2022/11/Debanjan-Chowdhury-Chez-Pierre_announcement-poster-3-1.pdf)**

**Host: Senthil Todadri**

**November 21, 2022**

**Speaker: TBA**

**Title: TBA**

**Host: TBA**

**<br>November 28, 2022**

**Speaker: Shahal Ilani, Weizmann Institute**

**Title: “The Quantum Twisting Microscope”.**

**[https://physics.mit.edu/wp-content/uploads/2022/10/Shahal-Ilani-Chez-Pierre\\_announcement-poster-3.pdf](https://physics.mit.edu/wp-content/uploads/2022/10/Shahal-Ilani-Chez-Pierre_announcement-poster-3.pdf)**

**Host: Pablo Jarillo-Herrero**

**<br>November 30, 2022 (Wednesday, Special Chez Pierre seminar)**

**Speaker: Andrea Alù, CUNY**

**Title: “Extreme Control of Light and Sound with Metasurfaces“**

**[https://physics.mit.edu/wp-content/uploads/2022/11/Andrea-Alù-  
\\_Chez-Pierre\\_announcement-poster.pdf](https://physics.mit.edu/wp-content/uploads/2022/11/Andrea-Alu-Chez-Pierre_announcement-poster.pdf)**

**Host: Marin Soljacic**

**December 5, 2022**

**Speaker: Fan Zhang, University of Texas at Dallas**

**Title: “Interacting Electrons in Elementary Bilayer Graphene”**

**[https://physics.mit.edu/wp-content/uploads/2022/11/Fan-Zhang-Chez-  
Pierre\\_announcement-poster1.pdf](https://physics.mit.edu/wp-content/uploads/2022/11/Fan-Zhang-Chez-Pierre_announcement-poster1.pdf)**

**Host: Long Ju**

**December 12, 2022**

**Speaker: Sufei Shi, Rensselaer Polytechnic Institute**

**Title: “Light-Matter Interaction in Flatland: Excitonic Physics in 2D“**

**[https://physics.mit.edu/wp-content/uploads/2022/11/Sufei-Shi-Chez-  
Pierre\\_announcement-poster.pdf](https://physics.mit.edu/wp-content/uploads/2022/11/Sufei-Shi-Chez-Pierre_announcement-poster.pdf)**

**Host: Long Ju**

**December 16, 2022 ( Friday, Special Chez Pierre seminar)**

**Speaker: Eslam Khalaf, University of Austin, Texas**

**Title: “Ideal flat bands, Topological phases, and charged excitations in graphene based moire systems”.**

**[https://physics.mit.edu/wp-content/uploads/2022/12/Eslam-Khalaf-Chez-Pierre\\_announcement-poster.pdf](https://physics.mit.edu/wp-content/uploads/2022/12/Eslam-Khalaf-Chez-Pierre_announcement-poster.pdf)**

**Host: Liang Fu**

**December 19, 2022**

**Speaker: Jia Leo Li, Brown University**

**Title: “Parity, time-reversal and rotational symmetry breaking in twisted trilayer graphene”.**

**[https://physics.mit.edu/wp-content/uploads/2022/10/Jia-Leo-Li-Pierre\\_announcement-poster-3-1.pdf](https://physics.mit.edu/wp-content/uploads/2022/10/Jia-Leo-Li-Pierre_announcement-poster-3-1.pdf)**

**Host: Liang Fu**