

## WORKSHOP

# Strongly Interacting Matter in Extreme Magnetic Fields

### Trento, 25-29 September, 2023

#### Abstract

The properties of strongly interacting systems under the influence of magnetic fields have become an intense field of study at the crossroads of nuclear, particle and astrophysical research. Some of the key questions that research in this field aims to address are related to the modifications experienced by static as well as dynamical properties of the particles that make up these systems. In the presence of these fields, these modifications can show up both in vacuum as well as at finite temperature and density. Effective model descriptions, helpful to get intuitive pictures of these properties, are constantly being put to the test by lattice QCD results. At the same time, experimental results from heavy-ion collisions and from the analysis of signals from astrophysical systems provide useful constraints for a clearer picture to emerge. This workshop aims to bring together specialists in the field as well as young practitioners to discuss in-person the latest developments on these studies. Special attention will be paid to summarize and make available to the larger community the results of the workshop discussions by publishing them in the form of proceedings or a special issue of a journal, provided that funding allows it.

#### Organizers

- Varese Salvador Timóteo (University of Campinas UNICAMP, Brazil)
- Alejandro **Ayala** (Universidad Nacional Autónoma de Mexico, Mexico)
- David Blaschke (Institute for Theoretical Physics University of Wroclaw, Poland)
- Gergely Endrodi (University of Bielefeld, Germany)
- Ricardo Farias (Universidade Federal de Santa Maria, Brazil)

#### Speakers

P. Adhikari, J. O. Andersen, G. Bali, A. Bandyopadhyay, F. Braghin, P. Buividovich, J. Castaño Yepes, M. Chernodub, A. Chowdhury, S. Dos Santos Avancini, M. Dutra, E. Fraga, K. Fukushima, M. Kaminski, A. Kotov, T. Kovacs, G. Krein, P. M. Lo, M. Loewe Lobo, O. Lourenço, M.I. Malheiro, G. Marko, K. Marquez, D. Peres Menezes, A. Mizher, B. Mukhopadhyay, E. Munoz, H. Pais, A. Raya, E. Ruiz Arriola, N. Scoccola, A. Sedrakian, W. R. Tavares, M.E. Tejeda-Yeomans, L. Tolos, C. Villavicencio, F. Wang, S. Yasui, Z. Zuraiq

#### **Director of ECT\*: Professor Gert Aarts**

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