

The poster for HADRONs 2025 Porto Alegre features a dark blue background with a stylized illustration of a particle detector or building. At the top left is a profile of a person's head. The title 'HADRONs' is in large yellow letters, followed by '2025 Porto Alegre' in white. Below this, it says 'XVI International Workshop on Hadron Physics' and '10-14 Mar | Centro Cultural da UFRGS'. A list of invited speakers includes Kenji Fukushima, Chun Shen, Lisheng Geng, and Fernanda Steffens. It also lists the National and Organizing Committees. At the bottom, it says 'Registrations open from 10 Aug 2024 to 14 Feb 2025' and provides a URL. Logos for IF, PPG, FAPESP, CAPES, and FAPERGS are at the bottom.

HADRONs
2025 Porto Alegre

• • • XVI International Workshop on Hadron Physics

10-14 Mar | Centro Cultural da UFRGS

Invited speakers

Kenji Fukushima
The University of Tokyo

Chun Shen
Wayne State University

Lisheng Geng
Beihang University

Fernanda Steffens
University of Bonn

National Committee

Kanchan Khemchandani (UNIFESP)
Jun Takahashi (UNICAMP)
Leticia Palhares (UERJ)
Luciano Abreu (UFBA)
Ricardo Sonogo Farias (UFSM)
Victor Gonçalves (UFPEl)
Tiago Nunes (UFSC)

Organizing Committee

Victor Gonçalves (UFPEl) - Chair
Gustavo Gil da Silveira (UFRGS)
Magno Machado (UFRGS)
Ricardo Sonogo Farias (UFSM)

Registrations open from
10 Aug 2024 to 14 Feb 2025

<https://indico.cern.ch/e/hadrons2025>

IF PPG FAPESP CAPES FAPERGS



Começar (Iniciar) 10 de mar. de 2025 09:00

Fim 14 de mar. de 2025 19:00

America/Sao_Paulo



Centro Cultural - UFRGS

Jacarandá Auditorium

Rua Eng. Luiz Englert, 333 - Porto Alegre-RS

[Ir para o mapa](#)



[Victor Goncalves](#)



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ID da Contribuição: 143

Tipos: Seminar (invitees)

g-2 of the muon in the Standard Model: status and challenges

segunda-feira, 10 de março de 2025 15:30 (30 minutos)

The anomalous magnetic moment of the muon, or $g-2$, is now known experimentally with an astonishing precision of 0.19 parts per million and final results from the $g-2$ experiment at Fermilab are expected to be released in 2025. It is, therefore, crucial to scrutinize the Standard Model (SM) determination of $g-2$ in order to assess whether or not there is room for beyond-the-SM physics. The main issue is the hadronic vacuum polarization (HVP) contribution which dominates the theory error. The SM $g-2$ result based on the HVP contribution obtained using input from $e+e-$ hadronic cross-section data shows a larger-than-5-sigma tension with the experimental result, while using new results for the HVP from lattice QCD the SM determination of $g-2$ becomes compatible with experiment. Understanding the discrepancies between experiment and theory, and between the data-driven and lattice computations of the HVP contribution, are critical tasks. In this talk, I will discuss the present status of $g-2$ in the SM and our recent data-driven computation of specific diagrams contributing to the HVP in $g-2$, which provide new benchmarks for the comparison with present and future lattice-QCD results. I will also discuss the potential role of recent CMD-3 2π cross-section data and new sum rules introduced for scrutinizing the SM calculation of $g-2$, comparing data-driven and lattice approaches.

Autores: BOITO, Diogo (Universidade de São Paulo); BOITO, Diogo**Apresentador:** BOITO, Diogo**Classificação da Sessão:** Afternoon