



## **7th Brazil Interpore Chapter Conference on Porous Media**

site: <https://interpore2024br.salinopolis.ufpa.br/>

August 12th – 14th, 2024 –Salinópolis/PA - Brazil.

### **General Overview**

The 7th Brazil InterPore Chapter Conference on Porous Media was held from August 12th to 14th, 2024, at the Casa da Cultura, part of the Federal University of Pará (UFPA) in Salinópolis, Pará, Brazil. This event marked a significant milestone as it was the first time the InterPore conference took place in the Northern region of Brazil.

The Federal University of Pará is the largest academic institution in the Amazon region. The Salinópolis Campus, the university's newest addition, is dedicated to advancing research in fields such as mathematics, physics, coastal engineering, energy, and geoenergy. Salinópolis is located 210 km from Belém, the capital of Pará.

The conference focused on cutting-edge research, methods, applications, and theoretical advances in porous media. The program covered a wide range of topics, including:

- Porous Media & Synchrotron
- Porous Media & Theory, Modeling, and Numerical Methods
- Porous Media & Mathematical modeling and applied analysis
- Porous Media & Energy and Industrial Applications
- Porous Media & Green World
- Porous Media & Biotechnology
- Porous Media & Oil Science and Microfluidics
- Porous Media & Smart Materials

### **Scientific Program**

The event featured plenary lectures, seminar sessions and poster sessions covering various scientific fields related to porous media. The primary goal was to disseminate knowledge and foster collaboration between the Brazilian InterPore community and the Federal University of Pará. The conference provided a platform for interaction

among specialists from academia, researchers industry, and students of undergraduate and graduate levels.

The scientific program included nine plenary speakers, thirteen oral presentations, and eleven presentations in poster form. These presentations spanned various areas of porous media research, such as synchrotron studies, theoretical modeling, numerical methods, energy and industrial applications, environmental sustainability, biotechnology, oil science, microfluidics, and smart materials.

Below is a list of the main speakers and their presentation titles from the 7th Brazil InterPore Chapter Conference:

<b>Speaker</b>	<b>Presentation title</b>
Prof. Rainer Helmig (University of Stuttgart)	Porous Media Free-Flow Coupling – Models, Concepts and Analysis <i>Opening Lecture of the 7th Brazil InterPore Annual Meeting</i>
Prof. José Jadsom Sampaio (UFPA)	Petrophysics, Rock Physics, and Artificial Intelligence: Is the Next Frontier Defined?
Prof. Edvaldo Sabadini (UNICAMP)	Improving the well- reservoir permeability
Dr. Mathias Steiner (IBM)	Simulating Carbon Dioxide Injection, Trapping, and Storage in Digital Rock
Prof. Massimiliano Ferronato (University of Padova)	Unexpected Fault Activation in Underground Gas Storage: Mathematical Model and Mechanism
Prof. Bruno Jose Vicente (LENEP-UENF)	Dynamic of Polymer Flooding in Composite Porous Media with Discontinuous Adsorption Isotherm
Prof. Tito Bonagamba (USP)	NMR and 3D X-ray microtomography research at the interface between oil exploration and geologic CO <sub>2</sub> storage - an important environmental perspective
Prof. Rosângela Zanoni (LABORE-UNICAMP)	Pore-Scale Flow Simulations for Permeability Estimation Based on Low-Resolution Tomography for Carbonate and Sandstone Rocks
Prof. Celso Peres (UFSC)	Microscopic Pore System Characterization of Low Permeability Rocks

The full program can be found in the official website:

<https://interpore2024br.salinopolis.ufpa.br/>

## **Participants**

The conference drew 92 participants from across Brazil, representing several regions (North, Northeast, South, and Southeast), along with seven international attendees. The event attracted a diverse group, including students, post-doctoral researchers, and young scientists, who had the opportunity to engage with senior researchers and industry professionals. More than 50% of the attendees were under 25 years old, highlighting the strong interest of young scientists and students in subjects related to porous media and their enthusiasm for the InterPore community.

**Table 1:** Number of attendees and nationality

Brazilian	85
Foreigner	7
<b>Total</b>	<b>92</b>

**Table 2.** Gender of the attendees

Male	60
Female	32
<b>Total</b>	<b>92</b>

**Table 3:** Age of the attendees

Up to 25 years old	48
Between 26 and 40 years old	26
More than 40 years old	18
<b>Total</b>	<b>92</b>

**Table 4.** Distribution of attendee by Brazilian states.

SP	6
RJ	8
SC	5
RS	1
PA	62
BA	1
MG	2
Foreigner	7
<b>Total</b>	<b>92</b>

### **Coffee breaks and Cultural Program**

During the conference, a coffee break and cocktail reception were provided, which helped foster scientific discussions and integration among participants. Additionally, a regional group performed a cultural presentation of 'Carimbó,' a traditional rhythm of the region. Overall, we believe the conference was a success, offering valuable insights, promoting scientific cooperation, and providing an environment conducive to discussions on topics related to porous media

### **Sponsorship**

The conference was sponsored by Tennessine (Math2Market Brazilian representative), IBM, ABPG (Brazilian Association of Research and Development in Petroleum and Gas), JBV Usinagem e Tecnologia, Hico Comércio e Serviço, PROPESP/UFGA (Dean of Research and Postgraduate Studies - Federal University of Para), and CAPES (Federal Agency for Support and Evaluation of Graduate Education).

### **Scientific Committee**

Pedro Tupã Pandava Aum (LCPETRO/UFPA)  
Alexei A. Mailybaev (FLUID/UNICAMP)  
Eduardo Cardoso de Abreu (IMECC/UNICAMP)  
Grigori Chapiro (DM/UFJF)  
Marcio Arab Murad (COMOD/LNCC)  
Márcio da Silveira Carvalho (DEM/PUC-Rio)  
Martinus Th. Van Genuchten (Nuclear Engineering, UFRJ)

### **Organizing Committee**

Pedro Tupã Pandava Aum (UFPA, Chairperson)  
Cláudio Regis dos Santos Lucas (UFPA)  
Daniel Nobre Nunes da Silva (UFPA)  
Eduardo Cardoso de Abreu (UNICAMP, Chair Brazil InterPore Chapter)  
Marcio Arab Murad (LNCC)  
Tereza Neuma de Castro Dantas (UFRN and ABPG)

### **List of Monitors**

Álvaro Antônio dos Santos de Lima (Undergraduate student, UFPA)  
Andresa dos Santos Valente (Master student, UFPA)  
Andressa dos Santos Menezes (Undergraduate student, UFPA)  
Avyla Melissa dos Santos de Castro (High School, Scientific Initiation Program)  
Carla Tainá Silva Modesto (Undergraduate student, UFPA)  
Danish Khalid (Master student, UFPA)  
Dayene Mendes (Post-Doctoral Researcher, UFPA)  
Dulcídio Nogueira Barbosa Sarmento (Undergraduate student, UFPA)  
Eloisa Sofia da Costa Santos (High School, Scientific Initiation Program)  
Emanuele Dutra Valente Duarte (Post-Doctoral Researcher, UFPA)  
Eric Yuji Yasuda (Post-Doctoral Researcher, UFPA)  
Evelyn Kailanny Campelo de Oliveira (Undergraduate student, UFPA)  
Felipe Pereira de Souza (Ph.D Student, UFPA)  
Francisco Moreira Lopes Júnior (Lab Technician, UFPA)  
Heitor da Luz Silva (Undergraduate student, UFPA)

Jair Rodrigues Neyra (Ph.D Student, UFPA)  
Jessica Nascimento Pereira (Master student, UFPA)  
João Victor da Silva Fonseca (Undergraduate student, UFPA)  
José Pedro da Rocha dos Santos (Undergraduate student, UFPA)  
Ketlyn Marley Gomes Oliveira (Master student, UFPA)  
Lorena Cardoso Batista (Ph.D Student, UNICAMP)  
Marília Carvalho Teixeira (Ph.D Student, UFPA)  
Marianela Choque Fernandez (Master student, UFPA)  
Mickaelly de Cássia Santiago da Costa (High School, Scientific Initiation Program)  
Natalino da Silva Souza (Undergraduate student, UFPA)  
Paloma Andrade Rebouças (Undergraduate student, UFPA)  
Paula Caroline Silva Caxias (Undergraduate student, UFPA)

# Foto Gallery



**Figure 1.** Official photo of the 7th Brazil Interpore Chapter Conference on Porous Media occurred from August 12th to 14th, 2024, at the Casa da Cultura of Federal University of Pará, in Salinópolis – PA - Brazil.



**Figure 2.** Reception and opening



Figure 3. Main speaker plenaries



**Figure 4.** Poster section



**Figure 5.** 'Cultural presentation and cocktail





**Figure 6.** Venue - Casa da Cultura, UFPA



**Figure 7.** Selected photos of Salinópolis/PA

## Organized by



## Support and Sponsors

