

# 5<sup>th</sup> EPIC Conference

November 13-14<sup>th</sup>, 2023



## Welcome to the 5<sup>th</sup> EPIC Conference!

In 2023 we celebrate the 5<sup>th</sup> edition of the EPIC Conference, our annual event dedicated to showcasing our latest research findings together with captivating keynote speeches and thought-provoking round table discussions led by distinguished experts from both industry and academia.

The 5<sup>th</sup> EPIC Conference also holds special significance as it coincides with the conclusion of EPIC's initial five-year phase, Phase 1, and marks the transition to Phase 2. For deeper insights into this exciting new chapter, be sure not to miss the closing speech delivered by EPIC's Director, Prof. Denis J. Schiozer.

We wish you an enriching conference experience,

EPIC's team

### Conference Venues

The 5<sup>th</sup> EPIC Conference will take place at the auditorium of the **Eldorado Research Institute**, located at Av. Alan Turing, 275 - Cidade Universitária, Campinas – Brazil.

We will also have a **Welcome Cocktail** on **Monday (Nov. 13<sup>th</sup>), 18:30**, at **Casa do Professor Visitante (CPV)**, located at Av. Érico Veríssimo, 1251 - Cidade Universitária, Campinas – Brazil.



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(Eldorado)



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(CPV)



### Day 1: November 13<sup>th</sup>

⌚	Session	Speaker
8:30	<b>Registration</b>	
9:00	Opening + Safety moment	Prof. Denis J. Schiozer (Unicamp) Dr. Juliana Finoto Bueno (Equinor) Vinicius Pagano (Eldorado) Prof. Antonio José de A. Meirelles (Unicamp)
9:30	<b>Round Table:</b> The future of the Oil & Gas Industry in Brazil in times of energy transition	Prof. Marcelo Souza de Castro (Unicamp) Andrea Achoa (Equinor) Prof. Dr. Rodolfo Jardim Azevedo (FAPESP) Dr. Raphael Moura (ANP)  <b>Moderator:</b> Prof. Denis J. Schiozer (Unicamp)
10:40	<b>Break</b>	
11:10	<b>Keynote:</b> Energy transition: the need and challenges of petroleum subsurface competence to achieve energy security and climate goals, learnings from Norway	Prof. Alejandro Escalona Varela (University of Stavanger)
11:50	<b>Technical Presentation 1:</b> Impact of modeling advanced phenomena in a fractured carbonate reservoir subjected to WAG-CO <sub>2</sub> injection	Davi Eber Sanches Menezes (Unicamp)
12:10	<b>Technical Presentation 2:</b> Effects of viscosity on the flow behavior in an ESP impeller: a comparison between water and mineral oil	Rodolfo Perissinotto (Unicamp)
12:30	<b>Technical Presentation 3:</b> Three-dimensional seismic facies distribution and morphometric analysis of the Aptian Pre-salt Barra Velha Formation in Santos Basin, Brazil	Juan Villacreses Morales (Unicamp)
12:50	<b>Lunch</b>	
14:00	<b>Keynote:</b> Predicting permeability passageways in carbonate reservoirs with vugs or burrows	Prof. Robert H. Goldstein (Kansas University)
14:40	<b>Technical Presentation 4:</b> Fracture Characterization Using Seismic Attributes in Pre-Salt Carbonate Deposits: Barra Velha Formation, Santos Basin, SE Brazil	Joan M. Blanco (Unicamp)
15:00	<b>Technical Presentation 5:</b> Chemical Injection Valve Clogging: An In-Depth Chemical Characterization of the Clogging Material	Juliana Bahú (Unicamp)
15:20	<b>Technical Presentation 6:</b> Automated classification of dissolved zones in acoustic borehole image logs: An example from Brazilian pre-salt carbonate reservoirs	Guilherme F. Chinelatto (Unicamp)
15:40	<b>Break + Poster Session A</b>	
16:40	<b>Keynote:</b> Recent Advances in ESP Technology – Highlights from the 2023 ESP Symposium	Dr. Francisco Alhanati (Francisco Alhanati Consulting)
17:20	<b>Technical Presentation 7:</b> Exploring Wax Deposition Mechanisms: Morphology Investigation in flow	Letícia Bizarre (Unicamp)
17:40	<b>Technical Presentation 8:</b> Using visualization techniques to support the selection of representative models of petroleum reservoirs	Miguel Ângelo M. Póvoa (Unicamp)
18:00	<b>Day 1:</b> end of technical activities	







### Day 1: Poster Session A

🕒	Title	Presenter
15:40 – 16:40	<b>Poster A1:</b> Data-driven forecasting of oil & gas: a recurrent neural network approach	Victor Eduardo Martínez Abaunza (Unicamp)
	<b>Poster A2:</b> Enhancing Asset Profitability with Flexibility In Capacity For Long-Term Field Development	Felipe da Rocha Branco (Unicamp)
	<b>Poster A3:</b> Evaluation of the influence of wells opening schedule in NPV of a project using WAG-CO2	Anthony Andrey Ramalho Diniz (Unicamp)
15:40 – 16:40	<b>Poster A4:</b> Relationship between turbulent flow and energy loss in ESP impeller	William Fonseca (Unicamp)
	<b>Poster A5:</b> Advancing phase Inversion Prediction in water oil emulsions: HLD theory and Semi-Empirical Modeling	Tatiana Pessanha (Unicamp)
	<b>Poster A6:</b> Analysis of the Dimensionless Numbers on Gravity Separation of W/O Emulsions	Clarissa Dantas (Unicamp)
	<b>Poster A7:</b> Exploring Asphaltene Aggregation and Chemical Characteristics: Insights from Experimental Techniques	Fernanda Pelaquim (Unicamp)
15:40 – 16:40	<b>Poster A8:</b> Study of the coating effect on single-phase oil flows	Rafaela Ferreira (Unicamp)
	<b>Poster A9:</b> Carbonate rock type based on NMR logging responses of Lacustrine Carbonate Reservoir from the Santos Basin	Guilherme F. Chinelatto (Unicamp)
	<b>Poster A10:</b> Integrating fractures and dissolution features to predict reservoir connectivity of a pre-salt carbonate reservoir from the Santos Basin	Matheus Basso (Unicamp)

### Feedback

To help us improve the next editions of the EPIC Conference, please provide your feedback through the following link:



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### Day 2: November 14<sup>th</sup>

🕒	Session	Speaker
8:00	<b>Technical Visit:</b> Eldorado Research Institute (pre-registration required)	
9:00	<b>Keynote:</b> Flow Assurance into Near Future	Prof. Cem Sarica (The University of Tulsa)
9:40	<b>Technical Presentation 9:</b> Deciding for a single production strategy in the presence of multiple conceptually equal alternatives	Matheus Bernadelli de Moraes (Unicamp)
10:00	<b>Technical Presentation 10:</b> ESP operating with emulsion flows: A knowledge building about a complex challenge	Natan Bulgarelli (Unicamp)
10:20	<b>Break + Poster Session B</b>	
11:20	<b>Keynote:</b> Cyber Security in Critical Infrastructure	Mateus Silva Pierre (Eldorado) Dr. Ulf Lindqvist (SRI International)
12:00	<b>Technical Presentation 11:</b> An overview of Data Augmentation in Generative Adversarial Networks applied to the generation of geological models	Paulo Ranazzi (USP)
12:20	<b>Technical Presentation 12:</b> Contrasting sedimentological characteristics of two wells from the eastern margin of the Brazilian Pre-salt field	Renato Medeiros (Unicamp)
12:40	<b>Lunch</b>	
14:00	<b>Round Table:</b> Research Centers - Closing the Gap between Industry and Academia	Alexandre Breda (Shell) Prof. Ingebret Fjelde (NORCE) José Eduardo Bertuzzo (Eldorado) Prof. Michael J. King (Texas A&M) Dr. William Godoy da Silva (Equinor)  Moderator: Prof. Marcelo Souza de Castro (Unicamp)
15:30	<b>Conference Closing:</b> EPIC's Present and Future	Prof. Denis J. Schiozer (Unicamp)
15:50	<b>Day 2:</b> end of activities	

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## Day 2: Poster Session B

🕒	Title	Presenter
10:20 – 11:20	<b>Poster B1:</b> Complexity and Characterization: Challenges in Representing Pre-Salt Reservoir Simulations	Saad Allahham (Unicamp)
	<b>Poster B2:</b> Comparing WAG-CO <sub>2</sub> injection with continuous water and gas injection in separate wells under uncertainty	Josias Pereira de Oliveira Júnior (Unicamp)
10:20 – 11:20	<b>Poster B3:</b> Experimental analysis of the ESP performance curve operating with a stable water-in-oil emulsion	Andrey Felipe Casas Pulido (Unicamp)
	<b>Poster B4:</b> Model-based estimation of ESP system parameters and state variables using physics-informed neural networks	Felipe Carvalho (Unicamp)
	<b>Poster B5:</b> Non-Linear Model Predictive Control for Electrical Submersible Pumps	Mauricio Barrios (Unicamp)
	<b>Poster B6:</b> Chemical Injection Valves (CIVs) – A Teardown Analysis to Investigate Clogging Issues	Juliana Bahú (Unicamp)
	<b>Poster B7:</b> NMR-Based Diffusivity Prediction: Introducing a New Correlation Model	Ivanei Pinheiro (Unicamp)
10:20 – 11:20	<b>Poster B8:</b> Quantitative Mineralogical and petrophysical analysis of lacustrine pre-salt carbonates of Barra Velha Formation, Santos Basin	Luis Mansini (Unicamp)
	<b>Poster B9:</b> Reservoir quality evaluation in heterogeneous Pre-salt carbonate reservoir: A reservoir rock typing approach	Shohreh Irají (Unicamp)
	<b>Poster B10:</b> First results from the inversion of 2D NMR data acquired in samples from Barra Velha formation	Denilson Stefanelli (Unicamp)

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