

CREWES Annual Meeting 2025 - Technical Program - Day 1

Dec 4 2025

Time	Session	Moderator	Title	Speaker
8:40AM	WELCOME		Opening remarks	Kris Innanen
9:00AM	ACQ-DAS-LAB	Kris Innanen	Baseline DAS VSP acquisition at the Meadowbrook Carbon Storage Hub	Kevin Hall
9:20AM			Transforming physical modelling datasets to make them suitable for time-lapse FWI	Kevin Bertram
9:40AM			Impact of sparse acquisition on time-lapse imaging of gas injection: a physical modeling case study	Christina Schumacher
10:00AM			COFFEE (10:00AM - 10:50AM)	
10:50AM	CO2-NM-INT	Don Lawton	Measuring and simulating the directional response of the Croissant multicomponent DAS sensor	Carla Acosta
11:10AM			Update on CO ₂ storage monitoring at the Newell County Field Research Station	Marie Macquet
11:30AM			Modelling crustal fluid flow in seamount-influenced hydrothermal systems	Robert Perrin
12:00PM			LUNCH (11:50AM - 1:30PM)	
1:30PM			Prediction of Elastic Logs from the limited information available from LWD (logging while drilling) information	David Emery
1:50PM			Geophysical Ising solvers	Anton Ziegon
2:10PM			AVO inversion and nullspace shuttling on Ising networks	Kris Innanen
2:30PM			COFFEE (2:30PM - 2:50PM)	
2:50PM			On the role of multi-physics joint inversion in reducing uncertainties in geophysical inversion	Tianze Zhang
3:10PM			Continuous CO ₂ monitoring based on combined active-source and microseismic FWI	Xiaohui Cai
3:30PM			Transconceptual sampling and geophysical inverse problems	Jinji Li
3:50PM			Sparse seismic data planning for CO ₂ sequestration monitoring	Qi Hu
4:10-5:45PM	Invited Talk		POSTER SESSION & Demos	

CREWES Annual Meeting 2025 - Technical Program - Day 2

Dec 5 2025

Time	Session	Moderator	Title	Speaker
8:30AM	4DFWI	Kris Innanen	Feasibility study on time-lapse FWI using multiple-shallow-well VSP acquisition	He Liu
8:50AM			3D targeted nullspace shuttles in 4D FWI	Jinji Li
9:10AM			Time lapse nullspace shuttles and illumination in sparse acquisition settings	Kim Pike
9:30AM			Potential Wavefield Inversion (PWI): quasi-acoustic surrogates for elastic media	Ivan Sanchez
9:50AM	ML-DSI-CMP	Daniel Trad	COFFEE (9:50AM - 10:30AM)	
10:30AM			Pseudo-3D and full 3D FWI approaches applied to the Snowflake field data	Anton Ziegon
10:50AM			Direct estimation of time-lapse CO ₂ saturation variations with eFWI of the Snowflake dataset	Xiaohui Cai
11:10AM			Modelling, migration and inversion: acoustic and elastic 3D modules	Daniel Trad
11:30AM			Enabling curvilinear finite-differences in Devito for elastodynamic simulations in complex topography	Ivan Sanchez
11:50AM			LUNCH (11:50AM - 1:20PM)	
1:20PM			Seismic low-frequency extrapolation in a latent space based on self-supervised learning	Anqi Jia
1:40PM			Self-supervised deep learning for attenuating multiple types of seismic noise	Ji Li
2:00PM			Physics-informed neural operators for seismic wave propagation	Ángel Hernandez
2:20PM			COFFEE (2:20PM - 3:00PM)	
3:00PM			Synthetic P-wave velocity model generation using LLMs for seismic data simulation	Marcelo Guarido
3:20PM			Deep learning for separation of near-surface waves in the frequency–slowness domain	Ivan Sanchez
3:40PM	Invited Talk		A comparison of spectral decomposition methods	Brian Russell
4:00PM			WRAP-UP AND ADJOURN	

ACQ-DAS-LAB	Acquisition and field methods, DAS, lab results
CO2-NM-INT	CO ₂ , novel methods, interpretation
FWI-UQ	2D, 3D and 4D FWI and uncertainty quantification
ML-DSI-CMP	Machine learning, data science and computation