

# CREWES Annual Meeting 2022 - Technical Program - Day 1

*Dec 1 2022*

Time	Session	Moderator	Title	Speaker
8:40AM	WELCOME		Welcome and overview	<i>Kris Innanen</i>
9:00AM	ACQ-FIELD-DAS	Kris Innanen	Snowflake II: a time-lapse, multi-azimuth, multi-offset VSP in support of CO <sub>2</sub> monitoring	<i>Kris Innanen</i>
9:20AM			Upgrading the seismic physical modelling facility	<i>Kevin Bertam</i>
9:40AM			Multiparameter FWI of ultrasound data	<i>Scott Keating</i>
10:00AM	COFFEE			
10:30AM	CO2-TL-GEO	Don Lawton	Multicomponent DAS prototype sensors - the pretzel and the croissant	<i>Kevin Hall</i>
10:50AM			Monitoring carbon storage: detection thresholds and a look ahead at sparse monitoring	<i>Don Lawton</i>
11:20AM			Rapid-repeat time-lapse VSP sensing of CO <sub>2</sub> injection	<i>Xiaohui Cai</i>
11:40AM			A robust source-independent FWI	<i>Xin Fu</i>
12:00PM	LUNCH			
1:30PM			Time-lapse attenuation-attribute variations using DAS VSP data from the CaMI FRS	<i>Yichuan Wang</i>
1:50PM			Time-lapse FWI prediction of CO <sub>2</sub> saturation and pore pressure	<i>Qi Hu</i>
2:10PM			Borehole quality insights using Hook load and wavelets	<i>Scott Hess</i>
2:30PM	COFFEE			
2:50PM			Time-lapse FWI using simultaneous sources	<i>He Liu</i>
3:10PM			Time-lapse monitoring using neural networks	<i>Shang Huang</i>
3:30PM	Invited Talk		The new 4H Club – hydrogen, helium, heat, and hazards	<i>Rob Stewart</i>
4:00-5:45PM	POSTER SESSION			

ACQ-FIELD-DAS	Acquisition, field applications and DAS
CO2-TL-GEO	CO <sub>2</sub> , Time-lapse and Geothermal applications
FWI-AMP	Full waveform inversion and amplitude inversion
ML-DSI-CMP	Machine learning, data science and computation

# CREWES Annual Meeting 2022 - Technical Program - Day 2

Dec 2 2022

Time	Session	Moderator	Title	Speaker
8:30AM	FWI-AMP	Kris Innanen	Well-log parameterized full waveform inversion	<i>Ninoska Amundaray</i>
8:50AM			Hypothesis testing in time-lapse seismic FWI	<i>Scott Keating</i>
9:10AM			Towards improving crosstalk suppression in FWI by decorrelating parameter classes	<i>Mariana Lume</i>
9:30AM			Simultaneous inversion of SWD data for P-wave velocity, density, and source parameters	<i>Jinji Li</i>
9:50AM			Quantitative FWI characterization and monitoring of reservoir properties at the CaMI.FRS	<i>Qi Hu</i>
10:10AM	COFFEE			
10:30AM	ML-DSI-CMP	Daniel Trad	A 2D FWI using trench-deployed surface and VSP DAS data acquired at the CaMI.FRS	<i>Luping Qu</i>
10:50AM			Elastic FWI uncertainty analysis via conventional and ML methods	<i>Tianze Zhang</i>
11:10AM			Combining classical processing with deep learning	<i>Daniel Trad</i>
11:30AM			Common image gathers from blended data	<i>Ziguang Su</i>
11:50AM	LUNCH			
1:30PM			The use of U-Net and Radon transforms for multiple attenuation	<i>Paloma Fontes</i>
1:50PM			Machine Learning mineralogy classification and implications for physics-informed modeling	<i>David Emery</i>
2:10PM			Using natural language processing to convert mud-log chip descriptions to usable data tables	<i>Marcelo Guarido</i>
2:30PM	COFFEE			
2:50PM			Application of GPU parallelization for non-uniform Fourier interpolation	<i>Kai Zhuang</i>
3:10PM			A quantum algorithm for travelttime tomography	<i>Jorge Monsegny</i>
3:30PM	Invited Talk		The dual representation and its application to seismic reservoir analysis	<i>Brian Russell</i>
4:00PM	WRAP-UP			

ACQ-FIELD-DAS Acquisition, field applications and DAS

CO2-TL-GEO CO<sub>2</sub>, Time-lapse and Geothermal applications

FWI-AMP Full waveform inversion and amplitude inversion

ML-DSI-CMP Machine learning, data science and computation