

## CREWES Annual Meeting 2021 - Technical Program - Day 1

Dec 2 2021

Time	Session	Moderator	Title	Speaker
8:00AM	WELCOME		Welcome and overview	<i>Kris Innanen</i>
8:20AM	ACQ-FIELD-DAS	Don Lawton	CO2 monitoring at the CaMI.FRS - updates	<i>Don Lawton</i>
8:40AM			Can we predict helically wound DAS fibre pitch from recorded data?	<i>Kevin Hall</i>
9:00AM			An encoder-decoder CNN for DAS-to-geophone transformation	<i>Jorge Monsegny</i>
9:20AM			Rock physics analysis of well-log data	<i>Qi Hu</i>
9:40AM			Source wavefield estimation in VSP full waveform inversion	<i>Scott Keating</i>
10:00AM			Pre-processing and parameterization for DAS FWI	<i>Matt Eaid</i>
10:20AM	ML-DSI	Daniel Trad	FWI of the CREWES 2018 accelerometer / DAS dataset	<i>Matt Eaid</i>
10:40AM			Seismic inversion with gradient boosting	<i>Marcelo Guarido</i>
11:00AM			HPC in seismic modeling, migration, inversion, and machine learning	<i>Daniel Trad</i>
11:20AM			CNN-based reverse time migration	<i>Shang Huang</i>
11:40AM			Quantum machine learning	<i>Shahpoor Moradi</i>
12:00PM			Learning the elastic wave equation with Fourier Neural Operators	<i>Tianze Zhang</i>
12:20PM	WRAP-UP		Seismic facies classification with parametric and non-parametric statistics	<i>Brian Russell</i>
12:40PM				

## CREWES Annual Meeting 2021 - Technical Program - Day 2

Dec 3 2021

Time	Session	Moderator	Title	Speaker
8:00AM	FWI-AMP	Kris Innanen	Neural representations for full waveform inversion	<i>Tianze Zhang</i>
8:20AM			Stepsize sharing in time-lapse full waveform inversion	<i>Xin Fu</i>
8:40AM			Statistical-mechanical models for assessing uncertainty in seismic inversion	<i>Kris Innanen</i>
9:00AM			Local optimization methods for inverting PP-PS amplitudes	<i>Mariana Lume</i>
9:20AM			Full waveform inversion of DAS surface wave data	<i>Luping Qu</i>
9:40AM			Amplitude-encoding in FWI using different bases	<i>He Liu</i>
10:00AM	CO2-EOR-GEO	Don Lawton	Inversion of seismic amplitudes for fracture indicators	<i>Huaizhen Chen</i>
10:20AM			Time-lapse analysis of CaMI.FRS CO2 VSP data	<i>Brendan Kolkman-Quinn</i>
10:40AM			Feasibility of time-lapse EFWI of CO2 injection at CaMI.FRS	<i>Ninoska Amundaray</i>
11:00AM			Passive source location by diffraction scanning	<i>Jorge Monsegny</i>
11:20AM			Time-lapse rock physics CO2 monitoring with FWI	<i>Qi Hu</i>
11:40AM			Shiny apps for optimization of DFIT event detection with unsupervised learning	<i>Lukas Sadownyk</i>
12:00PM	Short Course Prep		Geothermal: geoscientific and engineering challenges	<i>Roman Shor</i>
12:20PM			Full waveform source and medium determination from seismic-while-drilling data	<i>Jinji Li</i>
12:40PM			Getting up and running with the short course codes	<i>Marcelo Guarido</i>

ACQ-FIELD-DAS	Acquisition, field applications and DAS
CO2-EOR-GEO	CO2, EOR and Geothermal applications
FWI-AMP	Full waveform inversion and amplitude inversion
ML-DSI	Machine learning and data science @ CREWES