

2nd EAGE Data Processing Workshop 2025

Barcelona, Spain
6-8 October 2025

ISBN: 979-8-3313-2587-9

Printed from e-media with permission by:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571



Some format issues inherent in the e-media version may also appear in this print version.

Copyright© (2025) by the European Association of Geoscientists & Engineers (EAGE)
All rights reserved.

Printed with permission by Curran Associates, Inc. (2026)

For permission requests, please contact by the European Association of Geoscientists & Engineers (EAGE)
at the address below.

European Association of Geoscientists & Engineers (EAGE)
PO Box 59
3990 DB Houten
The Netherlands

Phone: +31 88 995 5055

Fax: +31 30 634 3524

eage@eage.org

Additional copies of this publication are available from:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: 845-758-0400
Fax: 845-758-2633
Email: curran@proceedings.com
Web: www.proceedings.com

TABLE OF CONTENTS

Onshore Complex Fold/Thrust Belts Near Surface Velocity Model Building Effecting Deeper Reservoir Imaging.....	1
<i>A. Riaz, D. Bannister</i>	
Unlocking the Complex Subsurface Imaging Offshore Egypt	4
<i>T. Darwish, M. Mohamed, J. Kumar, J. Brittan</i>	
Data Driven Image Enhancement for the Drilling De-Risking in the Pre-Salt Exploration, Gulf of Suez, Egypt.....	7
<i>I. Mihaljevic, A. Sazykin, M. Salheen, C. Tu, A. Karvelas, A. Menari, G. Busanello</i>	
Elastic Full Waveform Inversion Workflow for Model Building and High-Resolution Imaging	10
<i>R. Plessix, J. Cao, D. Datta, V. Goh, A. Gomes Dos Santos, M. Huiskes, Y. Liu, X. Shang</i>	
Multi-Parameter FWI - Fundamentals and Applications	13
<i>J. Brittan, Ø. Korsmo, N. Chemingui, S. Crawley</i>	
Application of PS Reflection Waveform Inversion to Ocean Bottom Data from Offshore Norway	16
<i>O. E. Aaker, Ø. Pedersen, E. B. Raknes</i>	
Integrated Workflow for Joint Fault and Horizon Extraction Driven by Machine Learning.....	19
<i>G. Loginov, K. Obaid, A. Triki, M. Khalil, S. Hou</i>	
Enhanced Seismic Imaging with LAD-Based LSM: A Case Study.....	22
<i>I. Sharabi, A. Vigner, M. Shustak</i>	
Elastic MP-FWI Imaging for Vp, P-Impedance and Vs/Vp using OBN Data Offshore West Africa	25
<i>M. Kobylarski, J. Chaloner, M. Micu, B. Chowdhury, W. Hickey, K. Kraus</i>	
Unlocking New Reservoir Insights with FWI	28
<i>S. Masclat, Y. Aziez, A. Montagud</i>	
Utilizing Surface Distributed Acoustic Sensing (S-DAS) for PP and PS Imaging: A North Sea Case Study.....	31
<i>D. Brager, M. Wilk-Lopes, R. Bachrach, S. Sonika, C. Thorgersen, E. B. Raknes, Y. Ivanov</i>	
Automated Fracture Identification in Borehole Image Logs using YOLO and PCA-Based Anomaly Detection.....	34
<i>S. Acharya</i>	
Enhancing Far-Field Acoustic Logging Imaging using Receivers' Rotation Correction Algorithm	37
<i>M. Alsharif, N. Albasheer, L. Liu, H. Alsalem, T. Tonellot</i>	
Beyond Finite-Difference: Spectral Element-FWI for High-Fidelity Imaging.....	41
<i>L. Casasanta, C. Purcell, S. Grio, C. Boehm, L. Krischer, M. Afanasiev</i>	
Up-Going Data Improvements Through the Attenuation of Converted PS Waves.....	44
<i>D. Rosa, B. Webb, N. Bienati</i>	
Multi-Dimensional Seismic Data Analysis in an Advanced Reservoir Characterization Workflows.....	47
<i>C. Reiser</i>	

Joint 3D Elastic FWI of OBS and DAS-VSP	51
<i>H. A. E. Malak, G. Apeland, P. A. Olsen, Y. Biryaltseva, R. Dehghan-Niri, H. Westerdahl, A. Cooke, C. Thorgersen, J. Rickett, J. Xu, X. Zhao, O. Lewis</i>	
4D FWI on 25,000 Nodes – A Clair Case Studybe.....	54
<i>D. Cavalin, P. Tillotson, E. Cho, F. Gao, L. Saxton, D. Davies, L. Wang</i>	
A Deep Learning Waveform-Based Earthquake Detector for DAS Data	59
<i>S. Gaviano, D. Pecci, E. Rebel, F. Grigoli</i>	
Encoding Spatio-Temporal Coordinates in Convolutional Neural Networks for Seismic Data Processing.....	62
<i>M. Fernandez, N. Etrich, M. Deleschuse, J. Keuper</i>	
Relevant Training Data for ML - Leveraging the Existing Image	65
<i>A. K. Evensen, O. Kolbjørnsen</i>	
Hybrid Seismic Data for Overburden and Reservoir Seismic Study Over the UK Hewett CCS Project.....	68
<i>B. Webb</i>	
Multiparameter FWI Imaging using Full Wavefield in a Shallow Water Environment: Investigations Towards Efficient CCS Monitoring.....	71
<i>O. Lewis, A. Cooke, J. Juan, Y. Biryaltseva, F. Agnar Maaø, R. Dehghan-Niri, H. Westerdahl, M. Soledad Yanez Sanchez</i>	
Improved Imaging using Angle Dependent Ray-Based Algorithms for 3D Prestack Depth Migration.....	74
<i>S. Klarner, A. Elistratov, M. Baykulov</i>	
Mitigating Sparse Acquisition Limitations with FWI Imaging for Shallow Hazard Detection in Suriname.....	77
<i>M. Aquino, H. Prigent, N. Salaun, M. Pouget</i>	
Technology Roadmap - Where Are You Going with an Industry Led by the AI?.....	80
<i>F. Pautre</i>	
PVA METHOD - A NEW APPROACH FOR PHASE VELOCITY ANALYSIS OF RAYLEIGH WAVES.....	84
<i>A. Costa, P. Pizzuti, R. Costa, F. Rodrigues, M. Tschoepke</i>	
Pitfalls and Limitations in the Statistical Analysis of High-Frequency Imaged Data.....	89
<i>M. Hussein Kamel, W. Mohamed Mabrouk, A. Mohamed</i>	
Reviving Legacy 4D Seismic Data to Reveal Subtle Oil Slumping Signals in the Grane Field.....	94
<i>M. Wilk-Lopes, G. Sarsengaliyeva, A. Handzlik-Walat, H. Neffati Rouai, G. R. Hall, F. Bükler, M. Beiki</i>	
Reducing Risks Through Seismic Inversion and Comprehensive Prospectivity Analysis	97
<i>N. Desgoutte, V. Thomas, N. Lucet, R. Baillet</i>	

Author Index