SEG WORKSHOP

3RD SEG BOREHOLE GEOPHYSICS TECHNOLOGIES WORKSHOP

10–12 October 2025 • Xi'an, China

TECHNICAL PROGRAM

V2.2

Event Date: 10-12 October 2025
Event Location: Shaanxi GUESTHOUSE (Shaanxi Zhangbagou Hotel)
Venue Address: No. 1, Zhangba North Rd., Yanta Distr., Xi'an, Shaanxi, China

Hotel Recommendation:

- **No. 12，18 & 10 Building of Shaanxi GUESTHOUSE (Shaanxi Zhangbagou Hotel)**
  TEL: +86-(029)- 87877777, +86.139 9188 1700 (Ms. Zhou)
- **Shan Bin Queensir Hotel Xi'an)**
  TEL: +86-(029)-65269696

Saturday, 11 October 2025		
Opening Session		
08:30-08:35	Opening Speech from the Workshop General Chairman	**Hong Cao**, BGP Inc., CNPC
08:35-08:40	Opening Speech from SEG China	**Xuri Huang**, SEG China, Southwest Petroleum
08:40-08:45	Opening Speech from Technical Co-chair	**Bao Chen**, China National Logging Corporation (CNLC)
Session 1: Keynote & Invited Presentation		
08:45-09:10	**Keynote Speaker 1:** Some comments on borehole seismic measurements	**Arthur Cheng**, Society of Exploration Geophysicists
09:10-09:35	**Keynote Speaker 2:** (TBD)	**Bangliu Zhao**, CNPC
09:35-10:00	**Keynote Speaker 3:** CNPC Logging Technology: Application and Development	**Chunhao Yu**, China National Logging Corporation (CNLC)
10:00-10:25	**Keynote Speaker 4:** Multi-scale acoustic detection of fracture network: Theory, method, and application	**Xiaoming Tang**, China University of Petroleum (East China)
10:25-10:30	*Group Photo & Break*	
10:30-10:40	***Technical Discussion*** *& Coffee Break*	
Special Session: Panel Discussion		
10:40-12:00	**Moderator: Prof. Arthur Cheng**, Society of Exploration Geophysicists **Panelist: Dr. Gang Yu**, BGP Inc., CNPC **Prof. Xiaoming Tang**, China University of Petroleum (East China) **Dr. Stephan Gelinsky**, Shell **Dr. Song Yiqiao**, Harvard University **Prof. Jingjing Zong**, University of Electronic Science and Technology of China **Prof. Arthur Cheng**, Society of Exploration Geophysicists **Technical Topics:** (1) The evolution of downhole measurements: Where are the biggest opportunities? (2) Model-based joint interpretation: How can we achieve better integration? (3) Beyond the borehole: What's needed for effective reservoir-scale insights? (4) Key measurements for quantitative interpretation: Which technologies matter most? (5) VSP & wireline synergy: How do they complement each other? (6) AI's transformative role: Where does machine learning fit in?	
12:00-13:20	*Lunch*	

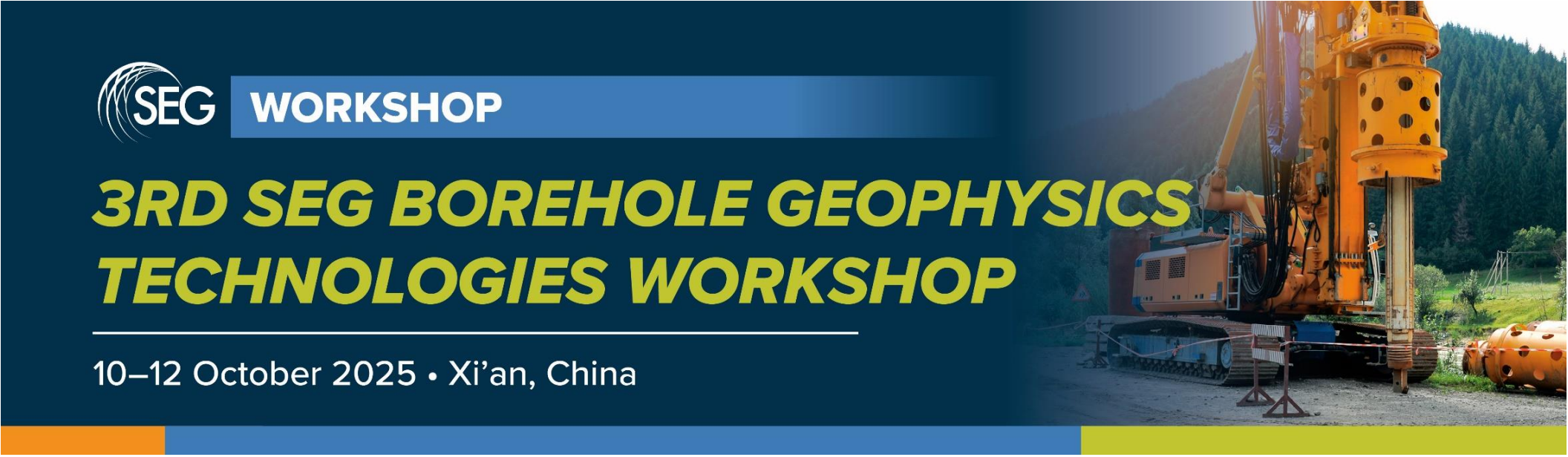
Session 2: Keynote & Invited Presentation		
13:30-13:55	**Keynote Speaker 5:** Geometrization of Elastodynamics via Energy Conservation—A Unified Framework for Nonlinear and Dissipative Media	**Xiuming Wang**, Institute of Acoustics, Chinese Academy of Sciences
13:55-14:15	**Invited Speaker 1:** Emerging mobile NMR instrumentation for borehole geophysics	**Huabing Liu**, Beijing Limecho Technology Co., Ltd
14:15-14:35	**Invited Speaker 2:** Automated Well Log Depth Matching Using Image-based Deep Learning Model	**Lei Fu**, Aramco Americas
14:35-14:55	**Invited Speaker 3:** Near-borehole imaging with dipole acoustic logging: Deep learning and full waveform inversion	**Xiao He**, Institute of Acoustics, Chinese Academy of Sciences
14:55-15:15	**Invited Speaker 4:** Electromagnetic residual oil-water detection technology and its application in well-surface integration	**Zhigang Wang**, BGP Inc., CNPC
15:15-15:50	***Poster Session A*** *12 poster presentations* *& Coffee Break*	
Session 3: Acoustic, Electrical and Electromagnetic Measurement Integration | Downhole and lab NMR Measurement | Integration with Other Surface and Downhole Measurements		
15:50-16:10	Monitoring of Hydraulic Fracturing Using Frequency-Domain Controlled-Source Electromagnetic Method	Shuaiyin Ge, BGP Inc., CNPC
16:10-16:30	Integrated Use of ERT, GPR and Seismic Methods for Groundwater Exploration in Talish Mountains, Azerbaijan	Narin Salimi, Azerbaijan State Oil and Industry University
16:30-16:50	Research and application of time-lapse DAS-VSP for CCS monitoring	Yuanzhong Chen, Optical Science and Technology (Chengdu) Ltd. CNPC
16:50-17:10	Research and application of reservoir prediction based on seismic date processed by steerable pyramid method for geological feature enhancement : A case study of braided-river delta of S area of A basin in Central Asia	Feilong Li, School of Geoscience and Technology, Southwest Petroleum University
17:10-17:30	The composition of acoustic logging waveforms	Yongjin Shen, China National Petroleum Corporation Logging Co., Ltd.
17:30-17:50	Effectiveness evaluation method and application of ultra-deep fault-controlled carbonate reservoir based on acoustic log	Ruokun Huang, 1.Tarim Oilfield Company, PetroChina; 2.China University of Petroleum (East China); 3.Xinjiang Key Laboratory of Ultra-deep Oil and Gas
17:50-18:10	Key Technologies in the Development of a Low-Frequency Transmission and Full-Frequency Variable-Source-Distance Fiber-Optic Reception Acoustic Logging Detector	Fei Huang, 1.China University of Petroleum (Beijing); 2.China National Petroleum Corporation Logging Company
18:10-19:30		*Dinner*

Sunday, 12 October 2025		
Session 4: Keynote & Invited Presentation		
08:30-08:55	**Keynote Speaker 6:** Characterization of basalt formation: solid minerals and pores	**Yiqiao Song**, Harvard University
08:55-09:15	**Invited Speaker 5:** AI-powered dip picking tool for borehole image logs	**Nan You**, Aramco **Weichang Li**, Zhejiang University
09:15-09:35	**Invited Speaker 6:** On the imaging conditions in elastic reverse time migration for single-well imaging	**Hengshan Hu**, Harbin Institute of Technology
09:35-09:55	**Invited Speaker 7:** Application and Reflection on Digital Rock Physics Technology	**Yuhang Guo**, Jilin University
09:55-10:15	**Invited Speaker 8:** Borehole Acoustic Wave Propagation and Reservoir Permeability Inversion with Viscosity-Extended Biot Theory	**Xiumei Zhang**, Institute of Acoustics, Chinese Academy of Sciences
10:15-10:30	***Poster Session B*** *6 poster presentations* *& Coffee Break*	
Session 5: Rock physics and In-situ measurements for accurate subsurface characterization		
10:30-10:50	Orthorhombic anisotropic rock physics analysis of the buried-hill fractured reservoirs	Zhengyu Zhu, CNOOC Research Institute Co., Ltd.
10:50-11:10	Research and Application of Pre-stack Inversion Method for Predicting Remaining Oil Saturation Based on Time-lapse Seismic and Fluid Diffusion Models	Sheng Yang, School of Geoscience and Technology, Southwest Petroleum University
11:10-11:30	A study on rock fracture type based on microseismic focal mechanism	Jiaojun Rong, 1.BGP Inc., CNPC; 2.Optical Science and Technology (Chengdu) Ltd.
11:30-11:50	Rock Physics-Driven Sweet-Spot Parameter Characterization for Gulong Shale Oil Reservoir: Laboratory-to-Model Integration	Zengjia Xiao, Exploration and Development Research Institute of Daqing Oilfield Co., Ltd.
11:50-12:10	A rock physics model for heterogeneously distributed gas hydrates	Xiangyu Zhu, CNOOC Research Institute Co., Ltd.
12:10-13:20		*Lunch*

Session 6: Keynote & Invited Presentation		
13:30-13:55	**Keynote Speaker 7:** Joint prestack depth migration of ground and VSP seismic waves	**Jun Lu**, China University of Geosciences (Beijing)
13:55-14:15	**Invited Speaker 9:** Full waveform velocity and impedance inversion through OBN and DAS-VSP integration	**Yu Zhang**, Houston Research Center, BGP Inc., CNPC
14:15-14:35	**Invited Speaker 10:** Acoustic waves in a borehole penetrating a double-porosity formation	**Yongxin Gao**, Hefei University of Technology
14:35-14:55	**Invited Speaker 11:** Fiber optic borehole geophones and their application	**Wentao Zhang**, Institute of Semiconductors, CAS
14:55-15:15	**Invited Speaker 12:** Stress Field Inversion Using Downhole Fiber-Optic Distributed Acoustic Sensing During Hydraulic Fracturing in Shale Gas Reservoir	**Haoyu Lai**, Institute of Geology and Geophyscis, CAS
15:15-15:30	***Free Discussion*** *& Coffee Break*	
Session 7: Borehole Geophysical Data Acquisition & Processing, Vertical Seismic Profiling and Crosswell Seismic		
15:30-15:50	Research on 3D Cross-well Seismic Multi-wavefield Forward Numerical Simulation Using Gaussian Beam Method	Huili Zhang, School of Earth Sciences and Engineering, Xi'an Shiyou University
15:50-16:10	Application and research of cross-well seismic technology in Daqing Oilfield	Shunguo Cheng, Exploration & Development Research Institute, PetroChina Daqing Oilfield Co., Ltd.
16:10-16:30	Deep learning-based wavefield separation for VSP data	Xiaobin Li, College of Geophysics, Chengdu University of Technology
16:30-16:50	Regularized reconstruction technology for vertical seismic profile data-Theoretical model study and application	Keyang Chen, 1.China University of Petroleum, Beijing; 2.PetroChina Daqing Oilfield Co., Ltd.
16:50-17:10	A Zero-offset VSP Wavefield Separation Method Based on Morphological Filteringple	Haokun Wang, Exploration & Development Research Institute, Petrochina Changqing Oilfield Company
17:10-17:30	DAS-VSP Coupled Noise Suppression Method Based on Unsupervised AE Network	Yunhao Pan, State Key Laboratory of Petroleum Resources and Engineering, China University of Petroleum (Beijing)
17:30-17:50	Joint least-squares migration of surface and VSP data	Yubo Yue/YunyanShi, School of Geoscience and Technology, Southwest Petroleum University
17:50-18:00	***Conclusion, Awarding & Closing Ceremony***	
18:00-19:30		*Dinner*

Poster Session A		
15:20-15:25	Identifying fracture distribution using the wave travel time and attenuation coefficient in the w	Yongjin Shen, China National Petroleum Corporation Logging Co., Ltd.
15:25-15:30	Extraction of reflected waves from acoustic logging data using 3D matching pursuit linear beam	Zilong Wang, State Key Laboratory of Oil and Gas Reservoir Geology and Exploitation, Chengdu University of Technolo
15:30-15:35	Tube wave suppression via physics-informed neural network	Pei Liu, University of Electronic Science and Technology of China
15:35-15:40	Application of DAS-Walkaway VSP in ultra-deep complex structure area of Kuqa Depression, Ta	Tengyu Wang, Tarim Oilfield Company, PetroChina
15:40-15:45	Research on CCUS monitoring method in Northwestern Margin of Junggar Basin, China	Zhidong Cai, Optical Science and Technology (Chengdu) Ltd. CNPC
15:45-15:50	A physics constrained UNet for VSP coupling noise identification and suppression	Sinan Sun, University of Electronic Science and Technology of China
15:20-15:25	D–T Source Neutron-Gamma Density Logging: Elemental Effects and Corrections	Shu Yang, School of Geosciences, China University of Petroleum (East China)
15:25-15:30	Microseismic Response Characteristics in Deep Shale Reservoirs: A Case Study of the Qiongzhus	Shanshi Wen, Shale Gas Research Institute, PetroChina Southwest Oil & Gasfield Company
15:30-15:35	Well-Seismic Prediction Method for Carbonate Reservoirs Based on Electrical Imaging Logging -	Feng Zhang, Changqing Branch of China Petroleum Logging Co. Ltd.
15:35-15:40	Seismic data evaluation method based on well-seismic combination under strong reflection bac	Liying Yang, Sinopec Geophysical Research Institute Co., Ltd.
15:40-15:45	An integrated framework with robust low-rank approximation for enhancing seismic signals obs	Mi Zhang, China University of Petroleum-Beijing at Karamay
15:45-15:50	Inversion method of wellbore-fracture coupling system based on tube wave	Xingming Wang, Chengdu University of Technology

Poster Session B		
10:15-10:20	Multi-Constraint Initial Velocity Model Building via Conditional Latent Diffusion	Yinghao Xu, 1.China University of Petroleum (East China); 2.Shandong Key Laboratory of Intelligent Oil & Gas Industria
10:20-10:25	Real-Time Compressional Wave Slowness Extraction Using Robust First Arrival Picking for Acous	Xiugang Ma, 1.China University of Petroleum, Beijing 2.China National Logging Corporation (CNLC), CNPC
10:25-10:30	Analysis of Microseismic Characteristics of Coal Rock Fracturing	Fangdong Chu, BGP Inc., CNPC
10:15-10:20	Assessment of CO_2 Storage Potential and Monitoring Strategies in Abu Qir Basin: Bridging Subsu	Nuray Abbasova, Azerbaijan State Oil and Industry University
10:20-10:25	A Self-Adaptive Calculation Method for Dry Rock Elastic Parameters in Time-Lapse Seismic	Ying Zheng, CNOOC Research Institute Co., Ltd.
10:25-10:30	Using convolutional neural network for prediction of hard bands while drilling	Saygin Ileri, Norwegian University of Science and Technology (NTNU)



技术交流日程

V2.2

会议时间：2025 年 10 月 10-12 日
会议地点：陕西宾馆（陕西丈八沟宾馆）
具体地址：陕西省西安市雁塔区丈八北路 1 号

酒店推荐：

- **陕西宾馆 12 号楼、18 号楼、10 号楼等**
  TEL: +86-(029)- 87877777，+86.139 9188 1700（周经理）
- **西安陕宾雀笙酒店**
  TEL: +86-(029)-65269696

2025年10月11日，星期六		
大会开幕式		
08:30-08:35	大会主席代表 开幕致辞	**曹宏**，中国石油集团东方地球物理勘探有限责任公司
08:35-08:40	SEG中国代表 开幕致辞	**黄旭日**，SEG 中国，西南石油大学
08:40-08:45	技术主席代表 开幕致辞	**陈宝**，中国石油集团测井有限公司
单元1：主旨报告 & 邀请报告		
08:45-09:10	**Keynote Speaker 1:** 井中地震测量技术评析	**郑传汉**，香港中文大学
09:10-09:35	**Keynote Speaker 2:** （TBD）	**赵邦六**，中国石油
09:35-10:00	**Keynote Speaker 3:** 中石油测井技术应用及发展	**余春昊**，中国石油集团测井有限公司
10:00-10:25	**Keynote Speaker 4:** 裂缝网络的多尺度声学检测：理论、方法和应用	**唐晓明**，中国石油大学（华东）
10:25-10:30	会议合影	
10:30-10:40	讨论 & 茶歇	
特别单元：专家小组讨论		
10:40-12:00	**主持人：郑传汉**，香港中文大学 **小组专家：余刚**，中国石油集团东方地球物理勘探有限责任公司　**唐晓明**，中国石油大学（华东）　**Stephan Gelinsky**，Shell **宋一桥**，哈佛大学　**宗晶晶**，电子科技大学　**郑传汉**，香港中文大学 **探讨话题：** (1) 井下测量技术发展脉络：未来突破点在哪里？ (2) 模型驱动的综合解释：如何实现深度整合？ (3) 超越单井尺度：油藏级表征需要哪些关键技术？ (4) 定量解释的核心测量：哪些技术最具突破性？ (5) VSP与电缆测井的协同：如何发挥1+1>2效应？ (6) 人工智能的变革潜力：机器学习如何重塑工作流？	
12:00-13:20	午餐	

单元2：主旨报告 & 邀请报告		
13:30-13:55	**Keynote Speaker 5:** 基于能量守恒的弹性动力学几何化——非线性耗散介质的统一框架	**王秀明**，中国科学院声学研究所
13:55-14:15	**Invited Speaker 1:** 用于井下地球物理研究的新兴便携式移动式核磁共振仪器	**刘化冰**，北京青檬艾柯科技有限公司
14:15-14:35	**Invited Speaker 2:** 基于图像深度学习模型的测井曲线自动深度匹配	**傅磊**，沙特阿美石油公司
14:35-14:55	**Invited Speaker 3:** 偶极声波测井近井成像：深度学习与全波形反演	**何晓**，中国科学院声学研究所
14:55-15:15	**Invited Speaker 4:** 井地电磁剩余油水检测技术及应用	**王志刚**，中国石油集团东方地球物理勘探有限责任公司
15:15-15:50	**张贴报告单元（A）** *12 poster presentations* *& Coffee Break*	
单元3：声波、电磁测量、多源地球物理数据融合		
15:50-16:10	基于频率域可控源电磁法的水力压裂监测	葛帅寅，中国石油集团东方地球物理勘探有限责任公司
16:10-16:30	阿塞拜疆塔雷什山脉地下水勘探中电阻率成像法、探地雷达与地震法的综合应用	Narin Salimi，阿塞拜疆国立石油大学
16:30-16:50	基于时移DAS-VSP 的二氧化碳地质封存监测方法研究与应用	陈沅忠，中油奥博（成都）科技有限公司
16:50-17:10	基于地质特征增强的导航金字塔地震数据处理技术在储层预测中的研究与应用-以中亚A盆地S区辫状河三角洲	李飞龙，西南石油大学 地球科学与技术学院
17:10-17:30	声波测井波形的组成	沈永进，中国石油集团测井有限公司
17:30-17:50	基于声波测井资料的超深断控型碳酸盐岩储层有效性评价方法及应用	黄若坤，1.中国石油塔里木油田分公司勘探开发研究院； 2. 中国石油大学
17:50-18:10	低频传输与全频变源距光纤接收声波测井探测器关键技术研究	黄飞，1.中国石油大学（北京）地球物理学院，2. 中国石油集团测井有限公
18:10-19:30		晚餐

2025年10月12日，星期日		
单元4：主旨报告 & 邀请报告		
08:30-08:55	**Keynote Speaker 6:** 玄武岩地层表征：固体矿物与孔隙	**宋一桥**，哈佛大学
08:55-09:15	**Invited Speaker 5:** 人工智能钻孔图像测井倾角拾取工具	**Nan You**，沙特阿美石油公司 **李伟昌**，浙江大学
09:15-09:35	**Invited Speaker 6:** 单井弹性波逆时偏移成像条件分析	**胡恒山**，哈尔滨工业大学
09:35-09:55	**Invited Speaker 7:** 数字岩石物理技术的应用与思考	**郭宇航**，吉林大学
09:55-10:15	**Invited Speaker 8:** 粘性扩展Biot理论下的井孔声场及储层渗透率反演	**张秀梅**，中国科学院声学研究所
10:15-10:30	**张贴报告单元（B）** *6 poster presentations* *& Coffee Break*	
单元5：岩石物理		
10:30-10:50	潜山裂缝性储层正交各向异性岩石物理分析	朱振宇，中海油研究总院有限责任公司
10:50-11:10	基于时移地震和流体扩散模型预测剩余油饱和度的叠前反演方法研究应用	杨圣，西南石油大学 地球科学与技术学院
11:10-11:30	基于微地震震源机制的岩石断裂类型研究	容娇君，1.中国石油集团东方地球物理勘探有限责任公司，2. 中油奥博（成
11:30-11:50	基于岩石物理实验与理论模型的古龙页岩油甜点参数表征方法研究	肖增佳，中石油大庆油田有限责任公司 勘探开发研究院
11:50-12:10	一种基于非均匀分布水合物的各向同性岩石物理模型	朱翔宇，中海油研究总院有限责任公司
12:10-13:20		午餐

单元6：主旨报告 & 邀请报告		
13:30-13:55	**Keynote Speaker 7:** 地面与垂直地震剖面波场联合叠前深度偏移	**芦俊**，中国地质大学（北京）
13:55-14:15	**Invited Speaker 9:** 通过OBN与DAS-VSP技术融合实现全波形速度与阻抗反演	**张宇**，中国石油集团东方地球物理勘探有限责任公司休斯敦研发中心
14:15-14:35	**Invited Speaker 10:** 双重孔隙地层中声波测井响应	**高永新**，合肥工业大学
14:35-14:55	**Invited Speaker 11:** 井中光纤地震检波器及其应用	**张文涛**，中国科学院半导体研究所
14:55-15:15	**Invited Speaker 12:** 井中光纤分布式声波传感（DAS）阵列揭示储层应力场变化	**赖浩宇**，中国科学院地质与地球物理研究所
15:15-15:30	茶歇与自由讨论 *Free Discussion & Coffee Break*	
单元7：井孔地球物理数据采集处理、垂直地震剖面与井间地震技术		
15:30-15:50	三维井间地震多波场高斯束正演数值模拟研究	张慧莉，西安石油大学 地球科学与工程学院
15:50-16:10	井间地震技术在大庆油田的应用与研究	程顺国，中石油大庆油田有限责任公司 勘探开发研究院
16:10-16:30	基于深度学习的VSP波场分离方法	李小斌，成都理工大学 地球物理学院
16:30-16:50	井中地震数据规则化重建技术：模型研究与应用	陈可洋，1.中国石油大学（北京）地球物理学院，2.中国石油大庆油田有限
16:50-17:10	基于形态滤波的零偏VSP波场分离方法	王浩坤，中国石油长庆油田分公司 勘探开发研究院
17:10-17:30	基于无监督AE网络的DAS-VSP耦合噪声抑制方法	潘云浩，中国石油大学（北京）
17:30-17:50	井地联合最小二乘叠前深度偏移	岳玉波/史云燕，西南石油大学
17:50-18:00	**会议总结、颁奖典礼与闭幕式**	
18:00-19:30	晚餐	

张贴报告 单元A		
15:20-15:25	用井下面波时差和衰减系数识别裂缝分布	沈永进，中国石油集团测井有限公司
15:25-15:30	采用三维匹配追踪线性波束形成方法提取声波测井数据中的反射波	王子龙，成都理工大学
15:30-15:35	基于物理信息神经网络的套管波压制方法	刘培，电子科技大学
15:35-15:40	DAS-Walkaway VSP在塔里木盆地库车地区超深复杂构造中的应用	王腾宇，中国石油塔里木油田公司
15:40-15:45	准噶尔盆地西北缘CCUS监测方法研究	蔡志东，中油奥博（成都）科技有限公司
15:45-15:50	基于物理约束的UNetVSP耦合噪声识别与压制	孙思男，电子科技大学
15:20-15:25	D-T源中子伽马密度测井：元素效应和校正	杨树，中国石油大学（华东）
15:25-15:30	深层页岩气微地震响应特征分析：一个筇竹寺地层案例	文山师，中国石油西南油气田分公司页岩气研究院
15:30-15:35	基于电成像测井的碳酸盐岩储层井震预测方法 ——以鄂尔多斯盆地中东部马四为例	张峰，中国石油集团测井有限公司长庆分公司
15:35-15:40	强反射背景下基于井震结合的地震资料评价方法	杨丽莹，中石化石油物探技术研究院有限公司
15:40-15:45	一种增强DAS井中观测地震信号的稳健低秩近似集成框架	张宓，中国石油大学（北京）克拉玛依校区
15:45-15:50	基于管波的井孔-裂缝耦合系统反演方法	汪兴明，成都理工大学

张贴报告 单元B		
10:15-10:20	基于条件潜在扩散的多约束初始速度模型构建	徐英豪，1. 中国石油大学（华东）计算机科学与技术学院，2. 山东省智能注
10:20-10:25	基于稳定初至拾取方法的声波测井实时纵波慢度提取	马修刚，1.中国石油大学（北京）人工智能学院，2.中国石油集团测井有限
10:25-10:30	煤岩破裂微震特征分析	储方东，中国石油集团东方地球物理勘探有限责任公司
10:15-10:20	阿布基尔盆地二氧化碳封存潜力评估与监测方案：协同推进地下表征与可扩展CCUS实施	Nuray Abbasova，阿塞拜疆国立石油大学
10:20-10:25	一种时移地震岩石物理骨架参数自适应计算方法	郑颖，中海油研究总院有限责任公司
10:25-10:30	基于卷积神经网络的随钻硬岩层带预测	Saygin Ileri，挪威科技大学