

# The 12<sup>th</sup> UPC International Symposium on New Well

## Logging Techniques

### Online Meeting Schedule

#### Notice:

a. Scheduled time: **November 3 -- November 5, 2021**

b. Software: **Tencent Meeting or Voov Meeting**

c. ID: **569 2515 5924**

#### 1. 8:30~11:55 a.m. (Beijing Time), November 3 (Keynote Speech)

| Time        | Topic and Speaker   | Host |
|-------------|---|------|
| 8:30-9:00   | Conference opening and speech<br>1. Vice president, UPC<br>2. Lichun KUANG, PetroChina;<br>3. Harry Xie, Vice President of SPWLA  |      |
| 9:00-9:25   | <b>Topic:</b> Present and Future Technological Challenges in the Formation Evaluation of Unconventional Sources of Subsurface Energy<br><b>Speaker:</b> Prof. Carlos Torres-Verdin, The University of Texas at Austin |      |
| 9:25-9:50   | <b>Topic:</b><br><b>Speaker:</b> Lichun KUANG, PetroChina Science and Technology Management Department  |      |
| 9:50-10:15  | <b>Topic:</b> Advance of NMR and Core Analysis from the Technical Report of International Conference on Petroleum Industry<br><b>Speaker:</b> Harry Xie, Senior Adviser of Core Laboratories                          |      |
| 10:15-10:40 | <b>Topic:</b> Determining Resistivity and Low-Frequency Dielectric Constant Using Induction Data in the Presence of Strong Induced Polarization<br><b>Speaker:</b> Dean M. Homan, Schlumberger Oilfield Service       |      |
| 10:40-11:05 | <b>Topic:</b> Imaging Rocks: The Best Source of Data for Rock Models<br><b>Speaker:</b> Michael T. Myers, University of Houston   |      |
| 11:05-11:30 | <b>Topic:</b> Geophysical Logging in the Age of Intelligence<br><b>Speaker:</b> Prof. Lizhi XIAO, China University of Petroleum(Beijing)  |      |
| 11:30-11:55 | <b>Topic:</b> Future Explore of Artificial Intelligence in Logging Information Processing and Application<br><b>Speaker:</b> Prof. Cairui SHAO, China University of Petroleum (East China)                            |      |

## 2. 14:00~17:45 p.m. (Beijing Time), November 3 (Keynote Speech)

| Time        | Topic and Speaker   | Host |
|-------------|---|------|
| 14:00-14:25 | <b>Topic:</b> Reservoir Engineering Surveillance Problems Solving for Tight Reservoirs at the Stage of Field Exploration and Development<br><b>Speaker:</b> Prof. Martynov V.G., President of Gubkin State University of Oil and Gas, Russia Academician of the Academy of Sciences |      |
| 14:25-14:50 | <b>Topic:</b> progress of logging intelligent identification Methods for complex lithofacies based on machine learning<br><b>Speaker:</b> Prof. Guiwen WANG, China University of Petroleum (Beijing)  |      |
| 14:50-15:15 | <b>Topic:</b> Prediction of the Equilibrium Temperature of Rocks Based on the Processing of Temperature Measurements in the Well<br><b>Speaker:</b> Associate Prof. Guzel Vakhitova, Ufa State Petroleum Technological University   |      |
| 15:15-15:40 | <b>Topic:</b> Assessment of the Applicability of Machine Learning Algorithms for the Interpretation of Well Logging Data in the High-Viscous Oil Field of the Republic of Tatarstan (Russia)<br><b>Speaker:</b> Associate Prof. Platov B.V., Kazan Federal University               |      |
| 15:40-16:05 | <b>Topic:</b> Advance of Logging Evaluation Under the Background of Big Data<br><b>Speaker:</b> Xianran ZHAO<br>Schlumberger Technology Services (Beijing)  |      |
| 16:05-16:30 | <b>Topic:</b> Application of Thermohydrodynamic Simulators in the Interpretation of Well Data<br><b>Speaker:</b> Prof. Timur Khabirov, Ufa State Petroleum Technological University   |      |
| 16:30-16:55 | <b>Topic:</b> Inversion method of automatic history fitting geological model based on reservoir production performance<br><b>Speaker:</b> Prof. Kai ZHANG, Qingdao University of Technology   |      |
| 16:55-17:20 | <b>Topic:</b> New Machine Learning Technology Application for Well Interference Evaluation and Oil Production Enhancement<br><b>Speaker:</b> Associate Prof. Gulyaev D.N., Gubkin State University of Oil and Gas   |      |
| 17:20-17:45 | <b>Topic:</b> Uncertainty and Interpretability of Machine Learning Models: A Case Study of Logging Data Applications<br><b>Speaker:</b> Prof. Hua WANG, University of Electronic Science and Technology of China  |      |

### 3. 8:30~12:00 a.m.(Beijing Time), November 4

| Time        | Topic and Speaker   | Host |
|-------------|---|------|
| 8:30-8:55   | <b>Topic:</b> Borehole Acoustic Full Waveform Inversion ( <b>Keynote Speech</b> )<br><b>Speaker:</b> Prof. Arthur Cheng, National University of Singapore   |      |
| 8:55-9:20   | <b>Topic:</b> Artificial Intelligence in Petrophysics: The Role of Mathematics and Physics ( <b>Keynote Speech</b> )<br><b>Speaker:</b> Chicheng Xu, Aramco America: Aramco Research Center - Houston                                   |      |
| 9:20-9:45   | <b>Topic:</b> Data-Driven Reduced Order Models for Simulation and Imaging of Resistivity Measurements ( <b>Keynote Speech</b> )<br><b>Speaker:</b> Vladimir Druskin, Worcester polytechnic institute                                    |      |
| 9:45-10:10  | <b>Topic:</b> Physics-Driven Machine Learning-Enable Automatic Borehole Sonic Shear Processing ( <b>Keynote Speech</b> )<br><b>Speaker:</b> Lin Liang, Science Advisor of Schlumberger-Doll Research Centre                             |      |
| 10:10-10:35 | <b>Topic:</b> Increased Reservoir Understanding in Three Dimensions, with Inversion of Ultra-Deep Electromagnetic LWD Data ( <b>Keynote Speech</b> )<br><b>Speaker:</b> Nigel Clegg, Halliburton, Science Advisor                       |      |
| 10:35-11:00 | <b>Topic:</b> Multi-scale and multi-field coupled computational geoscience and its potential application in unconventional oil and gas fields ( <b>Keynote Speech</b> )<br><b>Speaker:</b> Prof. Huilin XING, Ocean University of China |      |
| 11:00-11:15 | <b>Topic:</b> Logging Intelligent Interpretation Method of Deep and Unconventional Oil and Gas<br><b>Speaker:</b> Prof. Maojin TAN, China University of Geosciences (Beijing)   |      |
| 11:15-11:30 | <b>Topic:</b> Unconventional Reservoir Saturation Modeling and Application Based on Digital Core Technology<br><b>Speaker:</b> Chaoliu LI, PetroChina Exploration & Development Research Institute                                      |      |
| 11:30-11:45 | <b>Topic:</b> Genesis Analysis and Logging Evaluation Method of Deep and Ultra-deep Tight Sandstone<br><b>Speaker:</b> Jinbin WAN, Logging Application Research Institute, China Petroleum Logging Co., LTD                             |      |
| 11:45-12:00 | <b>Topic:</b> Multi-dimensional NMR Logging Data Processing and Application Based on Blind Source Separation Technology<br><b>Speaker:</b> Xinmin GE, China University of Petroleum (East China)  |      |

#### 4. 14:00~18:00 p.m. (Beijing Time), November 4

| Time        | Topic and Speaker  | Host |
|-------------|--|------|
| 14:00-14:15 | <b>Topic:</b> Sinopec New Generation Intelligent Logging Interpretation Platform<br><b>Speaker:</b> Wei WANG, Sinopec Research Institute of Petroleum Engineering  |      |
| 14:15-14:30 | <b>Topic:</b> Development of AI Analysis and Prediction Platform for Logging Data<br><b>Speaker:</b> Xiaobing HE, North China Measurement & Control Branch of Sinopec Matrix Corporation   |      |
| 14:30-14:45 | <b>Topic:</b> Boosting Algorithm and Small-sample Machine Learning for Reservoir Division<br><b>Speaker:</b> Hejun LV, North China Measurement & Control Branch of Sinopec Matrix Corporation  |      |
| 14:45-15:00 | <b>Topic:</b> Logging Curve Reconstruction Method Based on Machine Learning<br><b>Speaker:</b> Zhaohui XU, China University of Petroleum (Beijing)   |      |
| 15:00-15:15 | <b>Topic:</b> Intelligent Computation Method of Acoustic Time Difference Based on Machine Learning<br><b>Speaker:</b> Chuan FAN, Oilfield Technology Division of China Oilfield Services Limited   |      |
| 15:15-15:30 | <b>Topic:</b> Glutenite Reservoir Parameter Prediction Based on Machine Learning<br><b>Speaker:</b> Jianpeng ZHAO, Xi'an Shiyou University   |      |
| 15:30-15:45 | <b>Topic:</b> Logging Characterization and Progress of Sweet-spot Elements of Carbonate-rich Shale Oil in Jiyang Depression<br><b>Speaker:</b> Min WANG, Petroleum Exploration and Production Research Institute, Shengli Oilfield Branch of Sinopec |      |
| 15:45-16:00 | <b>Topic:</b> Three Methods and Interpretation Chart of Cementing Quality Evaluation Using Array Acoustic Logging  |      |

| Time        | Topic and Speaker   | Host |
|-------------|---|------|
|             | <b>Speaker:</b> Jianguo SHEN, Tianjin University  |      |
| 16:00-16:15 | <b>Topic:</b> Advances in Borehole Time-domain Electromagnetic Logging<br><b>Speaker:</b> Zhanshan XIAO, Logging Application Research Institute, China Petroleum Logging Co., LTD                   |      |
| 16:15-16:30 | <b>Topic:</b> Experimental Law and Conduction Model of Pyrite-bearing Low Resistivity Reservoir<br><b>Speaker:</b> Xiaomin TANG, Northeast Petroleum University                                     |      |
| 16:30-16:45 | <b>Topic:</b> Study on New Logging Method Based on the Coupling of Electromagnetic and Ultrasonic<br><b>Speaker:</b> Yanhong LI, Institute of Electrical Engineering of Chinese Academy of Sciences |      |
| 16:45-17:00 | <b>Topic:</b> Software Implementation of Lithologic-density Logging Calibration and Algorithm<br><b>Speaker:</b> Huihong XU, Beijing Logging Research Institute of China Petroleum Logging Co., LTD |      |
| 17:00-17:15 | <b>Topic:</b> Tight-gas Logging Comprehensive Evaluation in Linxing-Shenfu Area<br><b>Speaker:</b> Jiajie CHENG, China Oilfield Services Limited  |      |
| 17:15-17:30 | <b>Topic:</b> 3D Inversion and Evaluation of Resistivity LWD in Horizontal Wells<br><b>Speaker:</b> Hongwei ZHANG, Oilfield Technology Division of China Oilfield Services Limited                  |      |
| 17:30-17:45 | <b>Topic:</b> Log Facies Identification and Curve Prediction Based on Machine Learning<br><b>Speaker:</b> Qiu DENG, Paradigm Technology Co. Ltd.  |      |
| 17:45-18:00 | <b>Topic:</b> Numerical Simulation Analysis and Application of LWD Focused Resistivity Measurement<br><b>Speaker:</b> Jie LIU, FairOak Technology Inc.  |      |

## 5. 8:30~11:45 a.m. (Beijing Time), November 5

| Time        | Topic and Speaker  | Host |
|-------------|--|------|
| 8:30-8:45   | <b>Topic:</b> Reservoir Compressibility Evaluation by Dipole Acoustic Logging<br><b>Speaker:</b> Zhenzhen QI, North China Measurement & Control Branch of Sinopec Matrix Corporation   |      |
| 8:45-9:00   | <b>Topic:</b> Reservoir Permeability Prediction and Quality Evaluation Based on BP Neural Network of Optimized Random Forest Model<br><b>Speaker:</b> Meng WANG, Oilfield Technology Division of China Oilfield Services Limited   |      |
| 9:00-9:15   | <b>Topic:</b> Pore Structure Evaluation of Low Permeability Glutenite Reservoir Based on Digital Core<br><b>Speaker:</b> Zhenlin LI, Logging Application Research Institute, China Petroleum Logging Co., LTD                      |      |
| 9:15-9:30   | <b>Topic:</b> Crack Detection Method Based on Improved Yolo4 Deep Learning<br><b>Speaker:</b> Suwen HE, North China Measurement & Control Branch of Sinopec Matrix Corporation   |      |
| 9:30-9:45   | <b>Topic:</b> Application of Geosteering Techniques for LWD in Horizontal Well<br><b>Speaker:</b> Chaochao Yang, Logging Application Research Institute, China Petroleum Logging Co., LTD  |      |
| 9:45-10:00  | <b>Topic:</b> Research on Resistivity Logging Method and Equipment of Transient Field Through Casing<br><b>Speaker:</b> Qingle ZHAN, 22nd Research Institute of China Electronics Technology Group Corporation                     |      |
| 10:00-10:15 | <b>Topic:</b> Comprehensive Evaluation of Semideep-deep Reservoir Compressibility: A Case Study of Huachang Area in Fushan Sag<br><b>Speaker:</b> Bo WEI, Logging Application Research Institute, China Petroleum Logging Co., LTD |      |

| Time        | Topic and Speaker   | Host |
|-------------|---|------|
| 10:15-10:30 | <b>Topic:</b> Intelligent Quantitative Evaluation Method of the Second Interface Cement by Integrated Learning<br><b>Speaker:</b> Weiwei Zhao, North China Measurement & Control Branch of Sinopec Matrix Corporation |      |
| 10:30-10:45 | <b>Topic:</b> Design and Field test of Array Density Logging Tool Through Casing<br><b>Speaker:</b> Maosong TONG, Daqing Branch of China Petroleum Logging Co., LTD   |      |
| 10:45-11:00 | <b>Topic:</b> Influence of Rock Fracture Morphology on Resistivity Using Numerical Simulation<br><b>Speaker:</b> Chenjun ZHANG, Logging Application Research Institute of China Petroleum Logging Co., LTD            |      |
| 11:00-11:15 | <b>Topic:</b> Second Interface Evaluation Technique for VDL<br><b>Speaker:</b> Baixin ZHANG, Xinjiang Branch of China Petroleum Logging Co., LTD  |      |
| 11:15-11:30 | <b>Topic:</b> Functional Design and Prototype Development of Full-size Core NMR Measuring Instrument in Drilling Site<br><b>Speaker:</b> Fei WU, Suzhou Niumag Analytical Instrument Corporation                      |      |
| 11:30-11:45 | <b>Topic:</b> Digital Cores (Digital Rock physics)<br><b>Speaker:</b> Yuqi WU, China University of Petroleum (East China)   |      |

## 6. 14:00~17:30 p.m. (Beijing Time), November 5

| Time        | Topic and Speaker   | Host |
|-------------|---|------|
| 14:00-14:15 | <b>Topic:</b> Comprehensive Evaluation of Carbonate Fractured Reservoir in Daniudi Gas Field<br><b>Speaker:</b> Bingyan BAI, North China Measurement & Control Branch of Sinopec Matrix Corporation                             |      |
| 14:15-14:30 | <b>Topic:</b> Reservoir Oil-bearing Property Evaluation and Pore Structure in Guanzhen Sub-depression, North Jiangsu Basin<br><b>Speaker:</b> Hesong SU, North China Measurement & Control Branch of Sinopec Matrix Corporation |      |
| 14:30-14:45 | <b>Topic:</b> Electrical Resistivity Tomography (ERT) and Equipment<br><b>Speaker:</b> Jigen XIA, 22nd Research Institute of China Electronics Technology Group Corporation   |      |
| 14:45-15:00 | <b>Topic:</b> Evaluation of Application Effect of Long-term Shutdown Production Recovery in Jiyuan Area<br><b>Speaker:</b> Ning GAN, Logging Application Research Institute of China Petroleum Logging Co., LTD                 |      |
| 15:00-15:15 | <b>Topic:</b> Evaluation of Shale Oil Availability Based on High-pressure Mercury Injection Experiment<br><b>Speaker:</b> Fan YANG, Logging Application Research Institute of China Petroleum Logging Co., LTD                  |      |
| 15:15-15:30 | <b>Topic:</b> Porosity Calculation Method of Lacustrine Shale Reservoir<br><b>Speaker:</b> Xiuying SUI, Logging Application Research Institute, China Petroleum Logging Co., LTD  |      |
| 15:30-15:45 | <b>Topic:</b> Research and Application of Formation-boundary Detection Technology Based on Biorthogonal Antenna<br><b>Speaker:</b> Zhen YANG, Sinopec Matrix Corporation  |      |



| <b>Time</b> | <b>Topic and Speaker</b>   | <b>Host</b> |
|-------------|--|-------------|
| 15:45-16:00 | <b>Topic:</b> Quantitative Identification of Complex Clastic Rocks in Wuerxun Sag<br><b>Speaker:</b> Gang HU, Logging Application Research Institute of China Petroleum Logging Co., LTD                                       |             |
| 16:00-16:15 | <b>Topic:</b> Sweet-spot Evaluation of Continental Shale Gas Reservoir and Logging Series Optimization in Ordos Basin<br><b>Speaker:</b> Yuhan TAN, Logging Application Research Institute of China Petroleum Logging Co., LTD |             |
| 16:15-16:30 | <b>Topic:</b> Dual Mode Acoustic Logging Tool Design With IWS High SNR<br><b>Speaker:</b> Maosong TONG, Daqing Branch of China Petroleum Logging Co., LTD  |             |
| 16:30-16:45 | <b>Topic:</b> A New NMR Method for Evaluating Reservoir Microscopic Heterogeneity<br><b>Speaker:</b> Huabing LIU, Beijing Limecho Technology Co., Ltd  |             |
| 16:45-17:30 | <b>Closing Ceremony</b>  |             |