



# CONRAD SCHLUMBERGER AWARD

## AWARD FOR OUTSTANDING CONTRIBUTION

The Conrad Schlumberger Award is presented to a member of the Association who has made an outstanding contribution over a period of time to scientific and technical advancements of the geosciences, particularly geophysics. The Conrad Schlumberger Award consists of a medal and a certificate.

## THE SCHLUMBERGER AWARD 2019

*is presented to*

### ANDREY BAKULIN

Andrey Bakulin is an outstanding geophysicist who has worked in many areas of geophysics and has been especially concerned with solving problems that impact data quality and efficiency. Following on from the work his father did to monitor stress in mines, he has applied the same rock physics to oil field problems on a larger scale to estimate 3D stress fields and fractures from seismic data. With Rodney Calvert he invented the Virtual Source concept and pioneered the new field of seismic interferometry. He developed a novel Distributed Acoustic Sensing (DAS) acquisition system using optical fibre in shallow vertical holes that can deliver data quality similar to geophones with an order of magnitude more channels in each well for a fraction of the cost. He has an impressive publication record, he is winner of SEG's J Clarence Karcher Award (2005) and twice won the award for best paper presented at the SEG annual meeting (2006 and 2008). For his sustained and outstanding contributions to geophysics, the 2019 Conrad Schlumberger Award is given to Dr. Andrey Bakulin.

*London, 3 June 2019*

#### **Conrad Schlumberger**

Conrad Schlumberger (1878–1936) invented the electrical method of mineral prospecting. He completed his studies in Paris with degrees from the École Polytechnique and from the École des Mines, where he began teaching physics in 1910. He invented a way to detect metal ores of high electrical conductivity by generating an electric field in the ground and plotting the equipotential curves by voltage measurements. In 1912, he recorded the first map of equipotential curves on his Normandy estate.

After World War I, Conrad Schlumberger decided to develop an industrial application for his electrical prospecting method. Conrad and his brother Marcel founded their business in 1920, an enterprise that from 1926 was called Société de Prospection Électrique, known as 'the PROS.' From Conrad's research and Marcel's technological innovations, the PROS gradually extended its activity from metal ore prospecting to the exploration of possible oil-bearing structures. Conrad Schlumberger had the idea of measuring resistivity directly with an electrical sonde run in boreholes. The discovery in 1931 of a 'spontaneous potential' (SP) in boreholes introduced a new fundamental measurement. Recorded simultaneously with the resistivity curve, the SP curve enabled permeable oil-bearing beds to be differentiated from non-producing impermeable beds. Electrical logging was born – a true watershed for oil exploration and development and for the Schlumberger enterprise.