GeoNeurale

-Postdoctoral and doctorand training for Geoscientists and Engineers
-Industry postdoctoral and cross-disciplinary training

Module 7.
3D Reservoir Static Modeling

Between seismic inversion and dynamic simulation.
The 3D SEGY seismic cube.
Operations on the 3D seismic cube.
Positioning petrophysics, drilling dynamics and core data on the 3D cube.
Seismic data visualization: Slices, inlines , crosslines, randomlines, timeslices.
Synthetic seismogram calculation.
Horizon and fault interpretation (autotracking, anttracking), mapping.
Attributes cube generation, attributes map generation.
Volume rendering.
Volume extraction.
Seismic petrophysics attributes.
The Static model.
Logs loading and correlation.
Fault interpretaion and digitization: fault sticks, polygons, digitizing modes.
Pillar gridding: create skeleton grid and horizons building.
Time to depth conversion.
Inter-horizon Zones (isocrones).
Inter-zone Layering (facies / flow units / strata).
Geometrical property modeling.
Upscaling of petrophisical properties.
Facies modeling: sequential indicator simulation.
Object modeling.
Petrophysical modeling: petrophysical properties spatial distribution.
Deterministic workflow (Kriging), stochastic workflow (Sequential Gaussian Simulation).
Volume and STOIIP calculation.
Well trajectory design.