

SIAME LABORATORY FOR APPLIED SCIENCES IN MECHANICS AND ELECTRICAL ENGINEERING

SIAME / EA 4581 Fields of application
Civil engineering: safety of structures and soil stability, CO₂ storage, eco-materials

High-voltage processes: military (jamming, radar), agri-food processing, geophysics (fracturing) and medical (electrochemotherapy)

Flows and energetics: industrial processes, geophysics, heat storage, MCP, renewable energies

Coastal engineering: submersion, impact, protective structures, tsunamis, swell energy

Research themes and know-how

High-voltage processes

Generation of transient high voltages and high pulse currents, development of HV measurement devices, industrial applications of high pulse power.

Flows and energetics

Non-Newtonian fluids, compressible flows, multiphase flows, heat storage, building energetics.

Civil engineering

Behavior of geomaterials (soil, concrete, rock), aggressive materials and environment (concrete exposed to fire, sulfate attack, subsea carbonation, marine environment), development of eco-materials.

Coastal engineering

Numerical modeling of waves, particularly the interaction between waves and structure, in-situ measurements of the physical coastal environment.

Main equipment

Hydraulic presses, ovens, climatic condition reproducer
Triaxial cells for saturated and non-saturated porous media

Marx generators
200-mJ/120-ns Yag laser
Emulsifiers, calorimeters

Swell gauge, current meter, pressure sensors, in situ video equipment

Partnerships

Industrial partnerships: TOTAL, ALSTOM, ITHPP

Institutional partnerships: CEA, BRGM, CSTB, DGA, IFPEN, IRSN, ANDRA

Spearheaded by



SIAME in figures

30
researchers
and lecturers-
researchers

30
PhD students and
post-doctoral
researchers

Contact:

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