



Beicip Academic Program



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1. ABOUT BEICIP-FRANLAB

Beicip-Franlab is a leading independent petroleum consultancy firm and geoscience software editor highly reputed for technical quality, reliability and competitiveness. For more than 45 years, we have been providing best-in-class consultancy and software solutions in exploration, reservoir and field development, production optimization, process optimization, midstream-downstream studies. We have leading edge enhanced oil recovery solutions and extensive experience with unconventional hydrocarbon resources assessment and development (shale and tight reservoirs).

1.1. Company profile

We help our clients discover new oil and gas reserves, optimize the development of their fields and optimize their upstream and downstream portfolio. Our expertise is available through consulting services, software solutions, technical assistance and advisory services.

In order to optimize synergies with the industry, we have developed international branch offices in more than ten countries, and continue to open new international branches. Since our creation in the mid-1960s, we have been operating in more than 100 different countries and we are currently active in most oil and gas provinces across the globe.

We provide our customers with optimal, innovative, value-adding consultancy and software solutions. Whatever the needs (acquisition of proven, effective software solutions, technical consulting and advisory services), Beicip-Franlab is a partner of choice in a large variety of domains:

- Oil and gas exploration from regional to prospect scale (conventional and non-conventional hydrocarbons)
- Field development and production optimization, from marginal fields to super giant fields and non-conventional reserves,
- Midstream-downstream decision optimization.

1.2. Our Teams

Our permanent staff of more than 200 experts constitutes the backbone of the company's structure and competence. They cover a wide range of expertise in geoscience, oil and gas production, process optimization and in the economic-contractual domains. Our unrivaled international experience, in depth expertise and innovation culture, is the main asset of the company. Our affiliation with IFP Energies Nouvelles (www.ifpenergiesnouvelles.com) also testifies for our independence.

1.3. E&P Software Solutions

Our software solutions are widely recognized by the industry worldwide and cover a large variety of needs in exploration, reservoir characterization and reservoir simulation. They have gained a high reputation for technical integrity, superior capability and ease of use. Most of our solutions are available through the OpenFlow Suite, a new generation software platform that provides best in class performance, security and robustness, with intuitive construction of technical workflows and high productivity. Others are stand-alone applications.

We are reputed for the high quality training, support and technical assistance provided to our customers: our support and assistance teams are fully dedicated to satisfy the needs of the users of our software technology.

2. INTRODUCTION TO THE PROGRAM

The **Beicip Academic Program** provides institutions of higher education with access to our exploration and production (E&P) software for free upon specific conditions. The program provides the opportunity for researchers to use best-in-class software from the industry in their R&D program, for professors and teachers to illustrate geological principles in their classes and for students to prepare for a future career in the energy industry. The program includes renewable licenses, software maintenance, technical support and training.

3. OUR OFFER

3.1. Software

The program provides academic institutions with the latest versions of selected software from our portfolio. It delivers access to our applications in basin and stratigraphic modeling, seismic inversion, fractured reservoirs characterization and analysis, reservoir modeling simulation and production.

Forward Stratigraphic Modeling and Petroleum Systems Assessment

DionisosFlow[™] is a 3D forward stratigraphic modeling software, which aims at helping geologists to better quantify the sedimentary architecture and infilling of a basin, both in siliciclastic and carbonate environments. Its applicability ranges from fluvial to deep-offshore environments, from frontier to mature exploration, and from basin to reservoir scale.

TemisFlow[™] is a leading multi-dimensional petroleum system modeling software which applicability ranges from regional resources and prospects assessments to pre-drill pore pressure prediction. It may be applied both in conventional / non-conventional settings.

KronosFlow[™] is a unique software to efficiently produce 2D kinematic scenarios for basin and petroleum system modeling purposes. Starting from drawing a present-day cross section, KronosFlow features all required functionalities to restore its structural evolution through geological times while meeting basin modeling constraints. Combined with TemisFlow 2D Complex Tectonics, it constitutes a unique solution for 2D basin modeling in complex settings.

CougarFlow[™] is linked to both DionisosFlow and TemisFlow for effective sensitivity and risk analysis combining experimental design and response surface methodologies.

Seismic Characterization

InterWell is a geologically oriented seismic inversion package solution. Interwell proposes a unique workflow designed to analyze and preprocess acoustic, elastic, 4D and Azimuthal data. It produces accurate seismic wavelet calibrated at wells, it models the impedances through geological data including well logs and structural data, and it finally computes the optimal impedances by a joint

inversion process, which allows weighting seismic and geologic data according to their respective quality.

■ Characterization and Modeling of Naturally Fractured Reservoirs

FracaFlow™ is recognized as the best and most complete characterization and modeling software for naturally fractured reservoirs providing all the necessary tools to assess fractured reservoirs, from secondary porosity assessment to permeability computation. It allows geologists and reservoir engineers to pragmatically understand the impact of fractures and their associated uncertainties. FracaFlow is completed by a unique ability to model the impact of hydraulic fracturing on existing natural fractures.

■ Reservoir Simulation AHM & Uncertainties

PumaFlow™ is the all-in-one new generation fluid flow simulator that solves all aspects of reservoir engineering problems, ranging from pilot simulation to full field prediction of enhanced oil recovery and starting from reservoir description to final results analysis. In order to improve upfront decision making, PumaFlow is an advanced and complete solution that allows reservoir engineers to forecast a range of production and depletion scenarios based on different variables.

CougarFlow™ is linked to FracaFlow and PumaFlow for effective sensitivity and risk analysis combining experimental design and response surface methodologies. It is also used in reservoir simulation for assisted history matching, with advanced capabilities to match the historical production profiles, analyze production forecasts, evaluate and optimize field development scenarios from both technical and economical perspectives.

■ Geological, Geophysical and Reservoir Toolbox for Log Analysis

EasyTrace is a toolbox for well data analysis for geologists (electrofacies analysis, TOC estimation, etc.), geophysicists (velocity analysis, well to seismic calibration, etc.) and reservoir engineers (rocktyping, etc). It is supported by various 2D and 3D displays.

More information is available on our website at www.beicip.com/openflow-suite.

3.2. Technical and Software Support

As part of the program, Beicip-Franlab provides technical and software support for universities. The **support** includes:

- Free access to new releases and bug corrections
- E-mail support via : support@beicip.com

One person will be designated as “Technical contact”. The role of this “Technical contact” is to follow all requests for assistance to Beicip’s support organization using the above email address and to keep Beicip-Franlab informed of the works done through the Program. This person will also be the main contact for license update and software installation.

3.3. Training

Beicip-Franlab helps universities to learn the software with academic tutorials and specific training sessions.

Indeed, academic institutions have a free access to a detailed **academic tutorial** for each product, which is a good way to get hands on the software with self-teaching.

We also organize **free software training sessions** for students and researchers in our training rooms or virtually once a year. The sessions are taught by product experts and help students and researchers build expertise in the software. These trainings are also a place to share knowledge and experience on a common topic of interest.

4. BENEFITS OF THE PROGRAM

4.1. Privileged Access to State-of-the-Art Technology

Beicip-Franlab software solutions are validated by the IFP Group and are used by major O&G companies in the market. By making these high-end industrial solutions available to universities, this program helps students to become fully operational when starting to work in the industry.

4.2. Quality Support and Training

Beicip-Franlab provides academic institutions with high quality support and training. Tutorial and training sessions help students use the software correctly. The support organization consists of experts in their field and in the use of the software. These expertise guide academics in their work and help innovate and develop competencies.

4.3. Free Software for Research and Education

These academic licenses are made available free of charge for one year, renewable after conducting a review with Beicip-Franlab of the activities performed using the software. This review ensures adequate use of the technology and satisfaction of all SPECIAL CONDITIONS. In case of no activity or feedback, the license will not be renewed, or will have cost.

Main access to license is limited in number, time, and software products to ensure a proper follow-up and a qualitative relationship. Number of necessary licenses and required products must be discussed when starting the program (an Application Form must be filled by applicants) and can change through time if necessary.

Additional temporary licenses can also be available to support internal training sessions or workshops.

5. SPECIAL CONDITIONS

To obtain access to the software packages for educational & research purposes, the institution agrees to:

- Not use this software for revenue generating purposes;
- Mention software name and editor whenever results of software use are published, being through oral or written communications;
- Forward to Beicip-Franlab any paper or written communication that involved the use of the above-mentioned software;
- Mention the software name as well as the name of Beicip-Franlab company in any material used for education and training;

- Forward to Beicip-Franlab any interest for the company's software expressed by a company/organization in the frame of institution activities.
- Consult with Beicip-Franlab before sending any results to a third party.

6. ADDITIONAL BENEFITS

Beicip-Franlab is open to privileged relationship with selected universities bringing benefits, like participation of Beicip-Franlab specialists to courses or lectures, support for professors and teachers, participation to user meetings, joint publications, and internships.

For more information, please contact us at info@beicip.com.



Beicip Franlab Headquarters

232, avenue Napoleon Bonaparte - BP 231

92502 Rueil Malmaison Cedex - France

Phone: + 33 1 47 08 80 00 - Fax : +33 1 47 08 41 85

e-mail : info@beicip.com - www.beicip.com