Abstract
The Applied Computing Program (CAP) of the Brazilian National Institute for Space Research (INPE) is a MsC- and PhD-level graduate program which aims to contribute to the national technological and scientific development and to respond to the current research and development needs in Space Sciences and Technologies, in line with INPE's institutional mission.

The program has a strong tradition in areas such as data modeling, representation, analysis and simulation, using techniques such as complex systems modeling, applied artificial intelligence, signal and image processing, HPC, geographic information science and others, always with applications to INPE’s R&D fields. In particular, INPE has been developing research on AI application for weather forecasting and satellite data exploration, the key subjects of this workshop.

Recently, the Brazilian government has increased the funding to the internationalization process of some graduate programs, which will allow us to increase the cooperation with foreign institutions. In this way, INPE's participation in this event aims to share knowledge and its acquisition in regard to the state-of-the-art of AI applied to meteorology.

In this poster we will present the history and current activities of the program, with focus on interactions with other graduate programs and research centers at INPE (Meteorology, Remote Sensing, Astrophysics, Space Geophysics, Earth System Science, Engineering and Space Technologies). We will also present ongoing efforts and opportunities for collaboration between INPE and international universities, research centers and companies.

About INPE
INPE (Instituto Nacional de Pesquisas Espaciais, the Brazilian National Space Research Institute) was created in 1961. Its mission is to produce science and technology in the space and terrestrial areas and offer singular products and services for the benefit of Brazil.

INPE is a federal R&D institution, part of the Brazilian Ministry of Science, Technology, Innovation and Communications.

The Applied Computing Program (CAP)
The program was created in 1968 to meet INPE’s need for researchers in applied CS, with emphasis on applications to INPE’s areas of competence, and a strong focus on applied computing and mathematics.

Some of its research areas are Complex Systems, Modeling and Simulation, Software Engineering, Image Processing, Geographical Information Systems, Data Mining/Data Science and High-Performance Computing.

Several of its more than 500 graduates works on R&D at INPE, in other institutes and in tech companies, and many teach in colleges and universities.

In 2019 we had 28 faculty members and 84 grad students.
CAP was graded level 5 of 7 by the federal educational funding agency CAPES.

Theses' Sampler

All theses are online at http://www.inpe.br/biblioteca/, some are in Portuguese.

Opportunities
Research: collaboration with INPE (CAP and CPTEC, Center for Weather Forecasting and Climate Research), opportunities at the Internationalization Project (http://print.dpi.inpe.br/en)

Studying: there are no fees or tuitions. Most eligible MsC and PhD candidates can get grants from Brazilian funding agencies.

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