

## About LIAMF

The LIAMF (Lógica, Inteligência Artificial e Métodos Formais - The Logics, Artificial, Intelligence, and Formal Methods Lab) performs scientific research on the logic field and subareas as knowledge representation, reasoning, machine learning, automated planning, probabilistic graphical models and formal methods.

In 2000, LIAMF was founded by a group of Logic and AI expertise. Since its foundation, LIAMF is integrated to IME (Instituto de Matemática e Estatística - Institute of Mathematics and Statistics) at USP (Universidade de São Paulo) which is one of the most important Universities in South America.



1. Figure - LIAMF building

Currently, LIAMF is involved in several research projects that are financed by Brazilian and São Paulo state research funding agencies, international funding agencies, and international and national sectors of industry, finance and business. It is responsible to offer regular courses in the fields of logic, AI and formal methods at graduate and undergraduate levels, and also short courses on specific topics, usually related to ongoing projects.

Finally, LIAMF is coordinate by six faculty members and the Assoc. Prof. Ana C. V. de Melo is one of them in charge of running the Formal Methods research group. She has been supervising undergraduate and graduate students in topics related to Software Quality that involves Formal Methods as well as Software Testing, Software Maintenance, Software Safety, etc. In the context of these researches, she has collaborated with national and international universities and institutions such as NASA (National Aeronautics and Space Administration - USA) and INPE (Instituto Nacional de Pesquisas Espaciais - National Institute for Space Research - Brazil).

The introduction of Testwell CTC++ coverage tool into our research projects, provided a substantial improvement in our capacity to account for complex coverage criteria to software testings (in particular, the MC/DC converge criteria).

Testwell CTC++ also allowed our researchers to run experiments that are very close to the testing process performed in the software industry. Furthermore, the Testwell CTC++ proved to be very easy to be installed and used by software developers. Considering our good experience of using Testwell CTC++, we aim to adopt it in our courses to help to test safety-critical software.



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