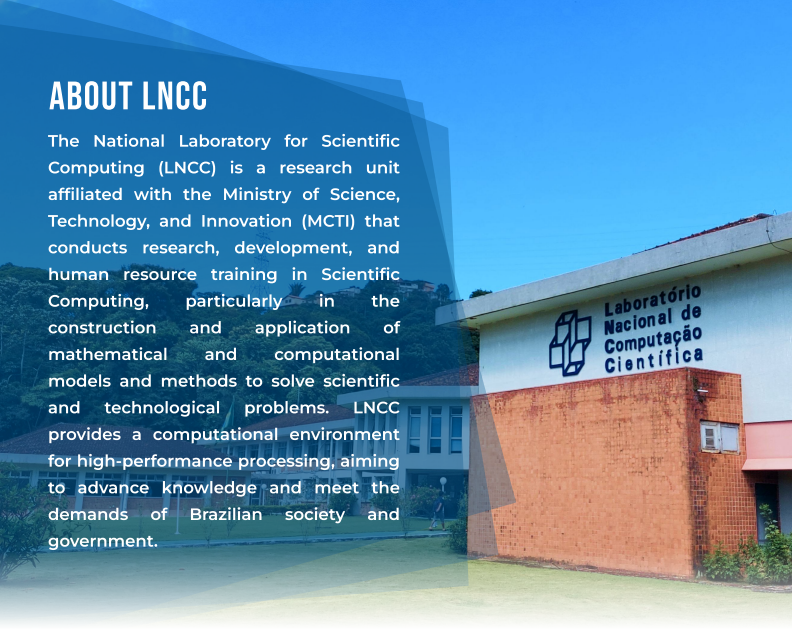
ABOUT LNCC



The National Laboratory for Scientific Computing (LNCC) is a research unit affiliated with the Ministry of Science, Technology, and Innovation (MCTI) that conducts research, development, and human resource training in Scientific Computing, particularly in the construction and application of mathematical and computational models and methods to solve scientific and technological problems. LNCC provides a computational environment for high-performance processing, aiming to advance knowledge and meet the demands of Brazilian society and government.

Over 300 Masters and PhDs in Computational Modeling have been trained at LNCC, currently active in 14 Brazilian states

Researchers from LNCC publish approximately 200 scientific papers per year, in collaboration with researchers from over 50 countries

Articles by LNCC researchers receive over 1,400 scientific citations

SANTOS DUMONT SUPERCOMPUTER

The high-performance computing platform, which includes the Santos Dumont Supercomputer, is open for use by the Brazilian scientific community, enabling to simulate phenomena, to analyze data and advance research. Santos Dumont is the fastest academic supercomputer in Latin America available to the scientific community, with a processing capacity of 5.1 quadrillion operations per second.

In 2024, an investment of US$ 19.4 million from Petrobras will extend the computing capacity of the "Santos Dumont" supercomputer. Based on the BullSequana XH3000 architecture from Atos, this extension will increase its capacity by 17 Petaflops, ensuring the supercomputer retains its status as the most powerful in Latin America for academic research.

The Santos Dumont Supercomputer's capacity will quadruple to meet the growing needs of the academic community. With this significant expansion funded by Petrobras, the Santos Dumont will be even more equipped to support cutting-edge research initiatives, especially in the energy sector.

This upgrade represents a significant advancement in the field of scientific computing, enabling researchers to conduct more complex simulations and large-scale data analyses, thereby driving innovation and progress in related fields of study.

https://www.gov.br/lncc/pt-br/supercomputador-santos-dumont

RESEARCH LINES

- Bioinformatics and Computational Biology
- Data Science
- High-Performance Computing
- Cryptography
- Energy
- Mathematical Methods and Algorithms
- Health
- Control Systems

https://www.gov.br/lncc/pt-br/centrais-de-conteudo/portfolio-grupos-de-pesquisas-lncc-2024-ingles.pdf

BUSINESS INCUBATOR

LNCC's business incubator supports entrepreneurship by welcoming individuals interested in transforming knowledge into innovative products, services, and processes.

The Laboratory's Incubator plays a unique role in integrating the local and regional entrepreneurial ecosystem and promoting technological innovation. It serves as a bridge between the academic environment and the private sector, facilitating interaction among researchers, entrepreneurs, investors, and government institutions.

https://www.gov.br/lncc/pt-br/servicos/incubadora-de-empresas

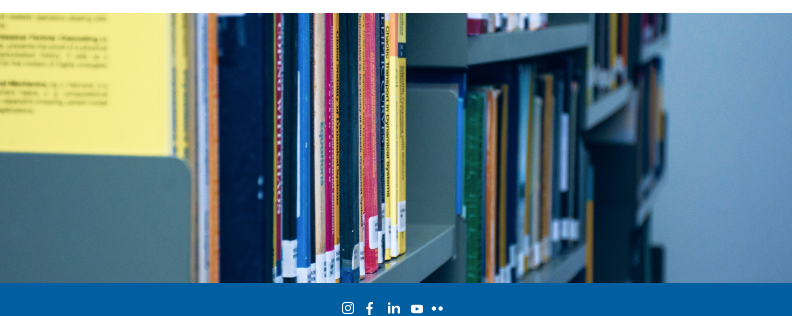
SCIENCE & TECHNOLOGY DISSEMINATION

LNCC promotes the dissemination of science and technology through lectures, seminars, colloquiums, courses, and events, as well as the "Portas Abertas" program and the “Visita Técnica” program, offering laboratory visits and discussions with researchers. The institution also participates in other programs aimed at encouraging STEM careers.

https://www.gov.br/lncc/pt-br/centrais-de-conteudo/divulgacao-cientifica

POSTGRADUATE

LNCC offers a stricto sensu Postgraduate program in Computational Modeling - Masters and Doctorate, with grade 7 in the CAPES Multidisciplinary Postgraduate Program.



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National Scientific Computing Laboratory - LNCC
Av. Getúlio Vargas, 333, Quitandinha, Petrópolis - RJ - CEP: 25651-075

LNCC Laboratório Nacional de Computação Científica

MINISTÉRIO DA CIÊNCIA, TECNOLOGIA E INOVAÇÃO

GOVERNO FEDERAL BRASIL UNIÃO E RECONSTRUÇÃO

MAY 2024