

The National Laboratory for Scientific Computing (LNCC) is a center of excellence under the Ministry of Science, Technology and Innovation (MCTI), dedicated to research, human resource development, and high-performance scientific computing.

Since 1980, LNCC has been advancing cutting-edge science, educating master's and doctoral students, and providing state-of-the-art computational infrastructure to researchers throughout Brazil.

Scientific computing employs mathematical and computational models to understand natural, physical, biological, and social phenomena. Through simulations, data analysis, and scientific visualization LNCC addresses complex global challenges.

At LNCC, researchers collaborate across diverse, highly impactful disciplines such as:

Artificial Intelligence (AI)

Machine Learning

Data Science

Big Data Analytics

Quantum Computing

Cybersecurity

Bioinformatics

Computational Modeling

Applied Mathematics

Dynamical Systems and Control

High-Performance Computing (HPC)

Research, innovate, and shape the future with Brazil's most advanced scientific infrastructure.

BE PART OF THE FUTURE OF SCIENCE!

Join a world-class environment driving technological breakthroughs and academic excellence.

Top-Tier Graduate Education: Master's and Ph.D. programs in Computational Modeling.

Global Collaboration Networks: Deep integration with national and international research initiatives.

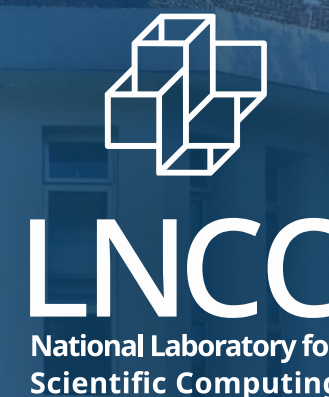
Next-Gen Tech Frontiers: Advanced research in Artificial Intelligence, Data Science, Quantum Computing and Cybersecurity.

Unrivaled Infrastructure: Direct access to Latin America's premier high-performance supercomputing environment.

VISIT LNCC

Schedule a visit, connect with our researchers, explore our laboratories and discover where innovation happens.

www.lncc.br



*Science. Innovation.
Supercomputing.*

*Transforming knowledge into
impact for society.*

THE SANTOS DUMONT SUPERCOMPUTER

Supercomputador
Santos Dumont

Housed at the LNCC headquarters in Petrópolis, Rio de Janeiro, the Santos Dumont Supercomputer serves as the central node of the National High-Performance Computing System (SINAPAD).

It provides the vital processing power needed to fuel Brazil's technological breakthrough.

 **Massive Processing Power:** delivers up to 20 petaflops of performance — equivalent to 20 quadrillion (20×10^{15}) operations per second.

 **National Research:** Actively supports strategic research projects across all regions of Brazil.

 **Provides free computational infrastructure** for approved scientific projects.

 **Eco-Efficient:** Featured in the Green500 ranking as one of the most energy-efficient, liquid-cooled supercomputers in Latin America.

 **Recognized as one of the most efficient HPC systems** in Latin America.

At LNCC, we work to create solutions that impact the present and transform the future.

Talent Development

LNCC offers world-class Master's and Ph.D. programs in Computational Modeling, preparing professionals to lead in technology, research, and innovation.

Our graduate education equips researchers with the skills to solve complex global challenges.

LNCC alumni excel in top-tier universities, research centers, and global companies, proving that our training opens doors to exceptional career opportunities worldwide.



Research & Innovation

At LNCC, ideas become innovation!

With 15 research groups operating at the forefront of knowledge, the institution develops cutting-edge solutions to complex challenges in fields such as Artificial Intelligence, Data Science, Bioinformatics, and Supercomputing.

Strategic Areas of Activity:

COMAC

Mathematical and Computational Methods Coordination: Focuses on Artificial Intelligence, Data Science, Applied Mathematics, and Advanced Computing.

COMOD

Computational Modeling Coordination (COMOD): Develops computational modeling for health sciences, biology, materials science, and complex systems.

COPGA

Graduate Studies and Professional Development Coordination: Manages the institutional Master's and Ph.D. programs in Computational Modeling.

COTIC

Information and Communication Technology Coordination: Drives the technological infrastructure, networking, and supercomputing.