

The Brazilian Nuclear Energy Association - ABEN promotes the ninth International Nuclear Atlantic Conference 2019 (INAC 2019), which will be held in Santos, São Paulo from October 21st to 25th. The theme of the event is "**Nuclear New Horizons: Fueling our Future**", which intends to discuss the essential role of nuclear science and technology in all its applications for the benefit and development of society. We will explore subjects of nuclear energy as a source that generates industrial demand, employment, social and economic-development and contributes to the environmental goals in the countries and regions where it operates.

The Conference comprises three independent, but complementary, technical meetings: The XXI Meeting on Nuclear Reactor Physics and Thermal hydraulics (XXI ENFIR), the XIV Meeting on Nuclear Applications (XIV ENAN) and the VI Meeting on Nuclear Industry (VI ENIN).

Jointly, the Eighth edition of the Junior Poster Technical Sessions is organized for undergraduate students from a number of colleges and universities to share with the participants the relevant results achieved in their research work under the supervision of nuclear researchers from Brazilian Institutions. In this edition of INAC, it will also happen the First International Workshop on Thorium (ITHOR-WS), that will discuss the present time status of thorium in the world.

Complementing the program, Expo INAC 2019, the traditional technical and commercial exhibition, runs alongside the INAC 2019, offering the opportunity to network with the delegates, enhance relationships with existing customers and meet new ones, demonstrate products or services, launch new products, and seek international partners forming new alliances.

ABEN and the INAC 2019 General Chair and Co-Chair are grateful to all who will contribute to the publication of the Proceedings: authors, board of referees and editorial committee. Also, we would like to thank the Chairs and Co-Chairs of the technical meetings for taking responsibility for delivering a successful and technically rich INAC, the largest nuclear event held in South America.

We would also like to acknowledge all the sponsors, government agencies, industries and institutions, which directly or indirectly have contributed or will contribute to the success of the event.

ABEN and the INAC 2019 Organizing Committee acknowledge that the success of this meeting truly lies on your attendance. We thank you in advance for sharing your time with us and wish you a fantastic time during your visit in Santos, São Paulo.

Be our guests!

**Claudio Ubirajara Couto de Almeida**  
President of the Brazilian Nuclear energy Association

#### Key dates, call for papers and information

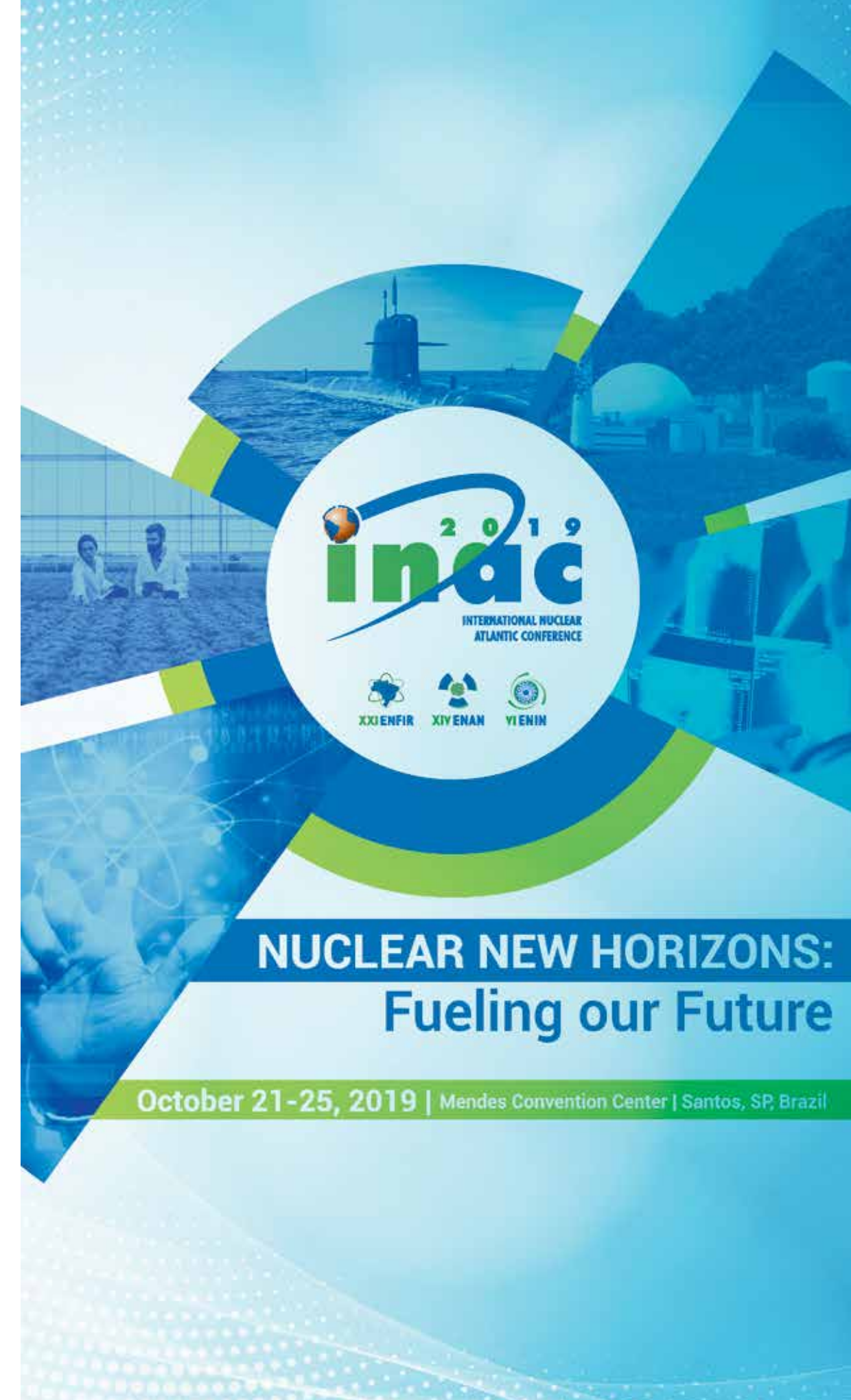
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#### Official website INAC 2019

[www.inac2019.org.br](http://www.inac2019.org.br)



# Subject Areas



## XXI ENFIR

### SUBJECT AREAS

- **R01** Nuclear Reactor Physics
- **R02** Nuclear Reactor Thermal Hydraulics
- **R03** Applied Mathematics and Computation
- **R04** Artificial Intelligence and Virtual Reality
- **R05** Nuclear Reactor Fuel Fabrication and Design
- **R06** Advanced Nuclear Reactors
- **R07** Structural Mechanics
- **R08** Reactor Safety Analysis
- **R09** Fuel Cycle Management and Services
- **R10** Computational Fluid Dynamics
- **R11** Man Machine Interface
- **R12** Nuclear Reactor Licensing and Regulation
- **R13** Nuclear Reactor Instrumentation and Control
- **R14** Nuclear Power Plant Viability, Design, Construction and Operation
- **R15** Environmental Impact applied to Nuclear Reactors and Fuel Cycle

**Maria de Lourdes Moreira**  
XXI ENFIR CHAIR



## XIV ENAN

### SUBJECT AREAS

- **E01** Radiation Protection
- **E02** Dosimetry
- **E03** Nuclear Analytical Techniques
- **E04** Environmental Sciences
- **E05** Nuclear Instrumentation
- **E06** Waste Management
- **E07** Isotopic Techniques in Environmental and Industrial Processes
- **E08** Medicine and Health
- **E09** Food Science
- **E10** Nuclear Applications in Agricultural Processes
- **E11** Biology
- **E12** Nuclear Physics
- **E13** Materials, Science and Technology
- **E14** Irradiators, Licensing and Regulations of Radioactive Installations
- **E15** Cultural Heritage

**Margarida Mizue Hamada**  
XIV ENAN CHAIR



## VIENIN

### SUBJECT AREAS

- **I01** Decentralization of the Energy Generation Sector
- **I02** Advances in New Nuclear Power Plants Deployment
- **I03** Plant Operation Strategies, costs and capacity factors in the Nuclear
- **I04** Market development in nuclear health and irradiation industries
- **I05** Uranium Market
- **I06** Public Acceptance, social responsibility, social impact of nuclear technologies
- **I07** Nuclear security, non-proliferation, safeguards and Nuclear forensics, Radioprotection
- **I08** Technology Innovations trends
- **I09** Human resources and Professional Development
- **I10** Research & Development Management

**Karla Kwiatkowski Lepetitgaland**  
VI ENIN CHAIRs

**Carlos Leipner and Olga Pustarnakova**  
VI ENIN CO-CHAIRs

### INAC 2019

**Alice Cunha da Silva**  
INAC 2019 GENERAL CHAIR

**Olga Simbalista**  
INAC 2019 CO-CHAIR

### Junior Poster Technical Sessions

**Ricardo C. Barros**  
JR POSTER CHAIR

**Graciete de Andrade e Silva,  
Leonardo de Andrade e Silva**  
JR POSTER CO-CHAIRS