



Global Power, Energy and Communication Conference
Cappadocia/TURKEY
June 12-15, 2019

Special Session on Thorium Utilization in Nuclear Reactors and Fuel Cycles

Nuclear Energy, primarily to produce electricity and other use, and the enveloping Nuclear Technology, as inherited from the XX Century, constitutes a controversial issue for political and economic reasons. On the one hand, the energy source is promoted in several Countries and an unavoidable mean to ensure growth for the human civilization ad suitable living standard with reduced or no impact upon the environment, on the other hand it is abandoned or going to be abandoned in other Countries which did benefit of stable economic growth. Thorium is an emblem for such a situation: huge reserves are available all over the world (primarily India, Turkey, and Brazil, but not only) and its technological worth for exploitation in current generation of thermal fission reactors is demonstrated, on the other hand no industrial use is ongoing or planned for the near future (with an exception constituted by situation in India). Therefore, it is important that the academia provide scientific, technical, economics and environmental impacts information to promote the utilization of thorium in benefit of the society, and to give to the police maker information's for taking decisions with scientific and technical bases and in a sustainable way. This special session will accept paper related with calculation methodologies; concepts; economics; environmental impacts; mining and milling; reprocessing; fuel behaviour; thermal physics; safety; natural resources, and other topics related with Thorium Utilization in Nuclear Reactors and fuel cycles.

Topics of interest include, but are not limited to:

- Calculation Methodologies (neutronics; thermal hydraulics)
- Thorium Reactors Concepts
- Economics in Thorium Reactors
- Environmental Impacts
- Fuel Cycles (mining and milling; processing; reprocessing; waste)
- Fuel Behaviour under Irradiation.
- Transients and Safety Analysis of Thorium Reactors
- Thermal Physics Properties
- Utilization in Generation III Reactors (APWR; APHWR, etc)
- Utilization in Generation IV Reactors (MSR; HTR; Fast Reactors)
- Kinetics and Dynamics of Thorium Reactors
- In Core and Out of Core Fuel Management

Organizer(s):

Organizers Names: Prof. Dr. José Rubens Maiorino; Prof. Dr. Sümer Şahin.

Affiliations: Federal University of ABC(Brazil); Bahçeşehir University (Turkey)

E-mail: joserubens.maiorino@ufabc.edu.br ; sumer.sahin@neu.edu.tr ; sumer.sahin@eng.bau.edu.tr

Deadlines of the special session:

Full paper submission (maximum 6 pages):	February 1, 2019
Notification of acceptance:	April 15, 2019
Final submissions due:	May 1, 2019

All the instructions for paper submission are included at the conference website.

<http://www.gpecom.org/index.php/guidelines/>