



Seminarium Zakładu Energetyki Jądrowej i Analiz Środowiska (UZ3) Departament Badań Układów Złożonych (DUZ)

Wtorek: **28.02.2023**

11:30

transmisja online:

<https://www.gotomeet.me/NCBJmeetings/uz3-and-phd4gen-seminars>

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Safety assessment of High Temperature Gas-cooled Reactor using parametric code

Abstrakt:

Nuclear reactors are probably one of the best solutions to solve the world's energy problems and are emerging as a safe and clean source of energy in the public consciousness. On the one hand side, they can provide sustainable and zero-emission energy, on the other hand, the licensing process and construction take a lot of time. Before the implementation of any type of nuclear facility, a complex and time-consuming safety assessment is required, which can prove that the concept is safe. The process needs to be made using a number of numerical methods for each specific field of interest (thermal-hydraulics, neutronics, fuel behaviour, structural mechanics or environmental studies).

In this presentation, the thermal-hydraulic aspects required in the Preliminary Safety Report will be described from the perspective of parametric code usage on the example of High Temperature Gas-cooled Reactor.

Serdecznie zapraszamy

Mariusz Dąbrowski, Tomasz Kwiatkowski

<http://www.phd4gen.pl>

Bio:

Maciej Skrzypek is a senior R&D specialist, and has more than 10 years of experience in Nuclear Safety Analysis. He graduates Faculty of Power and Aeronautical Engineering, at Warsaw University of Technology with specialization in Nuclear Engineering. Part of the Master Program made during the Erasmus exchange program in KTH, Sweden. In NCBJ he was starting as a thermal-hydraulic specialist using system codes for nuclear safety assessment of LWRs. Since 2016 mostly been involved in generation IV reactors analysis, including severe accident conditions. Responsible for severe accident modelling and analysis in GEMINI Plus, Gospostrateg-HTR and HTR-MEiN projects. During his career Mr Skrzypek had an opportunity to work in international working groups in CEA Cadarache, France and the University of Illinois at Urbana Champaign, US being responsible for severe accident code development and experimental stability flow investigations, respectively. He has participated in many workshops organized by IAEA, GIF and NEA and presented his scientific results at many international conferences. Currently working in National Centre for Nuclear Research at the Division of Nuclear Energy and Environmental Studies - Reactor Analysis Section.