Physics of Nuclear Energy

Prof. Waclaw Gudowski

Each lecture consists of 3 "on-line" (*gotomeeting*) passes of 30 minutes each. 15 minutes breaks between passes.

Date	Time	Room	Subject of the lectures	Lecturer
09.10.2020, Friday	10:00 - 12:00		From Röntgen to "Tsar Bomba": Development of Modern Physics leading to Nuclear Energy-Part 1	W. Gudowski
	14:00 - 16:00		From Röntgen to "Tsar Bomba": Development of Modern Physics leading to Nuclear Energy-Part 2	W. Gudowski
12.10.2020, Monday	10:00-12:00		Fear is worse than ghost: Radioactivity, Radioactive Decay, Radiation Protection	W. Gudowski
	14:00-16:00		Neutron - Divine (but not God) Particle: Neutron Interactions with Matter. Cross sections	W. Gudowski
13.10.2020, Tuesday	08:00-10:00		It's good to be late, sometimes: Nuclear Fission and Chain Reaction. Prompt and Delayed Neutrons	W. Gudowski
	14:00-16:00		Rollercoaster physics: slowing down neutrons, how to do it and how to simulate it.	W. Gudowski
14.10.2020, Wednesday	08:00-10:00		How to make nuclear power safe: reactor kinetics, reactor dynamics - all depends on feedbacks	W. Gudowski
	14:00-16:00		"Combat of Giants "- Fusion vs fission: principles of fusuin and will fusion ever work as an energy source on Earth	W. Gudowski
15.10.2020, Thursday	08:00-10:00		Conflict of generations? Generation IV reactors and back to the future	W. Gudowski
06.11.2020, Friday	08:00-10:00		Now we are done! Summary lecture and how to solve most common problems in energy physics	W. Gudowski

After every lecture few problems will be given to be solved and emailed to the lecturer.
Final exam will be an oral exam at the end of November, either on-line or "in person"