









# V4-Korea RADCON Workshop

# **Effect of Chemical Composition of Concrete on Its Long-term Performance** in Irradiated Environment

#### Date & Time:

• Date: September 2~3, 2021

• Time: 9:00 AM  $\sim$  12:00 PM in CET and 4:00 PM  $\sim$  7:00 PM in KST

#### **Organizers**

• Petr Štemberk, Czech Technical University, Czech

• László Szentmiklósi, Centre for Energy Research, Hungary

• Michal A. Glinicki, Polish Academy of Sciences, Poland

• Martin T. Palou, Slovak Academy of Sciences, Slovakia

• Kyoungsoo Park, Yonsei University, S. Korea

#### **Schedule**

Date	Time (CET)	Time (KST)	Contents
September 2 Thursday	09:00 ~ 09:15	16:00 ~ 16:15	Ice breaking & Overview of RADCON Workshop
	09:15 ~ 10:15	16:15 ~ 17:15	Technical session #1: Czech Technical University
	10:15 ~ 10:30	17:15 ~ 17:30	Break
	10:30 ~ 11:30	17:30 ~ 18:30	Technical session #2: Polish Academy of Sciences
	11:30 ~ 12:00	18:30 ~ 19:00	Technical session #3: Yonsei University
September 3 Friday	09:00 ~ 09:05	16:00 ~ 16:05	Ice breaking
	09:05 ~ 09:35	16:05 ~ 16:35	Technical session #3: Yonsei University
	09:35 ~ 10:35	16:35 ~ 17:35	Technical session #4: Slovak Academy of Sciences
	10:35 ~ 10:50	17:35 ~ 17:50	Break
	10:50 ~ 11:50	17:50 ~ 18:50	Technical session #5: Centre for Energy Research
	11:50 ~ 12:15	18:50 ~ 19:15	Final discussion

## **Technical Session #1: Czech Technical University**

- Yuliia Khmurovska, Effects of Gamma-Ray Irradiation on Hardened Cement Mortar
- Yuliia Khmurovska, RBSM-based model for prediction of radiation-induced volumetric expansion of concrete aggregates
- Yuliia Khmurovska, Catalogue of Radiation-Induced Damage of Rock Aggregates Identified by RBSM Analysis











#### **Technical Session #2: Polish Academy of Sciences**

- Daria Joźwiak Niedźwiedzka, Selection of materials in respect to the content of long-lived radioisotopes and alkali-silica reaction
- Mariusz Dąbrowski Influence of gamma irradiation on the initiation of steel corrosion in concrete
- Kinga Dziedzic, Influence of gamma irradiation on the expansion of concrete with different aggregates
- Aneta Antolik, Gamma irradiation sensitivity of early hardening concrete
- Michal A. Glinicki, Air void distribution in concrete studied using X-ray/neutron tomographic imaging and optical reflection imaging
- Michal A. Glinicki, Synthesis of IPPT PAN results

### **Technical Session #3: Yonsei University**

- Kyoungsoo Park, Reconstruction of concrete microstructure using complementarity of X-ray and neutron tomography
- Hyeung-Tae Kim, Image based analysis using virtual element method
- D. F. Tiana Razakamandimby R., 3D reconstruction of concrete microstructure

#### **Technical Session #4: Slovak Academy of Sciences**

- Martin Palou, Conceptual design and performance evaluation of self-compacting heavyweight concrete
- Martin Palou (Janette Dragomirová), Performances of novel steel fiber-reinforced heavyweight concrete versus 30-year NPP shielding concrete

#### **Technical Session #5: Centre for Energy Research**

- Katalin Gméling, PGAA-NAA-XRF elemental analysis and petrography results of concrete raw materials
- László Szentmiklósi, Computer simulations to estimate the neutron-activation of concrete
- Veronika Szilágyi, Neutron and X-ray imaging results of concrete specimens

# **Online Connection Information**

• ZOOM Link: https://yonsei.zoom.us/j/81015960940?pwd=c29CMGZLS0htcXppaWpnajJLdFV5QT09

• ZOOM ID: 810 1596 0940

• ZOOM PW: 562329

#### **Sponsors**











