

Illuminating Cultural Heritage: From research to preservation

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Speaker's biography: Tamás Belgya, Hungarian Academy of Science, Centre for Energy Research



Dr. Tamás Belgya is Candidate of Science of the Hungarian Academy from 1994 (CSc is equivalent to PhD). He started his career as a physicist with nuclear structure research using $(n,n'\gamma)$ reactions on a fast neutron experimental facility of the Budapest Research Reactor (BRR) at Institute of Isotopes in 1982.

After the BRR shut down for reconstruction in 1986, he continued his research in the framework of three National Science Foundation projects with the University of Kentucky. He had a two year contract at the

University of Kentucky and worked with accelerator produced $(n,n'\gamma)$ reactions from 1990. He worked out the Doppler Shift Attenuation Method at this time and measured a large number of nuclear level lifetimes in various nuclei. He took part in the discovery of the two-phonon octupole and octupole-quadrupole states in the spherical Pb, Sm and Nd nuclei. The NSF supported co-operation with University of Kentucky was successful till 1996.

From 1993, he started to work on the foundation of the radiative neutron capture (n,γ) instrumentation at the thermal neutron guide of the BRR. He took part in the design and building of the Prompt Gamma Activation Analysis (PGAA) experimental station and was responsible for the electronic systems.

In the year 2000, both the neutron guide and the PGAA station were redesigned. The PGAA station was extended with a new station called Neutron Induced Prompt-gamma Spectrometer (NIPS). From 1998, he became the deputy department head of the Nuclear Analysis Department and from 2004 he became the department head. From 2012, the department name was changed to Nuclear Analysis and Radiography Department of the Institute for Energy Security and Environmental Safety, Centre for Energy Research, Hungarian Academy of Sciences. He became the Director of



the Institute for Energy Security and Environmental Safety and deputy DG of the Centre from 2013.

He has been the local coordinator of several EU and National funded projects. Most notably, he was a WP coordinator in the EU FP6 Ancient Charm Project (2005-2008), a 3D non-distracting tomography/imaging project for archaeological objects. He was also working on methodology projects of ancient metals and neutron radiography/tomography.

He took part in numerous IAEA coordinated research projects on nuclear data, worked on nuclear database (Reference Input Parameter Library) and consultations on tomography and other topics. He has more than 260 journal papers, book chapters and reports. His current interests are measurements of nuclear data and photon strength functions, neutron radiography and tomography, PGAA and nuclear standards.

The publications database for Tamás Belgya's works is available [here](#).

