

2016.09.30.

EUROPEAN RESEARCHERS' NIGHT

*Free admission
for all programs!*

This European Researchers' Night project is funded by the European Commission under the Marie Skłodowska-Curie actions

Programs for Hungary, 2016

BAY ZOLTAN CAMPUS, Budapest

- o Topics: Energy and Green economy, Raw materials, mobility in research careers;
- o Interactive workshops, hands-on experiments, demonstrations, spectacular programmes for partner schools' pupils involving BZN's industrial partners both years (e.g. critical raw materials, circular economy);
- o Laser programmes: using laser beam for cutting and welding of small souvenirs;
- o Flike: the world's first manned tricopter (meeting with innovators, learn about the research-to-market process based on a real life example);
- o Energy efficiency of drones;
- o Drag race with small robots directed with smart phones;
- o Lego-robot building and programming competition supporting the STEM education of disadvantaged pupils throughout the country (results presented on the venue);
- o Raw Materials educational hands-on toolkit designed for experiments at schools
- o Quizzes about exploration, extraction, processing, recycling and substitution of raw materials;
- o Exhibition of minerals;
- o Mining game competition for visitors;
- o Meet and talk to the scientists on rare and critical raw materials.
- o Demos about BZN's research results and developments (e.g. in-house navigation systems by smart phones, health related IT solutions such as assisted living solutions; sensor-based IT solutions;
- o Biotechnological experiments: nano-printing, biological diagnostics, protein chip technology;
- o Mobility in research careers: workshop organised as the national coordinator of the EURAXESS network and coordinator of a European project of EURAXESS(addressing audience of 16-24 years)

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ERICSSON BUILDING

- o Topics: smart home, smart vehicles, 4 G mobile technologies, physics;
- o Hobbies of Researchers 5.0 (Smart home, civil flight simulator, Softvehicle etc.);
- o Innovations driving the future ICT ,with unique, spectacular demos and /or prototypes from the world of Ericsson (“Accelerate to 4G”, Rhythm of the cities);
- o Spectacular experiments in Physics not only for scientists (Physics cocktail, Loud experiments, Magical experiments);
- o “Once in a year”: visit to the world-famous research laboratories of Ericsson: two laboratories on media processing: the video-laboratory, the hardware-laboratory and a laboratory with small equipment, with hands-on experiments possible;

BME CAMPUS, CHILDREN UNIVERSITY

- o Topics: smart home, smart transport, automotive industry, food production;
- o CU-BME+: competition among participants of CU to receive rewards;
- o Visit of the flight simulator: take-off and landing from the perspective of the pilots;
- o Wind Tunnel Laboratory: experiencing various flow phenomena (vortex cannon, giant soap bubble, testing of a model truck etc.);
- o Sensory analysis of foods: from wheat grain to bread: presentation and quiz about food production, proteins and cereals;
- o Flame organ and flame speed measurement;
- o Water rocket: demonstration of rocket propulsion with a water rocket;
- o The world of automotive electronics, a visit in the embedded system laboratory;
- o Intelligent home (smart home): presentation of smart devices as smart glass, 3D computer;
- o Seeing the unseen: methods of the Continentals Central Quality Laboratory.

NATE, ZIPERNOWSKY HOUSE OF SCIENCE AND ARTS

- o Topic: Women in science, Competitiveness;
- o Speed dating Science Café, a facilitated social activity encouraging participants to speak with inspiring role models (at least 10 persons) (especially for girls to build personal contacts with outstanding women researchers) and engineers, get insight into their academic/technological and personal life, ask questions and learn about specific areas of science and engineering;
- o Meeting the grantees of the Women in Science Excellence Award Hungary;
- o Gender-related technical exhibition;
- o Display of the artworks of female artists;
- o Google Ground programmes with the involvement of SMEs/start-ups and young innovators.

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ÓBUDA CLUSTER

- o Topics: smart and green transport, robotics, health and wellbeing, innovative and reflective societies, environment protection, Europe in a changing world, lifelong learning;
- o Classic logical and strategic games from chess to Rubik's cube for youngest innovators from Mókus Kindergarten and pupils from Ilona Andor Primary School with the assistance of pensioners from a local retirement home;
- o "Tech kindergarten" (young visitors): building of tech installations;
- o Scientific conference (10-12 years old young researchers) : presentation evaluated by professors/students from Óbuda University and successful Hungarian start-ups;
- o Workshop of innovative SMEs, represented by young innovators: career advice and presentation about the challenges of founding a company based on an original idea for students of Árpád Secondary School;
- o Laboratory visits (big data, bioinformatics, intelligent transportation systems, robotics, handicap laboratory);
- o Telemedicine and eHealth applications, the benefits of patient tele monitoring and the opportunities of DaVinci surgical system (the only one in Hungary);
- o Robotic applications driven by voice commands of visitors;
- o Unmanned vehicle system by Bosch Hungary research centre;
- o School representatives (addressing girls between age 9-14) on Lego Robotics and Scratch programming (for enhancing the number of girls in STEM disciplines even in secondary schools and university levels);
- o Open a call for proposal: Smart Application Development Competition addressed to students (14-20) with a special "Girl Innovator Award";

HIDEGUT CLUSTER

- o Topics: competitiveness, chemistry and physics;
- o Spectacular experiment show by Bence Fazekas on chemistry and physics;
- o Chemistry competition for high school students with a preliminary online;
- o conducted by a chemist researcher;
- o „IQ obstacle race”;
- o Personalized career advice for students by researchers and professional advisors with the motto "How can you become a researcher?";
- o Presentations of local innovative SME-s about their innovations and the secrets of competitiveness;
- o Introduction of young innovators, the next generation of researchers talk about their lives and meet the audience.

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TIT

- o Topics: astronomy and space; biomedicine, biotechnology; science with and for society;
- o Planetarium:
- o Spectacular shows about space followed by live explanatory talks of astronomers;
- o Exhibitions of meteorites;
- o Astrophoto exhibition,
- o Walking Solar System,
- o Dedicated science café with MSCA fellows and researchers with international experience;
- o Stem-cell obstacle race with the help of MSCA fellows;
- o Member clubs:
- o Observing interesting phenomena on the horizon with telescopes set up in the clubs or on the main squares in towns;
- o Chat with the scientist:
- o Scientists talk about healthy ways of living and the role of innovation in our everyday lives in a science café atmosphere.

BAY ZOLTAN CAMPUS IN MISKOLC

- o Topics: smart IT, energy, nanotechnology, health and well-being;
- o Interactive workshops, scientific lectures and demos by senior and junior researchers;
- o Innovations in nanotechnology, environmental sciences and engineering;
- o Smart IT solutions in the field of Energetics;
- o Transporting and Health: interactive demonstrations for visitors;
- o Termite reaction;
- o Use of metal foams;
- o Presentation of the Marangoni convention and the super paramagnetic iron oxide nanoparticle (SPION);
- o Kids' logics games competitions with research related prizes;
- o Molecular gastronomy show;
- o IT technology exhibition: "from C64 through a tablet PC and on to artificial intelligence";
- o "Science show" with experiments and reactions about atoms' reactivity (e.g. use of various metal foams, Marangoni conversion, super paramagnetic iron-oxide nanoparticle).

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BAY ZOLTAN CAMPUS IN SZEGED

- o Topics: food and biotechnology;
- o Scientific presentations about new methodologies for creating energy with the help of biotechnology, and for restoring nature the most effectively after contamination;
- o Spectacular laboratory experiments measuring CO₂, pH, or using special microscopes for all age groups;
- o "International cooperation is cool!": interactive lectures about the international projects of the institute (e.g. soil modelling, soil investigations, using algae in biotechnology and alcohol fermentation);
- o Spectacular demos about amazing innovations (e.g. microbial fuel cells, producing electricity directly with bacteria, or follow up microorganisms by detecting the CO₂ produced by them).

SCIENCE IN THE CITY

- o Topics: planetary sciences, GPS navigation;
- o Solar System Runs:
 - o In Budapest and various Hungarian cities on Researchers' Night with the help of local organisers. (available using social media, including educational YouTube videos and a Facebook and Instagram campaign designed to target adolescents and young adults);
 - o Educational material on the Solar System, satellites and GPS technology;
 - o Taking place on the Night itself in Budapest and in other Hungarian cities;
 - o Mission: start from the sun and reach the orbital distance of Neptune;
 - o Display of proportionate models of each planet along the track proportionate models of each planet;
 - o Participants encouraged to wear "astro-geek" outfit and stop to act out upon reaching planets, asked to use mobile GPS (sport) (tracker applications to show relative orbital distances upon reviewing their workout);
 - o Follow-up: SSR recorded to create YouTube video, participants being encouraged to share their own images, workout records, etc. using social media;

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EU-corners

- o Located in a frequented area (most popular venues: Ericsson, Planetarium, BZN Campus);
- o Offering : the European flag, connections to all relevant EU websites (list to be provided by REA), demonstration about at least one research project EU-supported in the area considered, interactive activities;
- o Permanent presence of personnel likely to answer public questions about EU policies and programmes, and promoting the European dimension and gender balance in research and innovation (women in science);
- o Testimonials/activities conducted by researchers funded by Horizon 2020, including Marie Skłodowska-Curie actions (having been abroad or being on site), who will also take part in the activities organised outside the EU corner;
- o A 10-questions questionnaire about career and training perspectives;
- o Wherever possible, European Corners implemented in collaboration with other EU networks present in Hungary (e.g. EuropeDirect, EEN, EURES, EUROPASS etc.).