

PROGRAM

EELISA Scientific Student Competition 2024

10-11 JUNE 2024

Budapest, Hungary

Conceptually endorsed by EELISA INNOVation and COmmon Research Strategy (InnoCORE)

Alliance members

In Association with

Co-funded by



EELISA Scientific Student Competition 10-11. 06. 2024

PROGRAM

Sessions	MS TEAMS	Location
10th JUNE 2024		
8:30 – 9:15 Registration		
9:15 – 9:45 Opening ceremony (speeches: Emilia Koczkáné Csiszár, István Szabó, Balázs Kövesdi, BME Introduction)	LINK	Ceremony hall (Building K – 1 st floor)
10:00 – 13:00 Parallel Sessions		
Smart Production	LINK	K.195 (Building K – 1 st floor)
Informatics	LINK	Kmf.79 (Building K – ground floor)
Social Sciences 1	LINK	Kmf.30 (Building K – ground floor)
Chemical and Bioengineering	LINK	Kf.12. (Building K – basement)
Applied Sciences 1	LINK	K211. (Building K – 2 nd floor)
Medicine	LINK	K212. (Building K – 2 nd floor)
13:00 – 14:00 Lunch		
14:00 – 17:00 Parallel Sessions		
Automatization	LINK	K.195 (Building K – 1 st floor)
Applied Informatics	LINK	Kmf.79 (Building K – ground floor)
Social Sciences 2	LINK	Kmf.30 (Building K – ground floor)
Built Environment	LINK	Kf.12. (Building K – basement)
Applied Sciences 2	LINK	K211. (Building K – 2 nd floor)
Innovative mobility	LINK	K212. (Building K – 2 nd floor)
Architecture	LINK	K213. (Building K – 2 nd floor)
17:00 – 18:00 Jury evaluation session		
18:00 – 22:00 Social program for students – Dinner for jury members		
11th JUNE 2024		
9:00 – 12:00 Get to know BME (On demand department programs – with preliminary registrations)		
12:00 – 13:30 Awarding ceremony (speeches: János Levendovszky, Dale A. Martin, András Pataricza, László Gergely Vigh)	LINK	Ceremony hall (Building K – 1 st floor)
13:30 – 14:30 Lunch		

EELISA Scientific Student Competition 10-11. 06. 2024

COMITTEES

Patrons:

Sofia Costa D'Aguiar (EELISA Executive Director)
Dale A. Martin (President of EELISA)
István Szabó (Strategic Director, Council of the Hungarian SSA)
Tibor Czigány (Rector – BME)
Emilia Koczkáné Csiszár (Vice-rector for International Affairs – BME)
János Levendovszky (Vice-rector for Science and Innovation – BME)

Scientific Committee:

Adrián Horváth (BME / FŐMTERV)	Imre Balázs (BME)
Ádám Nyerges (BME)	István Biró (BME)
Ágnes Urbin (BME)	István Lerchner (HUMDA)
Ana-Maria Albu (UPB)	István Majzik (BME)
Anar Dushpanova (SSSA)	József Hlinka (BME)
Andrea Guirini (SNS)	Juan Manuel Muñoz (UPM)
Andreas Binkert (ZHAW)	Juan de Juanes (UPM)
András Pataricza (BME)	Kristóf Márton Bándy (BME)
András Czmerk (BME)	László Kullmann (BME)
Ayşe Aylin Bayar (ITU)	Máté Zöldy (BME)
Babir Guliyev (BME)	Márton Kormos (BME)
Balázs Benyó (BME)	Márton Mezei (SSSA)
Balázs Bokor (BME)	Mariana Mirela Stanescu (UPB)
Behçet Uğur Töreyn (ITU)	Nihan Yıldırım (ITU)
Bertalan Pizág (BME)	Noémi Csigené Nagypál (BME)
Claudiu Petrica Patrascu (UPB)	Oszkár Semeráth (BME)
Dániel Hadházi (BME)	Pasqualantonio Pingue (SNS)
Domonkos Wettstein (BME)	Pascal Bigey (PSL)
Edit Tomasovszky (BME)	Péter Harth (BME)
Emine Gorgul (ITU)	Sándor Kiss (BME)
Eszter Éva Solt (BME)	Simona Mihaela Bibic (UPB)
Gergely Szilveszter (BME)	Tamás Barbarics (BME)
Géza Németh (BME)	Tamás Gyenes (BOSCH)
Gheorghe Valerian Croitorescu (UPB)	Tamás Krámer (BME)
György Hild (BME)	Uğur Töreyn (ITU)
Hür Bersam Sidal (ITU)	Valentina Casieri (SSSA)

Viktória Dóra Feigl (BME)
Zoltán Bánhidi (BME)
Zoltán Horváth (ELTE)
Zoltán Micskei (BME)

Zoltán Vámosy (UNI-Óbuda)
Zoltán Víg (BME)

Organizing Committee:

Balázs Kövesdi – chairman (BME)
Eszter Tóthné Mischl – secretary (BME)
László Gergely Vigh – EELISA coordinator (BME)
Brigitta Szilágyi (BME)
Ágnes Urbin (BME)
Patrik Gáboros (BME)
Sándor Kiss (BME)
Márk Kovács (BME)
Tóth Boglárka (BME)
Zsuzsanna Jászai (BME)
Oros-Klementisz Marianna (BME)
Éva Kármán-Tamus (BME)
Attila Ficsor (BME)
Márton Virt (BME)
Dobos Kovács Mihály (BME)
Kata Buda (BME)

András Pataricza – co-chairman (BME)
Cecília Liszkay – secretary (BME)
Máté Zöldy (BME)
Noémi Csigéné Nagypál (BME)
Dóra Máthé (BME)
Csaba Fehér (BME)
Bálint Molnár (BME)
Enikő Buda (BME)
Dóra Baranyai (BME)
András Horváth (BME)
Márton Pluzsik (BME)
Milán Mondok (BME)
Réka Mándoki (BME)
Bálint Kurucz (BME)

Members of the EELISA 2 WP9

Anikó Grad-Gyenge (BME)
Inês Roquero da Costa Pinto (ECO)
Mustafa Sevimli (ENPC)
David Schkade (FAU)
Victoria Goldberg (FAU)
Hür Bersam Bolat (ITU)
Ilaria Ciofini (PSL)
Delphine Saint-Laurent (PSL)
Oscar-Eduardo Perez (PSL)
Simona Gallerani (SNS)
Darya Krasilnikov (SNS)
Andrea Mina (SSSA)
Rossella Raso (SSSA)

Sara Barsanti (SSSA)
Chiara Carbonaro (SSSA)
Maria Teresa Navigato (SSSA)
Silvia Alessi (SSSA)
Horia Iovu (UNSTPB)
Iuliana Biru (UNSTPB)
Juan Manuel Muñoz Guijosa (UPM)
Isabel Salgueiro (UPM)
Ana Horta Bellido (UPM)
Andreas Binkert (ZHAW)

SOCIAL SCIENCES 1

Chairman: István Szabó, Council of the Hungarian SSA (OTDT)

Jury members: Edit Tomasovszky, Budapest University of Technology and Economics
Zoltán Bánhidi, Budapest University of Technology and Economics

Secretary: Éva Kármán-Tamus, Budapest University of Technology and Economics

10⁰⁰ **CRISTINA-MIHAELA FLEACA, RADU-MARIAN BUJDOIU:** *Comparative analysis of organizational performances using the EFQM Excellence Model: the sustainability perspective*

10²⁰ **ULYSSE MANHES:** *Anti-romantic irony in Central Europe (1918-1989)*

10⁴⁰ **NUOFAN GAO:** *Exploring the Success Factors of MetaApp: A Case Study of China's Metaverse Industry.*

11⁰⁰ **RITA LADJÁNSZKY:** *Application of empirical and analytical usability studies to the user-centered development of extended reality (XR) software*

Break

11³⁰ **LEONARDO RICCI:** *European industrial strategic autonomy in the semiconductor market under the Chips Act*

11⁵⁰ **LILLA HARANGOZÓ:** *Defense techniques of emotional labor volunteer workers in Hungary*

12¹⁰ **OZAN DEMIREL:** *Song and Artist Classification and Success Prediction with Machine Learning as a Software*

SOCIAL SCIENCES 2

Chairman: Noémi Csigéné Dr. Nagypál, Budapest University of Technology and Economics

Jury members: Eszter Éva Solt, Budapest University of Technology and Economics
Ayşe Aylin Bayar, Istanbul Technical University
Babir Guliyev, Budapest University of Technology and Economics

Secretary: Éva Kármán-Tamus, Budapest University of Technology and Economics

14⁰⁰ AWRIN RAKSHIT: *Politics and white collar: An empirical study on the stock market prices of politically connected firms in India*

14²⁰ ROSARIO CARRETERO CASADO: *Options for improving air quality in urban environments through measures in the road traffic sector*

14⁴⁰ MATTEO DALLE LUCHE: *Heterogeneous returns on wealth in the Italian economy. The distributional consequences of differential households' savings and investment choices.*

15⁰⁰ ALESSANDRO VALFRÈ: *Commuting at municipality level in Italy: analysis and gender differences*

15²⁰ PAWAN KUMAR: *Inclusive Green Finance: A Study of Green Finance and Financial Inclusion on the emerging markets of India and other BRICS countries*

Break

15⁵⁰ GUILLERMO CRUZ PINTO: *Transmission Expansion Planning challenges in Spain for Integrating Renewable Energy*

16¹⁰ CIPRIAN NEGURA: *Development of an AI-Based Intelligent Training System for Business Professionals: Proposed Architecture*

16³⁰ ANA-MARIA MARIN, VERONICA CONSTANTIN, GEORGIANA CREȚU, RADU-MARIAN ORIȚĂ: *The social implications of Electrical Engineering technologies. An analysis of equity, accessibility, ethical implications, and real-life application.*

SMART PRODUCTION

Chairman: István Bíró, Budapest University of Technology and Economics

Jury members: Hür Bersam Sidal, Istanbul Technical University
Juan de Juanes, Universidad Politécnica de Madrid

Secretary: Márton Pluzsik, Budapest University of Technology and Economics

10⁰⁰ JACOBO GARRIDO DELGADO: *The Parameter estimation and CFD analysis of a Hyperloop Capsule*

10²⁰ RADULOVIC LUKA: *Manufacturing of Zn foam by chemical sintering*

10⁴⁰ PAUL CRETU, ABDREEA TANASE: *Structural strength study of a solid rocket motor*

11⁰⁰ MARINA CASTRO DE TROYA: *Research on waste management, environmental awareness and recycling PLA residue as a way to create new products*

11²⁰ BARNABÁS PIRI: *Experimental and numerical characterization of critical parameters in elliptical shell snap-through*

Break

11⁵⁰ DÁNIEL NAGY: *Numerical analysis of bubble interactions in sonochemistry*

12¹⁰ CSENGE DREMÁK: *Production of wood-plastic composite using polyolefin and wood waste*

12³⁰ LAURA MAILAT: *Improving the Accessibility of Playground Swings for Wheelchair Users*

AUTOMATIZATION

Chairman: András Czmerk, Budapest University of Technology and Economics

Jury members: Márton Mezei, Scuola Superiore Sant'Anna di Pisa
Ágnes Urbin, Budapest University of Technology and Economics
Balázs Bokor, Budapest University of Technology and Economics
Kristóf Márton Bándy, Budapest University of Technology and Economics

Secretary: Márton Pluzsik, Budapest University of Technology and Economics

14⁰⁰ MIGUEL GRANDE RÁEZ: *Chamber design and airflow optimization for E-Nose Technology*

14²⁰ ZSANETT BERTÓK: *Feedback Linearization Based Sensorless Control Scheme for Permanent Magnet Electric Drives*

14⁴⁰ IULIAN-NICOLAE PETRIIA, DANIEL-IOAN MIRCUCU: *Comparative analysis of materials used in the construction of a miniature Unmanned Aerial Vehicle*

15⁰⁰ CERCEL DRAGOS-STEFAN, DOGARU PAUL-LEONARD, LUCA DAN-ANDREI, RUSU COSMIN-CONSTANTIN: *Modular Embeddable Robotic Actuator (MERA)*

Break

15³⁰ BIANKA FORCZEK, LEVENTE ÁKOS LUDVIG: *Radiometric Calibration of HERA AFC Cameras*

15⁵⁰ BALÁZS ENDRÉSZ: *Visual balancing of the Furuta-pendulum*

16¹⁰ LÁSZLÓ GÁCSI: *Safety Critical Control of mechanical systems with input constraint*

16³⁰ AHMET TURAN AKCAY: *V2G Technology for peak shaving and profitability using constrained optimization techniques*

INFORMATICS

- Chairman:** Géza Németh, Budapest University of Technology and Economics
- Jury members:** Oszkár Semeráth, Budapest University of Technology and Economics
Behçet Uğur Töreyn, Istanbul Technical University
István Majzik, Budapest University of Technology and Economics
Zoltán Horváth, Eötvös Loránd University
- Secretary:** Attila Ficsor, Budapest University of Technology and Economics

10⁰⁰ **CĂTĂLIN CHELMUŞ, IONUŢ-LIVIU MOGDA, GABRIEL-ALEXANDRU CONSTANTINESCU, ANDREI-GEORGE NICOLA:** *Avionics system for supersonic rockets - Project NOR*

10²⁰ **NÁNDOR KÓFARAGÓ:** *Multi-view object detection using NeRF and YOLO*

10⁴⁰ **ÁRMIN ZAVADA:** *A Modular Modelling Language for Configurable Formalisation and Verification of Engineering Models*

11⁰⁰ **ALBERTO GONZÁLEZ CALATAYUD:** *GPT vs BioMistral for medical entity recognition in Spanish*

11²⁰ **BALÁZS MÁRK MIHÁLYI:** *All about momentum: investigating high-pressure situations in the NBA through scoring probability*

Break

11⁵⁰ **ANDREI TIME, SORIN IONESCU, DIEGO AUGUSTO DE JESUS PACHECO:** *Technical views on Software as a Service integration and development technologies: Systematic literature review, current tendencies, and avenues of inquiry*

12¹⁰ **MÁRK CZIMBER:** *Development of a Real Time Point Cloud Processing and Self-driving Software*

12³⁰ **ALVARO GARCIA-BARRAGAN:** *OncoRuleLLM: Oncological Rule-based LLM for normalizing Spanish EHR in an explainable manner*

12⁵⁰ **ÁGOSTON DALOTTI:** *Optimizing a speech-based model for estimating the severity of depression using speech samples imitating multiple emotional states*

APPLIED INFORMATICS

Chairman: Zoltán Micskei, Budapest University of Technology and Economics

Jury members: Zoltán Vámosy, Budapest University of Technology and Economics
Kristóf Iván, Budapest University of Technology and Economics
Nihan Yildirim, Istanbul Technical University
Tamás Barbarics, Budapest University of Technology and Economics

Secretary: Milán Mondok, Budapest University of Technology and Economics

14⁰⁰ ZOLTÁN SIMON: *Time evolution simulation of the quantum mechanical wave function in 3D space*

14²⁰ ȘTEFAN-MATEI GHEORGHITĂ, ADRIAN-IONUȚ DAVID: *Wavelet Filter analysis for hybrid and electrical vehicles*

14⁴⁰ KRISTÓF FLOCH: *Gaussian-Process-based adaptive trajectory-tracking control for small-scale autonomous ground vehicles*

15⁰⁰ RADU CRISTIAN OPREANU: *Applications of Edge Computing for Modelling the Energy Transfer in Modern Distribution Networks*

15²⁰ BENEDEK ZENTAI: *Boat speed analysis in SailGP*

15⁴⁰ LAURENȚIU-ALEXANDRU ZAHARIA, MIRUNA-ELENA TĂLMACEL, ALEX-IONUȚ MARINESCU: *Markov chain approach for IoT plant watering system using sensors*

Break

16¹⁰ MÁRTON LUKÁCS GELLÉR: *Recyclable Material Sorter Robotic Arm*

16³⁰ SORANA-ELIZA BALTARETU, ROBERT-MIHAI PIVODA: *Games: Military VS Civil*

16⁵⁰ KATA DÓRA VINCZE: *Development of a rehabilitation exoskeleton to alleviate spasm in the hand due to stroke*

INNOVATIVE MOBILITY

- Chairman:** Máté Zöldy, Budapest University of Technology and Economics
- Jury members:** Tamás Gyener, Bosch GmbH
István Lechner, Humda Zrt.
Gheorghe Valerian Croitorescu, Politehnica University of Bucharest
- Secretary:** Márton Virt, Budapest University of Technology and Economics
- 14⁰⁰ RUBÉN FLORES GANDUR:** *Methodology for the socioeconomic assessment of an electric road system (ERS) based on inductive technology for long-haul vehicles – the case of a high-density corridor in Catalonia, Spain.*
- 14²⁰ GÁBOR JEVUCZÓ:** *Optical flow-based yaw rate estimation and fault detection on drones*
- 14⁴⁰ SOFIJA ILIĆ:** *Design and Implementation of LQG Control Strategy for Unmanned WIG Vehicle*
- 15⁰⁰ MIGUEL UREÑA PLIEGO:** *Machine learning models for urban analysis: Historic evolution of the surface destined for cars in Vienna and Madrid*
- 15²⁰ JANKA TIHANYI, NÓRA JULIANNA RÁDULY:** *City logistics analysis of loading areas in Budapest*
- 15⁴⁰ GEORGE DANIEL ENACHE:** *The Design and development of an Integrated Propulsion System: Shared cooling and lubrication strategy*
- Break*
- 16¹⁰ RARES-ALEXANDRU NICULESCU:** *Implementation of ADAS functions on a small-scale autonomous vehicle*
- 16³⁰ MIRCEA-DAN MIRICĂ:** *The virtual prototype of a light electric van and its energy storage system design and thermal behavior*
- 16⁵⁰ REBEKA ANNA JÁGER:** *Air traffic control automation solutions*
- 17¹⁰ BABIUC DARIA, VICTOR LUNCAȘU:** *Implementation of Artificial Intelligence in Road Traffic Optimization*

ARCHITECTURE

Chairman: György Hild, Budapest University of Technology and Economics

Jury members: Emine Gorgul, Istanbul Technical University
Domonkos Wettstein, Budapest University of Technology and Economics

Secretary: Réka Mándoki, Budapest University of Technology and Economics

14⁰⁰ JING ZHANG: *Research on the Aesthetics of Architectural Space in the Alhambra Palace*

14²⁰ İREM ESEN: *Textile Waste Upcycling in Interior Design*

14⁴⁰ RAND SUKKAR: *Spatial Justice in Urban Regeneration Case Study: Budapest, Józsefváros*

15⁰⁰ DOROTTYA LIZER: *Alakbánya / Shape-pit!*

15²⁰ ESZTER NAGYHEGYESI: *Bioplastic textures*

Break

16⁰⁰ NIKOLETT GERASZIN: *Floating Elizabeth Town: /Adapting the Principles of Yona Friedman to Budapest/*

16²⁰ NUH ERTURK: *Architectural Floor Plan Design Optimization*

16⁴⁰ NÓRA HANGODI: *Abstract relativity*

MEDICINE

Chairman: Balázs Benyó, Budapest University of Technology and Economics

Jury members: Pascal Bigey, Chimie ParisTech
Mariana Mirela Stanescu, Politehnica University of Bucharest
Valentina Casieri, Scuola Superiore Sant'Anna di Pisa
Anar Dushpanova, Scuola Superiore Sant'anna di Pisa

Secretary: Dobos Kovács Mihály, Budapest University of Technology and Economics

10⁰⁰ LEANDRO MANCINA: *The role of MKK4 in the accelerated liver regeneration induced by ALPPS surgery*

10²⁰ SHANNON VLAHAKIS: *Exploring The Potential of Remote Patient Monitoring on the Management of Hypertension in Pregnant Women at Parirenyatwa Hospital: An Observational Feasibility Study*

10⁴⁰ IRENE PINILLA FERNÁNDEZ: *Multiple linear regression models to predict components of neuropathic pain associated with whiplash disorder using brain Magnetic Resonance Spectroscopy (MRS).*

11⁰⁰ ANDRA-CRISTIANA MARIA-FULASU, RUXANDRA-IOANA CIPU, ȘTEFAN-CĂTĂLIN PETRESCU: *Contributions on the non-linear modelling of the immune system activation in secondary lymphoid organs*

11²⁰ AHMET KAYMAK: *Spiking Patterns in The Globus Pallidus Highlight Convergent Neural Dynamics Across Diverse Genetic Dystonia Syndromes*

Break

11⁵⁰ ALEXA DIANA KALYANII: *Postsynaptic Density-95*

12¹⁰ LISABETH EMILIUS: *Immune responses against tumour epitopes generated by aberrant splicing*

12³⁰ MIHAELA-CRISTINA STRÎMTOREANU: *Improving Medical Image Quality: A Comparative Analysis of Techniques*

12⁵⁰ LINNEA EVANSON: *Cortical representations of speech in the developing brain*

APPLIED SCIENCES 1

Chairman: Viktória Dóra Feigl, Budapest University of Technology and Economics

Jury members: László Kullman, Budapest University of Technology and Economics
Andrea Guirini, Scuola Superiore Sant'Anna di Pisa
Simona Mihaela Bibic, Politehnica University of Bucharest

Secretary: Bálint Kurucz, Budapest University of Technology and Economics

10⁰⁰ GEMA ARIADNA CHUNG ECHEVARRÍA: *Improvement of the development of the parasitoid *Chelonus inanitus* L. (Hymenoptera: Braconidae) for the use as a natural enemy of the agricultural pests*

10²⁰ JACOB GONZÁLEZ ISA: *Detection of metagenomic functional enzyme variants of biotechnological and ecological interest through phylogenomics*

10⁴⁰ VICTORIA-ELENA PLOPEANU: *Exploratory study of new hydrodynamic instabilities in multi-fluid channel flows*

11⁰⁰ ALFONSO LAINEZ MUÑIZ: *Experimental study of wing tip vortices at low Reynolds numbers and development of a particle tracking velocimetry (PTV) system*

11²⁰ LAURA PASCAL: *Flow regime transitions and peculiar fluid structures in selective withdrawal as a droplet generation technique*

Break

11⁵⁰ STEFAN LUNCANU, ANDREI ZĂBREANU, ION CEBAN: *Exploring Exergy Models: Investigating Connections with Negentropy and Heat Transfer for Thermodynamic Efficiency Analysis*

12¹⁰ MEHMET ORHAN ŞIRIN: *Effects of space environment in low earth orbit on the radiation shielding properties of PMMA/CMT composites*

12³⁰ BIANCA HÂRSEANU: *Capillary fountains*

APPLIED SCIENCES 2

Chairman: Sándor Kiss, Budapest University of Technology and Economics

Jury members: Andreas Blinkert, ZHAW School of Engineering
Pasqualantonio Pinge, Scuola Normale Superiore
Márton Kormos, Budapest University of Technology and Economics

Secretary: Patrik Gádoros, Budapest University of Technology and Economics

14⁰⁰ ALEXANDRA-MARIA BORȘ, ANDREI-ROBERT COMAN: *Powering the Future: Game Theory Perspectives on Electric and Diesel Vehicles in the Era of Sustainability and Climate Change*

14²⁰ DONÁT ÁKOS KÖLLER: *Examining the correlation between university instructors' research performance and student evaluations using data science tools*

14⁴⁰ BENCE FITOS: *Weak vs. strong breaking of integrability in interacting scalar quantum field theories*

15⁰⁰ DAN MAUREL: *Sylvester equations and solutions injectivity*

Break

15³⁰ ISTVÁN ANDORFI: *Synthetic diagnostic-based method for the validation of HESEL turbulence simulation*

15⁵⁰ ISRAEL LÓPEZ MORENO, HELENA UYÁ RAMÍREZ: *Modeling and simulations of piano strings*

16¹⁰ SANTIAGO LOZA MORCILLO: *Design of broadband beam configurators for antenna arrays*

CHEMICAL & BIOENGINEERING

Chairman: Balázs Imre, Budapest University of Technology and Economics

Jury members: Szilveszter Gergely, Budapest University of Technology and Economics
Claudiu Petrica Patrascu, Politehnica University of Bucharest
Ana-Maria Albu, Politehnica University of Bucharest

Secretary: Kata Buda, Budapest University of Technology and Economics

10⁰⁰ DAVID HIDALGO-CARVAJAL: *A Circular Economy Living Lab – Enabling the transition of the university campus towards a regenerative system*

10²⁰ ADRIANA RECALDE GARCETE: *Recycling almond hulls for sustainable livestock production*

10⁴⁰ SUVIJA SUTHAKARAN: *An end-to-end platform for fragment-to-lead design by NMR for oncology targets*

11⁰⁰ PAUL VALENTIN LOVIN, ANA-MARIA ALBU, IULIA NEBLEA, IOANA CĂTĂLINA GÎFU, BOGDAN TRICA, CRISTIAN ANDY NICOLAE:
Macromolecular Chemistry Versatile Tool for Improving the Self-Assembly Skills of Commercial Coatings

11²⁰ ALIN-IONUȚ ALECU, ANA-MARIA ALBU, CELINA MARIA DAMIAN, ANDRA MIHAELA ONAȘ, CRISTINA STAVARACHE, ROXANA TRUȘCĂ:
Catechols: A never-Ending Story of Building Innovative Polymeric Materials

Break

11⁵⁰ BALÁZS BORBÁS: *Upconverting Nanoparticles: Anti-Stokes Photon Emission and Energy Transfer Properties of Composite Thin Films*

12¹⁰ ENRIQUE ALGAR ARÉVALO: *Alkaline electrolysis at sea: on the optimization of the electrolyte renewal problem*

12³⁰ CRISTIAN RADU: *Chitosan polymer as a green corrosion inhibitor for copper substrates in acid media*

12⁵⁰ ALESSANDRO PASQUI: *AI-Based and physics-informed computer vision methods for biological cell systems*

BUILT ENVIRONMENT

Chairman: Juan Manuel Muñoz, Universidad Politécnica de Madrid

Jury members: Adrián Horváth, Budapest University of Technology and Economics
Tamás Krámer, Budapest University of Technology and Economics

Secretary: András Horváth, Budapest University of Technology and Economics

14⁰⁰ **ADÉL OLOSZ:** *Parameter analysis of a Hungarian developed „Stockbridge damper”*

14²⁰ **ALEJANDRO JOSÉ TERRONES GARCÍA:** *Ballistic impact test on stabilized rammed earth*

14⁴⁰ **MÁTÉ ÁLMOS SZONDI:** *Applying a shape evolution equation to compute membrane surfaces*

15⁰⁰ **LEVENTE SZATMÁRI:** *BIM-based energy and environmental optimization of an educational building*

15²⁰ **NEREA PORTILLO JUAN:** *Implementation of Artificial Intelligence Techniques in climate change studies*

15⁴⁰ **SAMUEL REYES SANZ:** *WindFormer: Pretraining a Statio-Temporal Transformer for Wind Forecasting*

BME CAMPUS MAP

