

Programme

**The 21st Miklós Iványi International
PhD and DLA Symposium**



PTE
1367

27 Oct 2025

Faculty of Engineering and Information Technology
University of Pécs, Hungary

How to find a paper

The abstracts are published in the Book of Abstracts, electronically. In this programme the letters immediately preceding a paper title refer to the paper or lecture. For example P-2 refers to the second paper.

A note for authors presenting papers and chairmen

All authors should meet at the front of the meeting room for their session at least 5-10 minutes before the session starts. Each paper has been allocated 15 minutes for presentation and questions. Chairmen should indicate when 10 minutes have passed and again after 12 minutes that the presenter should immediately finish. Three minutes are available for questions and comments.

Authors are kindly asked to keep to the time allocated to them by the Chairmen. Authors are discouraged from using their own laptops for presentation unless absolutely necessary, in which case they should ensure that they can quickly and efficiently start their presentation when requested by the Chairmen.

Chairmen are requested to keep to the timetable. Changes to the programme will be indicated on the copies of the programme displayed on the conference timetable board and at the entrance to each of the rooms.

As a courtesy and in politeness to all speakers and other participants, please turn off your mobile phone whenever you enter any of the meeting and lecture rooms.

Journal special issue submission

For details of the format specification and procedures for submitting conference papers for possible publication in the journal of Pollack Periodica, please visit:

<https://phdsymp.mik.pt.e.hu/publication>

Day 1: Monday 27 Oct 2025

08:00-15:00 Registration desk open

09:00-10:00 Conference opening and invited lectures

10:00-10:30 Coffee / Tea Break

10:30-12:00 Conference session

12:00-13:00 Lunch (Room A008, ground floor) - *admission by ticket*

13:00-15:00 Conference session

15:00-15:30 Coffee / Tea Break

15:30-17:30 Conference session

18:30-23:00 Conference dinner,
Villány, wine tasting
(Buse leaves from the university, Boszorkány str. 2 at 18:30) - *admission by ticket*

Conference program

Day 1, Monday	
Time	Room A007
09:00-10:05	Conference opening, Plenary lectures page 5

Day 1, Monday				
Time	Room A007	Room A019	Room A017	Room A015
10:30-12:00	Civil engineering 1 page 6	Civil engineering 2 page 7	Mechanical Engineering page 8	-
12:00-13:00	Lunch - <i>admission by ticket</i>			
13:00-15:00	Architecture 1 page 9	Architecture 2 page 10	Architecture 3 page 11	Information Technology page 12
15:00-15:30	Coffee Break			
15:30-17:30	Architecture 4 page 13	Architecture 5 page 14	Architecture 6 page 15	-

Day 1: Monday, 27 Oct 2025: AM, Room A007

09:00-10:05

Conference opening

Professor Péter Iványi
University of Pécs

Professor Gabriella Medvegy
Dean of the Faculty of Engineering and Information Technology
University of Pécs

Plenary lecture

Introduction to the Discrete Bacterial Memetic Algorithm
Prof. Kóczy T. László

Writing Technical Papers: Ethical and Related Issues
Prof. Barry H.V. Topping

10:00-10:05

Group photo in front of the building

Day 1: Monday, 27 Oct 2025: AM, Room A007

10:30-12:00

Civil engineering 1

Chaired by Prof. Radomir Folic and Prof. János Lógó

P-43 Automated Optimization of Steel Trusses with Elasto-Plastic Behaviour Using a Neural Network-Genetic Algorithm Method

P. Grubits, M. Movahedi Rad

P-44 Symmetry Measure of Truss Structures Based on Group Representation Theory

M. Módis, F. Kovács

P-45 Reliability Assessment of SHM Strain Measurements in the Southern Danube Railway Bridge

A. I. Mansi, L. Dunai

P-46 Numerical Simulation of Shear Bond at Concrete Interfaces Using Element Deletion

V. Shafaie, M. Movahedi Rad

P-47 The Influence of Testing Method on the Determination of the Angle of Shear Strength in Sands: A Comparison of In-Situ and Laboratory Data

C. Szabóová, E. Kučová

P-48 Structural Design and Analysis of a Reinforced Concrete Bridge over the Mohansa River, Tanzania

S. B. Julius, S. Elhadad, A. Salem, A. Fülöp, Z. Orbán

12:00-13:00: Lunch

Day 1: Monday, 27 Oct 2025: AM, Room A019

10:30-12:00

Civil engineering 2

Chaired by Prof. Andrej Soltész and Prof. Csaba Koren

P-49 Hydraulic Modeling and Water Level Dynamics: A Case Study of Sĺňava Reservoir, Slovakia

D. Pavlov, L. Čubanová

P-50 Flood Protection of the Municipality in the Little Carpathians

N. Bilčíková, M. Červeňanská

P-51 Experimental Investigations of Downstream Water Level Effect on the Discharge Capacity of the Central Weir at the Čunovo Water Structure

R. Tóth, J. Rumann, A. Rutzká

P-52 Tracking the Lifespan of Vortical Structures in Forced Isotropic Turbulent Flow

H. Ahmed, W. Abdel Kareem, Y. Velísková

P-53 Shared Roads, Different Codes: How Do Cyclists Perceive Autonomous Vehicles?

A. Hammami, A. Borsos

12:00-13:00: Lunch

Day 1: Monday, 27 Oct 2025: AM, Room A017

10:30-12:00

Mechanical Engineering

Chaired by Prof. Jaroslav Kruis

P-65 Optimal Supply Temperature for Fan-Coil Heating Systems Considering Thermal Comfort

Z. Tamásik, G. Loch, L. Budulski, A. Ózdi, B. Cakó

P-66 Dynamic Comfort Mapping and PMV Estimation with Neural Networks and On-Site Measurements

A. Ózdi, B. Cakó, L. Budulski, G. Loch, Z. Tamásik

P-67 Investigation of the Compensating Effect of Terminal Heating Units near Cold Glazed Surfaces

G. Loch, L. Budulski, A. Ózdi, Z. Tamásik, Á. Borsos, B. Cakó

P-68 Application of Questionnaire-Based Methods to Support a Fuzzy Decision Tree Model of Comfort Perception

L. Budulski, A. Ózdi, G. Loch, Z. Tamásik, B. Cakó, J. Gyergyák

12:00-13:00: Lunch

13:00-15:00

Architecture 1

Chaired by Prof. Mirjana Devetakovic

P-1 Curating the Immersive Field: The Integration of Fashion, Craft and Culture in Space
T. Chen, G. Medvey, X. Jin

P-2 A Study on Architectural Design Practice Based on the Concept of Futurism
H. Cao, K. Guo

P-3 The Meaning of Home at a Civilizational Scale: A Framework for Architectural Design in Multicultural Societies
N. Golshani

P-4 The Role of Multimedia Spaces in Museum Narration from the Perspective of Cross-Cultural Communication
Z. Renkun, A. Tamás

P-5 The Stair
N. Ramos Gonzalez, T. Z. Dányi

P-6 A Comparative Study of Art Deco Architecture in Budapest and Shanghai
H. Li, B. Baranyai, M. Halada

P-7 Architectural Regeneration on a Construction Waste Landfill
X. Jin, K. Jiao

15:00-15:30: Coffee break

Day 1: Monday, 27 Oct 2025: PM, Room A019

13:00-15:00

Architecture 2

Chaired by Dr. Erzsébet Zoltán

P-8 Balancing Abundance and Need: Daylight, Human-Centric Lighting and Sustainable Housing in the Middle East

L. Esau, E. S. Zoltán

P-9 Lighting Design from the Perspective of "Great Health"

S. Xiao, A. Tamás

P-10 Not a House but a Home - Architecture and Information Technology in the Service of Social Responsibility

T. Z. Dányi, K. F. Nightngale

P-11 Integrating SLR and Expert Evaluation through FAHP for Assessing Holistic School Building Design Strategies across Climate Zones

K. Dedar Salam, T. J. Katona, B. Baranyai

P-12 Analyzing Adaptability in Office Typologies: Toward Sustainable and Flexible Design Strategies

D. M. A. Abu-Lail, E. S. Zoltán

P-13 Adaptive Design of Kindergarden Built Environments under the Eco-Friendly Concept

H. Cao

P-14 Study on the Assessment of the Built Environment of Community Centers and Optimization Strategies from the Perspective of Urban Health Examination

A. Greg, D. Zhao, Y. Qian, W. Gong, Y. Wu, H. H. Liang

P-15 Integrating Heritage Protection Research into Architectural Education: Adaptive Reuse and Revitalization in Practice-Based Learning

A. Greg

15:00-15:30: Coffee break

13:00-15:00

Architecture 3

Chaired by Prof. Ágnes Borsos

P-16 Interior Design Support of Function through the Presentation of Three Projects
S. Jurdik, Z. Bittner, G. Medvegy, Á. Borsos

P-17 Study on the Application of Spatial Scale in Interior Aging-Friendly Design
Q. Cui, P. Zilahi, X. Jin

P-18 Adaptability of Living Spaces to Changing Life Situations
D. Szurduk

P-19 Exploring Smart Community Development Strategies in the Context of Old Residential Area Renovation
Z. Li

P-20 Analysis of Apartments in the Retfala Nova Settlement: Case Study of Osijek
D. Koški, I. Brkanić Mihić, E. S. Zoltán, N. Ramos Gonzalez

P-21 Reimagining Historical Preservation: The Erbil Citadel Houses as a Model for Adaptive Heritage Reuse
W. A. S. Goriel, T. Molnár, E. S. Zoltán

P-22 The Symbolic System of Small-Town Hungarian Architecture - The Transformation of the Sándor Petőfi Cultural Center in Kiskőrös
Z. Bittner, S. Jurdik, G. Medvegy, Á. Borsos

P-23 Modular Renovation of Community Healthcare Centre Wards: Infection Control Zoning and Dual Circulation
Z. Fu, X. Jin, D. Rétfalvi

15:00-15:30: Coffee break

13:00-15:00

Information Technology

Chaired by Prof. Barry H. V. Topping and Prof. Péter Iványi

P-56 Measuring the Effectiveness of Simulated Data for Depth Map Generation

B. Sebők-Tornai, G. Várady, L. Czúni

P-57 Towards Robust and Generalizable Video Anomaly Detection Via Data Balancing

M. I. D. Almurumudhe, O. Hornyák

P-58 Mathematical Background of the Construction and Application of 3D Meshes for Wound Reconstruction

S. Molnár-Zékány

P-59 Semantic Analysis of Unsequenced Variable Accesses

Á. Hárnási

P-60 Detecting Tagged Union Inconsistencies with the Clang Static Analyzer

G. Tóthvári, K. Umann, Z. Porkoláb

P-61 Distributed Static Analysis Using Bazel and CodeChecker

T. Fürész, K. Umann, Z. Porkoláb

P-62 A Revision of Literature on Static Analysis Applicability

K. Umann, Z. Porkoláb

P-63 Predictive Maintenance Report Generation Using Large Language Models

M. Kernács, O. Hornyák

P-64 Trustworthy Parallelization Recommendations through Multi-Layer Validation: Combining LLVM Static Analysis, AI Pattern Recognition and OpenMP Specification Compliance

T. Ngo Phu Hoang, P. Iványi

15:00-15:30: Coffee break

15:30-17:30

Architecture 4

Chaired by Dr. Miklós Halada

P-24 Exploring Variable Acoustic Strategies in Concert Halls: Geometric, Material and Structure

Y. Tang, M. Halada, P. Paári

P-25 Sound Energy Weighted Evaluation Method for Average Reverberation Determination

Y. Tang, M. Halada, P. Paári

P-26 Parametric Design and Environmental Simulations for Climate-Responsive Architectural Solutions

K. Varga

P-27 Analyzing Adaptive Thermal Comfort Indoors in Jordan: An Experimental Study

S. Abdel-Salam, B. Cakó

P-28 Literature Review Establishing the Basis for Determining the Environmental Impacts of Residential Buildings

R. R. Szűrösné Ördög, T. Horváth, A. Veöreös

P-29 A Review of Urban Small-Scale BIPV Public Building Projects (2021-2025)

S. Tong, A. Greg

P-30 Exploring the Adaptability of Housing through Sustainable Solar Decathlon Europe Housing Prototypes

D. Ojo, Á. Borsos, G. Medvegy

P-54 Integrating Artificial Intelligence for Building Performance Enhancement: Thermal Comfort as a Key Optimization Parameter

S. Elhadad

15:30-17:30

Architecture 5

Chaired by Dr. János Gyergyák

- P-31** Adaptive Approaches to Sustainable Urban Housing: The Case of Pécs
H. Tomajian, J. Gyergyák
- P-32** The Alleyway as a Catalyst: Reinterpreting Naples' Urban Culture for Contemporary Community Design
T. Shi
- P-33** City-Scale Analysis of a Deteriorated Urban Area in the Context of Pécs' Urban Development Strategies
D. Hetesi, D. Kalkán, J. Gyergyák
- P-34** Green Retrofitting Strategies for Industrial Heritage in Urban Regeneration: A Case Study of the Ship Model Factory in China
W. Cheng
- P-35** Adaptive Reuse for Strengthening Rural Identity
G. Szecsei
- P-36** Scaling Sponge City Strategies: Policy, Financial and Governance Pathways for Urban Water Resilience
L. Ben Khadra
- P-37** Mapping Toolchains in Positive Energy District Cases
Á. Magyari, G. Medvegy, A. Reith
- P-38** A Typological Analysis of Public Space Networks in Chinese and Hungarian Settlements for Fostering Local Identity
X. Li, T. Zhao

15:30-17:30

Architecture 6

Chaired by Dr. Attila Fülöp and Dr. Márk Zagorác

P-39 A Strategic Approach to Laser Scanning: Accuracy, Time and Data Complexity Balance
- A Case Study

D. E. Simon, M. B. Zagorác, P. M. Máder, T. Jászberényi, N. Bakai, O. Rák

P-40 Mapping and Optimizing Current Hungarian Heritage Processes through the Application of BIM Methodologies

T. Jászberényi, M. B. Zagorác, P. Máder, O. Rák, D. E. Simon, N. Bakai

P-41 Semi-Automated Scan-to-HBIM: Reconstructing Classified Point Clouds into Geometry

R. Salah, N. Géczy, K. Ajtayné Károlyfi

P-42 Protectorate Heritage Buildings Coupled with Digital Twin-based Monitoring

S. Sakoudom, A. Greg

P-55 Geometric Refinement of Crowdsourced Maps to Support Early Engineering Designs

B. Gadó