DR. HABIL

Viktória Sugár

PhD in Engineering · Architect MSc

Vice-Rector for Education and Sustainable Development, Associate Professor
Óbuda University, Ybl Miklós Faculty of Architecture and Civil Engineering



sustainable architecture · building energy · historic building stock · urban morphology · urban climate

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Architect and researcher of historic urban fabric and the Budapest tenement stock. Her main fields are the typology of the building stock, the energy retrofit of historic buildings, urban climate and sustainable architecture; she works in Japanese–Hungarian and international research collaborations.

Professional experience

2011– **Óbuda University, Ybl Miklós Faculty of Architecture and Civil Engineering**, Institute of Architecture (formerly Szent István University)

- **2026–** Vice-Rector for Education and Sustainable Development
- **2026–** Sustainability Research Centre (EKIK) – head
- **2024–2026** Vice-Rector for Sustainability and Strategic Developments
- **2023–2024** Head of the Strategy Group, Ybl Consulting Office
- **2021–** Associate Professor
- **2021–2024** Director, Institute of Architecture
- **2020–2021** Deputy Head of Department
- **earlier** engineering lecturer, assistant lecturer; 2010–2011 student demonstrator (SZIE YMÉK Department of Mechanics and Structures)

2015–2023 **Eötvös Loránd Research Network** (formerly Hungarian Academy of Sciences), Centre for Energy Research
research fellow

2014, 2018 **Osaka University**, Division of Global Architecture, Osaka, Japan
visiting assistant researcher, assistant professor; guest lectures (2018)

Teaching

2023– **Doctoral school:** ÓE Doctoral School of Architecture, Design and Technology – key contributor to its establishment, secretary (until 2025), voting member of the Doctoral School Council; doctoral teaching and supervision.

Doctoral courses: Research and Evaluation Methods; Liveable Cities, Sustainable Architecture (developer); Research Workshop I–VIII.

2018– **Talent support:** ÚNKP supervisor – 2 students; EKÖP supervisor – 2 students (2025/26, 2026/27).

2012– **Student research (TDK) supervisor:** 16 papers; faculty TDK prizes, OTDK 2nd place (2019) and special prize (2025); TMDK 1st prize (2025). Chair of faculty TDK juries since 2024.

2011– Courses in English and Hungarian: lectures, seminars, development of subject programmes and curricula (architectural history, environmentally conscious architecture); also in English in the Erasmus and Stipendium Hungaricum programmes.

Subject coordinator (Architecture MSc, curriculum F): Energy Efficient and Ecological Architecture (YAXEOEFMNF, compulsory, 3 cr) and its English-language version (YAXEEEFMNF, Architecture MSc, 3 cr); Urban Climate and Energy (YAXTKEFMNF, KLIMAdesign specialisation, 4 cr). Co-designer of the "F" curricula of the BSc and MSc in Architecture, the KLIMAdesign specialisation, and the structure and subject network of the doctoral programme (concept).

Key achievements

- **PhD in Japan** – Osaka University (2020)
- **Women in Science Excellence Award** (2026)
- **GREENQUAL** – leader of an international consortium (2024–2027)
- ***Pesti bérházak*** monograph (2025), launched at Expo 2025 Osaka
- **ÓE Doctoral School of Architecture** – key contributor to its establishment
- **Ybl Conference** – chief organiser (2023–2026)
- **Ybl Journal of Built Environment** – co-editor-in-chief (2021–)

Languages

English C2 ●●●●●●

German B1 ●●●○○○

Japanese A1 ●○○○○○

Education

2020 PhD
Osaka University Graduate School of Engineering
Rehabilitation of Heritage Buildings: Energetic Retrofit in the Historical District of the Budapest Old Jewish Quarter

2013 MSc – Architect (MSc in Architecture)
Szent István University, Ybl Faculty

2011 BSc – Architectural Engineer
Szent István University, Ybl Faculty

Scientific activity

Publications

86 publications, 187 citations, of which 147 independent (MTMT, 8 Nov 2026). Tud-O-Méter (21 Nov 2026): Q-score 12.26; I-score 135; IF 25.31; h-index 6.

Monograph: Sugár – Kita: *Pesti bérházak – Stílus, mintázat, fejlődés* (Historical Tenements of Pest: Styles, Patterns, Evolution). TERC, 2025, 319 p.

Habilitation – 2025

Typology-based studies of the residential building stock of Budapest

International engagement

- **Osaka University** – PhD (2020), visiting researcher (2014, 2018), guest lecturer (2018)
- **European Spallation Source** – In-Kind Review Committee, Hungarian delegate (2022–2025)
- **SET-Plan IWG5** (Energy Efficiency in Buildings) – Hungarian delegate since 2023, confirmed by the European Commission (2026)
- **International projects** – GREENQUAL (EIG CONCERT-Japan; Polish and Japanese partners), TUKE–OU (Technical University of Košice); European Spallation Source, NMX instrument design – architectural expert (2015–2023)
- **Peer review** – Energy and Buildings (Elsevier, Q1), Journal of Building Engineering (Elsevier), Journal of Building Physics (SAGE)

Research programmes

- **2026–2028** **TUKE–OU Young Researchers' Grant**: Climate-Adaptive Solutions in Historical City Districts – comparative study of Košice and Budapest, with the Technical University of Košice – **principal investigator (ÓE)**
- **2024–2027** GREENQUAL – EIG CONCERT-Japan / NKFIH: for the healthy cities of the future, with Polish and Japanese partners – **consortium leader**
- **2023–2026** **EU NetZeroCities – Budapest Cares**: 100 Climate-Neutral Cities project in Budapest; architectural expert
- **2019–2021** Development of the Hungarian electricity distribution network – database building and visualisation
- **2019–2020** NTP – Solar energy potential of densely built urban fabric
- **2018–2021** **MMA Art Fellowship** – The architectural language of the Hungarian tenement stock – conceptual and formal investigations
- **2018** Fiumei Road Cemetery survey and heritage inventory, with the YMÉK Architectural History Group
- **2018** Climate vulnerability assessment methodology for the Hungarian housing stock, Lechner Knowledge Centre
- **2017–2018** ÚNKP – Efficient energy use in dense downtown fabric – nearly zero-energy options for the turn-of-the-century stock
- **2016** World Heritage Impact Assessment: impact of the Hauszmann Plan on the World Heritage site, YMÉK
- **2008–2009** Technological limits of self-compacting concrete, TDK
- Leading R&D projects at the ELKH Centre for Energy Research
- ELI Attosecond Light Pulse Source (ELI-ALPS): radiation protection verification of the MTA and HTA halls
- ÉMI Non-profit Ltd. for Quality Control and Innovation in Building: research programme for the concrete mix design of nuclear-safety-relevant structures of Paks II – radiation resistance and activation

Conference and workshop organisation

- **2026** International conference "Project Pedagogy in the Service of Sustainability" (ÓE RKK, 4 Jun 2026) – scientific committee member
- **2025** Book launches of Pesti bérházak: Expo 2025 Osaka, Hungarian Pavilion (28 Apr 2025); Hungarian Architects' House (24 Sep 2025)
- **2023–2026** **Ybl Conference on the Built Environment** (1st–4th) – **chief organiser**
- **2023** World Heritage Volunteers Programme – with the Ministry of Construction and Transport
- **2021** 1st Ybl Net Day – organiser; Researchers' Night 2021 – organiser
- **2018** Conference for the 150th anniversary of the birth of Ernő Foerk – organiser
- **2009–2015** Osaka University – YMÉK Cooperative Survey (2009, 2011, 2014, 2015)

Awards and scholarships

- 2026 **Women in Science Excellence Award** – Engineering Sciences category (NaTE, MTA, 11 May 2026)
- 2026 TUKE–OU Young Researcher Grant
- 2025 MMA Fellowship Results Dissemination Programme, book publication
- 2024 NKA Creative Grant
- 2023 ÚNKP Postdoctoral Fellowship (ÚNKP-23-4-II-OE-62)
- 2021 **Public-Spirited Lecturer of the Year Award**, ÓE
- 2021 EK Young Researcher Award
- 2019 Young Talents of the Nation Scholarship
- 2019 National Cultural Fund Scholarship
- 2018–2021 Fellow of the Hungarian Academy of Arts
- 2017–2018 New National Excellence Scholarship
- 2016–2019 Conference awards: Best Paper Award – ICAE 2019, ICACC 2018; Best Presentation Award – ICBAU 2017; Outstanding Paper Award – ICENS 2016
- 2011 Szent István Scholarship
- 2011 National Scientific Students' Conference (OTDK), 1st place
- 2009–2012 Scholarship of the Republic (2009, 2010, 2012)
- 2009 Faculty TDK Conference, 3rd place and special prize

Committee memberships

- 2026– ÓE Education Committee – **chair**
- 2026 ÓE Final Examination Board – chair
- 2025– ÓE University Doctoral and Habilitation Council – advisory member
- 2024– ÓE Sustainability Council – **chair**
- 2024– ÓE Senate – advisory member
- 2024– ÓE Rector's Council – member
- 2024– ÓE Doctoral School of Architecture, Design and Technology – Council member
- 2022– ÓE YMÉK Disciplinary Committee – member
- 2021– **Ybl Journal of Built Environment** – co-editor-in-chief
- 2020– ÓE YMÉK Faculty Council – member
- 2020– ÓE YMÉK MSc Admission Committee – member
- 2014– ÓE YMÉK Diploma Defence Committee – member

Participation in other institutions

- 2026 SZE Multidisciplinary Doctoral School of Engineering Sciences – pre-reviewer of a dissertation
- 2025–2026 SOE József Cziráki Doctoral School – external examiner, pre-defence reviewer (2025); official reviewer (2026)
- 2025 PTE MIK Marcel Breuer Doctoral School – opponent in a doctoral procedure
- 2024– **Standing Committee on Building Science, Hungarian Academy of Sciences** – permanent invited member
- 2023– **SET-Plan IWG5** (Energy Efficiency in Buildings) – Hungarian delegate, confirmed by the European Commission (2026)
- 2022–2025 **European Spallation Source**, In-Kind Review Committee – member, Hungarian delegate
- 2021– PTE BMDI – invited lecturer (2021–); PTE BDMI – comprehensive examination committee member (2023)
- 2021–2026 BME GPK Géza Pattantyús-Ábrahám Doctoral School – doctoral defence committee member (2021, 2023, 2026)
- 2021 BME VIK – project subject and thesis, external consultant
- 2017– **Journal reviews: Energy and Buildings** (Elsevier, Q1, 2026–); **Journal of Building Physics** (SAGE, 2026–); **Journal of Building Engineering** (Elsevier, 2020–); Periodica Polytechnica (2025–); Pollack Periodica (2022–); Ybl Journal of Built Environment (2017–)
- 2014, 2018 Osaka University – visiting researcher; guest lecturer (2018)

Collaborative projects

- 2022 With the Municipality of Józsefváros – student surveys of designated historic buildings
- 2021 With the Hungarian Museum of Architecture and Budapest City Archives – exhibition on the buildings of Győző Czigler: consultation of student models, organisation
- 2019– With Budapest City Archives – Time Machine project: student 3D models, professional consultation
- 2017, 2022 With the ELKH Centre for Energy Research – student designs for the site, coordination, organisation

Successful grant applications

- 2024–2025 Scientific Patronage (Mecenatúra) – 3rd Ybl Conference, MEC_SZ 149911
- 2023–2024 RRF – energy renovation of the YA building
- 2022, 2023 NKA – organisation of a conference at the Ybl Faculty
- 2021 NKA – processing of the Ybl library pattern books
- 2021 MMA – Ybl Workshop Booklet project: publication and online exhibition

Conference and workshop participation

- **20+ / 15+** international or English-language / Hungarian conference participations
- **2025–2026** **Selection:** SACI 2025 (IEEE, Timișoara); ISCAH 2025; 8th Hungarian Transport Conference – 49th Road Days, Eger (2025, invited section talk); MCC Feszt – DOSZ panel discussion, Esztergom (31 Jul 2025); IEEE SAMI 2026; 3rd and 4th Ybl Conference (presentations); SET-Plan IWG5 meetings (2025–2026)

Editing of publications

- **2023–2026** Ybl Conference on the Built Environment (1st–4th): Book of Abstracts. ÓE YMÉK; ISBN 9789634493303 (2023, 164 p.), 9789634493600 (2024, 132 p.), 9789634493938 (2025); 2026: ISBN pending
- **2022** Ybl Műhely – Műterem (Ybl Workshop – Studio). Óbuda University; ISBN 9789634492788
- **2021** KFKI 2030 – MSc architecture designs of ÓE YMÉK. ÓE YMÉK; ISBN 9789634492863

Exhibition design and organisation

- **2024** Historical tenements of Pest: Evolution, patterns, style – ÓE YMÉK, Budapest, 17 May 2024
- **2022** KFKI 2030 – MSc architecture designs of ÓE YMÉK – Hungarian Academy of Sciences, Great Hall, 24 Feb 2022
- **2021** Pattern books of the Ybl Faculty: a selection from the special collection of the faculty library – online exhibition
- **2020** YBLayers (group exhibition) – FUGA Budapest Centre of Architecture, 5–7 Feb 2020
- **2017** Istanbul 100, Károly Kós exhibition – Istanbul, Turkey
- **2014** YBL 200 Memorial Year: model exhibition of the buildings of Miklós Ybl, Hungarian National Museum (28 Oct – 30 Nov); The sacred buildings of Ybl, St Stephen's Basilica (23 Jul – 1 Oct)
- **2013–2014** SZIE YMÉK MSc Diploma Exhibition – FUGA
- **2011** Osaka University – Ybl Miklós Faculty Cooperative Exhibition – Ybl Faculty, Budapest

Science communication

- **2026** Women in Science Excellence Award – portrait film
- **2026** "Conversations with Role Models" – Girls' Day (NaTE)
- **2026** Index interviews: on preserving the historic townscape (28 Feb); on urban heat and green sustainability (13 Jun); Sláger FM, Sláger Reggel (5 Mar)
- **2026** Óbuda University, Határtalan Innováció (Boundless Innovation) podcast, episode 2: What makes a house energy-positive? – guest (with István Kistelegdi, 2 Oct 2026)
- **2025–2026** **STEAM Excellence Programme** (ÓE, for secondary-school students) – developer and leader of the "Sustainable Architecture and Urban Planning" talent track
- **2025** Book reviews: Magyar Építőművészet / Utóirat 2025/5; Mérnök Újság 2025/12; mérnökvagyok.hu
- **2024–** Regular participation in secondary-school career days
- **2021–** **Website editing:** green.uni-obuda.hu (ÓE green website); yblesz.uni-obuda.hu (Ybl Conference – design, content, structure); ybl.uni-obuda.hu (YMÉK – design, content, structure); ymmf.hu/mintakonyvek (online exhibition, 2021)
- **2021–2024** Girls' Day (NaTE) – co-organiser of the programme at the ÓE Ybl Faculty

Other engineering activities

- **2023** Budapest Solar: estimation of the solar energy potential of Budapest, supporting study
- **2021** KFKI site development concept – preparatory material, surveys
- **2020** Author of municipal climate strategies: Újfehértó, Balatonfűzfő, Tab, Sülysáp
- **2018–2021** Evaluation of construction-industry innovation grant applications – ÉPÍTŐ-2-3-4-5 programme (2018–2019, 2021), approx. 500 applications
- **2016–2020** Development of the biological shielding of the European Spallation Source (with MTA EK)
- **2011–2012** Concrete Canoe Project (YMÉK Building Materials Group, 2011); 1st Hungarian Concrete Canoe Cup (2012) – designer of the Ybl canoe

Study visits and further training

- **2023–2025** Budapest – Introduction to Artificial Intelligence (ÓE training, 2025); Japan – Expo 2025 Osaka, international book launch of Pesti bérházak (2025); Budapest – Academic presentation training (2023)
- **2014–2019** Ireland – Erasmus+: Atlantic Language, Academic Presentation Skills (2019); Spain – NKA grant, conference participation and study visit (2019); Japan – J-PARC (2018); Sweden – European Spallation Source (2018); Belgium – ESS Brightness (2018); Iceland – Erasmus+: Intercultural Iceland, Diverse Classroom (2017); Japan – urban morphology research project, invited and supported by Osaka University (2014, 2018)