

List of Publications

Annex to CV · complete chronological list, Author name in bold.

PEER-REVIEWED JOURNAL PAPERS

1. Balderrama A., **Luna-Navarro, A.**, Kang, J., Al Basha, H., Verschuur, E., Artzmann D., Knaack, U., (2026). Influence of automated façades on the soundscape outside of buildings. *Applied Acoustics*, 111498, vol. 254
2. Martinez-Alcaraz P., de la Barra P., Andriotis C.P; Knaack U. **Luna-Navarro A.**, Current trends and future directions for addressing multi-domain occupant demands in building automation and control systems, *Building and Environment*, 114588, vol. 297 (2026)
3. Pajonk, A., **Luna-Navarro, A.**, Blum, U., Knaack, U. (2026). Workflow and Lab-Scale Demonstrator of an on-substrate 3D-Printed Window Frame. *Journal of Facade Design and Engineering*, 14(1), 39–62.
4. de la Barra, P., Martinez-Alcaraz, P., Brembilla, E., Brager, G., Exss, K., & **Luna-Navarro, A.** (2026). Interface design for lighting and shading controls: device type, position, and system cues influencing user preference and acceptance. *Building and Environment*, 295, 114439.
5. Bianchi, S., Matteoni, M., Kim, K., Konari, A. M., Koning, K., **Luna-Navarro, A.**, Peng, Z., Silva, A., Overend, M., & More Authors (2025). Resilience Readiness Levels for buildings: Establishing multi-hazard resilience metrics and rating systems. *International Journal of Disaster Risk Reduction*, 128, 105746.
6. . Khovalyg, D., Bivolarova, M. P., Shinoda, J., Al-Assaad, D., Vellei, M., Bandurski, K., Martinez Alcaraz, P., de la Barra Luegmayer, P., **Luna-Navarro, A.**, & More Authors (2025). Personalized Environmental Control Systems (PECS): Systematic Review of Benefits for Thermal Comfort, Air Quality, Health, and Human Performance. *Building and Environment*, 286, 113541.
7. Dávalos Quevedo, M. V., **Luna-Navarro, A.**, Pottgiesser, U., & Blum, U. (2025). Methods and approaches for evaluating occupant satisfaction with office space design: A systematic review. *Ergonomics*, 2480271.
8. de la Barra Luegmayer, P., Brembilla, E., Prieto, A., Vásquez, C., Knaack, U., & **Luna-Navarro, A.** (2025). Influence of Automated Façades on Comfort and Energy: A Critical Review. *Energy and Buildings*, 347, 116290.
9. Torresin, S., de Souza, L. P., Dicle, S. Y., Al-Assaad, D., Aletta, F., Balderrama, A., Bivolarova, M. P., Lee, P. J., **Luna-Navarro, A.**, & More Authors (2025). Definition and performance of acoustic personalised environmental control systems (acoustic PECS): A systematic review. *Building and Environment*, 282, 113243.
10. Kim, K., **Luna-Navarro, A.**, Ciurlanti, J., & Bianchi, S. (2024). A multi-criteria decision support framework for designing seismic and thermal resilient facades. *Architecture, Structures and Construction*, vol. 4, pag. 195-210
11. Hassen, M., de la Barra, P., Oke, S., Overend, M., Bilow, M., & **Luna-Navarro, A.** (2024). Glass serviceability limits: New evidence from human-centred studies. *Glass Structures and Engineering*, Volume 9, pages 657–669
12. **Luna-Navarro, A.**, Brembilla, E., de la Barra, P., Moreau, L., & Overend, M. (2024). Luminance-based methodology for assessment of low level haze in glazing. *Glass Structures and Engineering*.
13. de la Barra, P., **Luna-Navarro, A.**, Brembilla, E., Allen, M. C., Knaack, U., & Overend, M. (2025). User interaction with smart glazing: Effect of switching speed under overcast sky condition. *Building and Environment*, 270, 112409.
14. Exss, K., & **Luna-Navarro, A.** (2024). Usability of personalized thermal control systems by people with intellectual disabilities in energy poverty. *Building and Environment*, 265, 112018.
15. Bier, H., Hidding, A., Brancart, S., **Luna-Navarro, A.**, Khademi, S., & van Engelenburg, C. (2024). AI-supported approach for human-building interaction implemented at furniture scale. *Frontiers in Computer Science*, 6, 1295014.
16. Pajonk, A., **Luna-Navarro, A.**, Knaack, U., Blum, U. (2024). Additive manufacturing with varying material properties of thermosetting reactive polymers: A framework and comparison of different modes for implementing material transitions. *Architectural Science Review*, 68(2), 81–93.
17. **Luna-Navarro, A.**, Lori, G., Callewaert, D., & Overend, M. (2023). Semi-automated vs manually controlled dynamic facades: assessment through a field study on multi-domain occupant satisfaction. *Energy and Buildings*, 286, 112912.
18. Michael, M., Favoino, F., Jin, Q., **Luna-Navarro, A.**, & Overend, M. (2023). A Systematic Review and Classification of Glazing Technologies for Building Façades. *Energies*, 16(14), 5357.
19. Borkowski, E., **Luna-Navarro, A.**, Michael, M., Overend, M., Rovas, D., & Raslan, R. (2022). Empirical validation of co-simulation models for adaptive building envelopes. *Journal of Facade Design and Engineering*, 10(1), 119–154.
20. de la Barra, P., **Luna-Navarro, A.**, Prieto, A., Vásquez, C., & Knaack, U. (2022). Influence of Automated Façades on Occupants: A Review. *Journal of Facade Design and Engineering*, 10(2), 19–38.

21. Chinazzo, G., Andersen, R. K., Azar, E., Barthelmes, V. M., Becchio, C., Berger, C., Carlucci, S., Crosby, S., Gauthier, S., **Luna-Navarro, A.**, & More Authors (2022). Quality criteria for multi-domain studies in the indoor environment: Critical review towards research guidelines and recommendations. *Building and Environment*, 226, 109719.
22. Balderrama, A., Kang, J., Prieto, A., **Luna Navarro, A.**, Arzmann, D. & Knaack, U. (2022). Effects of Façades on Urban Acoustic Environment and Soundscape: A Systematic Review. *Sustainability*, 14(15), 9670.
23. Cureau, R. J., Pigliautile, I., Pisello, A. L., [...] **Luna Navarro, A.**, [...] (2022). Bridging the gap from test rooms to field-tests for human indoor comfort studies: A critical review of the sustainability potential of living laboratories. *Energy Research & Social Science*, 92, 102778.
24. **Luna-Navarro, A.**, Hunt, G. R., Overend, M. (2022). Dynamic façades – a campaign to assess occupant multi-domain environmental satisfaction and façade interaction. *Building and Environment*, January 2022, 108703, vol. 211
25. **Luna-Navarro, A.**, Overend, M. (2021). Design, construction and validation of MATELab: A novel outdoor chamber for investigating occupant-facade interaction. *Building and Environment*, 203, 108092.
26. Pisello, A. L., Pigliautile, I., [...] **Luna-Navarro, A.**, [...] (2021). Test rooms to study human comfort in buildings: a review of controlled experiments and facilities. *Renewable & Sustainable Energy Reviews*, 149, 111359.
27. **Luna-Navarro, A.**, Fidler, P., Law, A., Torres, S., Overend, M. (2021). Building Impulse Toolkit (BIT): a novel IoT system for capturing the influence of facades on occupant perception and occupant-facade interaction. *Building and Environment*, 107656, vol. 193
28. Mahdavi, A., Berger, C., [...] **Luna-Navarro, A.**, [...] (2021). The Role of Occupants in Buildings' Energy Performance Gap: Myth or Reality? *Sustainability*, 13(6).
29. **Luna-Navarro, A.**, Loonen, R. C. G. M., Attia, S., Juaristi, M., Monge-Barrio, A., Overend, M. (2020). Occupant-Facade Interaction: a review and classification scheme. *Building and Environment*, May 2020, 106880, vol. 177
30. Attia, S., **Luna Navarro, A.**, Juaristi, M., Monge-Barrio, A., Gosztanyi, S., Al-Doughmi, Z. (2018). Post-Occupancy Evaluation for Adaptive Façades. *Journal of Facade Design and Engineering*, 6(3), 1–9.

JOURNAL PAPERS IN PRESS / REVIEW

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1. **Luna-Navarro, A.**, De la Barra, P., Kalfa, T., Brembilla, E., Overend, M. Subjective Perception and Acceptance of Low-Level Haze in Architectural Glazing under Varying Viewing Conditions. *Glass Structures and Engineering*, in review.
 2. Brembilla, E., **Luna-Navarro, A.**, De La Barra, P., Overend, M. Robust In-Situ Measurements of Haze in Glass Facades. *Glass Structures and Engineering*, in review.
 3. Lenarduzzi, E., Maniatis, S., **Luna-Navarro, A.**, Peeters, M., Heuclin, H., Guillemot, F., Hartwell, R. Environmental and Economic Assessment of Material Recovery Strategies for Architectural Glazing. *Glass Structures and Engineering*, in review.
 4. Heiranipour, M., Juaristi, M., **Luna-Navarro, A.**, Belleri, A., Favoino, F. Early-stage facade design for thermal resilience under climate change: Comparing performance under typical and extreme conditions across European climate zones. *Building and Environment*, in review.
 5. Fardelli, M., Maiullari, D., **Luna-Navarro, A.** Façade retrofit under extreme heat: multi-scale thermal comfort assessment of cool coatings and insulation. *Building Research and Information*, in review (minor).
 6. Lalyko, T., Ricci, D., **Luna-Navarro, A.**, Bianchi, S. Extreme heat risk in retrofit cost-benefit analysis: probabilistic evaluation of overheating mitigation for mild climates. *Building Research and Information*, in review (minor).
 7. Martinez Alcaraz, P., De la Barra, P., Andriotis, C., Sharpe, E. J., Knaack, U., **Luna-Navarro, A.** Office occupants differ in how they prioritise indoor environmental quality factors — and these priorities depend on the building context. *Nature Scientific Reports*.
 8. De la Barra, P., Martinez Alcaraz, P., Brembilla, E., Knaack, U., **Luna-Navarro, A.** What Should Be Automated in Offices? Occupants' Preferences for Automation Levels from a Large Survey in Spain and the Netherlands. *Energy and Buildings*, in review.

BOOKS & BOOK CHAPTERS

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1. **Luna-Navarro, A.**, Overend, M., Knaack, U., Montali, J., Henriksen, T. Façade Design and Engineering: A Performance Based Approach. Taylor & Francis — full book in submission Fall 2026.
 2. **Luna-Navarro, A.**, Boerstra, A. Performance assessment of human-building resilience to extreme heat. In S. Bianchi & J. Ciurlanti (Eds.), *Integrated Solutions for Multi-Hazard Resilient and Sustainable Buildings*, Elsevier — in publication.

3. **Luna-Navarro, A.**, Overend, M. MATELab Façade test cell to study occupant response. In Booklet 3.2 'Building Performance Simulation and Characterization of Adaptive Facades', p. 153, TU Delft Open for COST Action 1403, Nov 2018.
4. **Luna-Navarro, A.** Human comfort in the workplace: How much does the environment influence our behavior? In K. Ruggeri (Ed.), *Behavioral Insights for Public Policy: Concepts and Cases*, p. 333–340, Routledge, May 2018.
5. Brembilla, E., Ucci, M., Rastogi, P., **Luna Navarro, A.**, Mourkos, K., Hare, J., Kelly-Waskett, R., Wealend, E., Dimitroulopoulou, S. & More Authors (2022). TM68: Monitoring Indoor Environmental Quality. London: CIBSE, 76 p. (Technical Manual).

PEER-REVIEWED CONFERENCE PAPERS

1. **Luna-Navarro, A.**, Bilow, M., Martinez-Alcaraz, P., de la Barra, P., Boerstra, A. (2026). When Labs Move: Lessons-Learnt from Relocating and Upgrading a Human–Façade Interaction Lab. *Challenging Glass Conference Proceedings*.
2. Kooistra, R., **Luna-Navarro, A.**, Boerstra, A. (2026). A Design Framework for User-Centred Personalised Environmental Control System for Air Movement. *CLIMA 2025, LNCE vol 763, Springer*.
3. Nestoros, E. C. et al. (2026). A Multi-disciplinary Approach to Assessing the Influence of Facade on Outdoor Thermal Comfort: A Case Study of Milan. *CLIMA 2025, LNCE vol 763, Springer*.
4. Dávalos Quevedo, M. V., **Luna-Navarro, A.**, Pottgiesser, U., de la Barra Luegmayer, P., Martinez Alcaraz, P. (2025). Pre-occupancy evaluation: Comparison of two questionnaire approaches to inform renovation design in existing buildings. *CIBSE IBPSA-England Technical Symposium 2025, London*.
5. Tenpierik, M. J., Huijbregts, Z., Konstantinou, T., Brembilla, E., **Luna-Navarro, A.**, Jonathan, T. T., Bousios, S. (2025). Energy performance of novel low-cost inkjet-printed electrochromic glazing. *6th Int. Conf. on Building Energy and Environment (COBEE)*.
6. D'Amico, A., Fiume, F., de la Barra, P., **Luna-Navarro, A.** (2025). Indoor Air and Thermal Quality in School Buildings: Demonstration of BIM-Integrated IoT Window Signaling System. *Colloqui.AT.e 2025, LNCE vol 765, Springer, 260–284*.
7. de la Barra, P., Martinez-Alcaraz, P., **Luna-Navarro, A.** (2025). Identification of Factors Influencing Satisfaction with Interaction Strategies by Clustering Occupants in Buildings. *IBPC 2024, LNCE, Springer, 211–220*.
8. Chiucchiù, A. C., Misuraca, I., Brembilla, E., Pigliautile, I., Tenpierik, M. J., Pisello, A. L., de la Barra Luegmayer, P., **Luna-Navarro, A.** (2024). Effect of Blue-Tinted Glazing on Thermal and Visual Perception in Neutral and Warm Thermal Conditions. *CATE 2024, Seville*.
9. Matricardi, P., Ottele, M., Louter, C., **Luna-Navarro, A.** (2024). Environmental Impact of Passive Smart Window Technologies: Framework and Preliminary Results. *Challenging Glass 2024, Delft*.
10. Kim, K., Bianchi, S., Konstantinou, T., Overend, M., Ciurlanti, J., **Luna-Navarro, A.** (2024). Thermal resilience to extreme heat: preliminary study on thermal fragility curves. *Journal of Physics, IBPC 2024, Toronto*.
11. Martinez-Alcaraz, P., de la Barra, P., Andriotis, C. P., Wang, Y., **Luna-Navarro, A.** (2025). Personalised Building Controls Based on Individual Thermal Preferences for Energy Efficiency and Thermal Comfort. *IBPC 2024, LNCE vol 555, Springer, 203–210*.
12. Madabushi, A., Tenpierik, M., **Luna-Navarro, A.** (2024). The impact of occupant window operation on indoor temperature and air quality during the cooling season. *Journal of Physics, IBPC 2024, Toronto*.
13. **Luna-Navarro, A.**, Verbeek, R., Huijbregts, Z., Brembilla, E., Konstantinou, T., Tenpierik, M. (2024). Preliminary evaluation on the visual and thermal performance of novel low-cost ink-jet printed electrochromic glazing. *Journal of Physics, IBPC 2024, Toronto*.
14. Balderrama, A., **Luna-Navarro, A.**, Kang, J. (2024). The Role of Building Façades in the Composition of the Urban Soundscape. *Journal of Physics, IBPC 2024, Toronto*.
15. De la Barra, P., Martinez-Alcaraz, P., **Luna-Navarro, A.** (2024). Identification of interaction strategies required for occupant archetypes in buildings. *Journal of Physics, IBPC 2024, Toronto*.
16. **Luna-Navarro, A.**, Welti, A., Martinez-Alcaraz, P., de la Barra, P., Porta, M. (2024). Impact of adaptive façade technologies on the Smart Readiness Indicator (SRI). *Journal of Physics, IBPC 2024, Toronto*.
17. Balderrama, A., **Luna-Navarro, A.** (2023). Soundscape Assessment at a University Campus in Detmold, Germany. *Healthy Buildings 2023 Europe, Aachen, 1193–1195*.
18. Yüksel, S., de la Barra Luegmayer, P., Boerstra, A. C., **Luna-Navarro, A.** (2023). Effectiveness of window signalling systems in open-plan workplaces: Evidence from field work. *BEHAVE 2023, Maastricht*.
19. De la Barra Luegmayer, P., **Luna-Navarro, A.**, Knaack, U., Prieto Hoces, A., Vazquez, C. (2023). An investigation on occupant preferences with Automated Facades. *Healthy Buildings 2023 Europe, Aachen, 1193–1195*.

20. Bianchi, S., Ciurlanti, J., **Luna-Navarro, A.**, Brembilla, E. (2023). Impact of earthquakes vs. heat waves on the socioeconomic losses of buildings. *COMPdyn Proceedings*, 4706–4718.
21. **Luna-Navarro, A.**, Khandhachani, P., Brembilla, E., de la Barra, P., Andriotis, C. (2023). Towards multi-domain user archetypes for user-centred façade design. *Journal of Physics: Conference Series*, 2600.
22. Lanfranco, V., **Luna-Navarro, A.**, Popescu, M. (2023). *Proceedings of Textile Intersections Conference 2023*. Design Research Society, 15 p.
23. **Luna-Navarro, A.**, Gaetani, I., Anselmo, F., Law, A., Overend, M. (2021). The influence of occupant behaviour on the energy performance of single office space with adaptive facades: simulation versus measured data. *Building Simulation Conference 2021*, Ghent.
24. Gaetani, I., **Luna-Navarro, A.**, Anselmo, F. (2021). People who? Why occupant behaviour modelling is still not included in the design workflow. *Building Simulation Conference 2021*, Ghent.
25. **Luna-Navarro, A.**, Blanco Cadena, J. D., Favoino, F., Donato, M., Poli, T., Perino, M., Overend, M. (2019). Occupant-Centred Control strategies for Adaptive Facades: A preliminary study of the impact of shortwave solar radiation on thermal comfort. *Building Simulation Conference 2019*, Rome.
26. **Luna-Navarro, A.**, Allen, M., Meizoso, M., Overend, M. (2019). BIT – building impulse toolkit: a novel digital toolkit for productive, healthy and resource efficient buildings. *Energia Procedia, CISBAT 2019*.
27. Allen, M., **Luna-Navarro, A.**, Blanco Cadena, J. D., Hartwell, R., Overend, M. (2019). User-centred control of automated shading for intelligent glass facades. *Glass Performance Days 2019*, Finland.
28. **Luna-Navarro, A.**, Loonen, R. C. G. M., Attia, S., Juaristi, M., Monge-Barrio, A., Donato, M., Rabenseifer, R., Overend, M. (2018). Occupant-Adaptive Façade Interaction: Relationships and Conflicts. *FAÇADE 2018, COST TU1403*, Lucerne.
29. **Luna-Navarro, A.**, Overend, M. (2018). Towards human-centred intelligent envelopes: A framework for capturing the holistic effect of smart facades on occupant comfort and satisfaction. *7th IBPC 2018, Syracuse (NY)*, 653–658.
30. **Luna-Navarro, A.**, Meizoso, M., DeBleecker, H., Verhoeven, Y., Donato, M., Overend, M. (2018). Façade impulse: experimental methods for stretching the envelope beyond human comfort. *VIII Int. Congress on Architectural Envelope*, San Sebastián.
31. Bedon, C., Pascual, C., **Luna-Navarro, A.**, Overend, M., Favoino, F. (2018). Thermo-mechanical Investigation of Novel GFRP-glass Sandwich Facade Components. *Challenging Glass 6*, TU Delft.

EXHIBITIONS & THESES

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1. Face-2-Face installation, Glasstec 2022, Düsseldorf (with Eyrise/Merck).
 2. Face-2-Face interactive installation, Highlight Festival 2024, Delft.
 3. 'Science on Tour', Human-Building Interaction exhibition, Future Façade 2025, Utrecht.
 4. **Luna-Navarro, A.** (2021). Novel methods for capturing the influence of facades on occupant satisfaction and interaction. PhD Thesis, University of Cambridge.
 5. **Luna-Navarro, A.** Energy performance of GFRP-Glass Façades. MPhil Thesis, University of Cambridge.
 6. **Luna-Navarro, A.** Redevelopment, recovery and