23 December 2025

# Newsletter




## ZEBAI Presented at IEEE CIS Webinar

On 30 October 2025, the ZEBAI project was featured in an online webinar hosted by the IEEE Computational Intelligence Society (IEEE CIS). The session, "Evolutionary Algorithms for the Design of Zero-Emission and Cost-Effective Buildings," introduced ZEBAI's goals, methods, and first results.

The event brought together 25–30 live participants, reflecting strong interest in optimisation-based approaches for designing zero-emission buildings. During the presentation, attendees were introduced to how evolutionary algorithms can support energy performance optimisation and cost-effective decision-making in building design.

The full webinar is available online here



Co-funded by the European Union

# Joint Webinar with META BUILD Project




On 26 November 2025, the EU-funded **ZEBAI** and **META BUILD** projects co-hosted a webinar exploring how AI-driven design and electrification can work together to create efficient and scalable buildings.

The META BUILD team, represented by Nikos Dimitropoulos and Symeon Chorozoglou from NTUA, explained how AI supported electrification and system integration from early design stages, while Marian Ángeles Gallego de Santiago (CARTIF) demonstrated how machine learning improved the reliability of heat pumps, PVT systems, and battery storage across six European demonstration sites. The session then turned to the ZEBAI project: Antonio la Torre and Lorena Cruz from Universidad Politécnica de Madrid introduced the ZEBAI design tool, which enabled users to model buildings, simulate performance, and automatically generate optimised solutions. Martjan den Hoed (Gortemaker Algra Feenstra Architects) highlighted successful applications, including hospital designs under development in Tilburg, Netherlands. The event concluded with a panel discussion featuring Lucia Royo (Electroingenium), Dimitris Chatzigiannis (Heron Energy S.A.), and Benjamin Constant (NéoEco) who discussed how AI, digitalisation, and electrification were driving innovation in industrial sectors and supporting circular, resilient building concepts.

Recoding of the webinar available here.



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ZEBAI

# Upcoming Events



## 2nd general assembly of the ZEBAI Project

In January, the ZEBAI consortium will gather in Madrid to enhance cross-collaboration and outline plans for future activities and developments.

## Stay updated for more collaboration in 2026

Stay tuned for more collaboration with other EU projects ! The ZEBAI Team is working on exciting initiatives to educate and share knowledge about sustainable building practices.





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