

Integrating Emerging EUROGIA Technologies for 4IR

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Nottingham Trent University – one of the UK's largest research-based practice universities focused on applied innovation and industry collaboration

- Strong expertise in intelligent buildings, sustainable infrastructure, and integrated energy systems
- Advanced capabilities in digital twins, smart building monitoring, and energy analytics
- Extensive experience delivering industry-led innovation projects and real building demonstrators
- Role in EUROGIA: technology integrator connecting research, industry partners and real building pilots

Dr Yangang Xing – Intelligent buildings and energy systems integration

- Chair – CIBSE Intelligent Buildings Group
- Active collaboration with REHVA and CIB W098 Intelligent & Responsive Buildings

Potential EUROGIA Innovation Projects – Seeking Industry Partners

| Innovation Theme | Core Technologies | Potential Demonstration |
|------------------------------------|---|---|
| Distributed DC Smart Buildings | Distributed DC microgrids, renewable integration, battery storage | Campus buildings, commercial offices, smart building testbeds |
| Grid-Responsive Buildings | Demand response, grid-interactive building control, smart energy management | Commercial buildings, campus energy systems |
| AI Digital Twin Buildings | AI optimisation, predictive building control, digital twin modelling | Living labs, innovation districts |
| AI-Optimised Net-Zero Data Centres | AI energy optimisation, renewable microgrids, advanced cooling | Green data centre pilots, research campuses |
| Data Centre Waste Heat Reuse | Heat recovery, heat pumps, district energy integration | Urban districts, campus energy systems |