

Professor Dr Runa T. Hellwig

(Full professor, PD (Privatdozent), Dr.-Ing., Dipl.-Ing.)

Projects, Grants (thematically arranged)

04_Residential, renovation, energy optimisation

2019 – 2021



Energisynk – Energy synchronisation – Renovation of the Danish single family house building stock to prepare the houses for low temperature district heating

Strategic funding of AAU at Aalborg University

Interdisciplinary project of the integrated Architecture group with the Institute for planning, Human centred computing, Utility companies and industry

2008 – 2009

MCME - Maximal Comfort, Minimal Energy – Retrofitting High rise buildings

contracted by a Korean Construction Company at the Fraunhofer Institute for Building Physics

investigation in order to improve the indoor climate and to develop strategies for energetically retrofitting of residential high-rise buildings in South Korea

2008

Thermal Comfort, Well-Being and Performance - State of the Art and Suggestion of a Methodological Approach (ComForm)

financed by the Fraunhofer Institute for Building Physics

2005-2006

Examination of Energy Saving Measures in Residential Buildings

Contracted by the Bavarian Ministry of the Interior, Building Authority at University of Technology Munich

Chair for Building Climatology and Building Services, Prof. G. Hausladen

2002

CO2-Savings by Means of Insulation of Heating Pipes

contracted by industry at Zentrum für Umweltbewußtes Bauen, Kassel

project acquisition for a newly founded Centre at University of Kassel, Germany: Zentrum für Umweltbewusstes Bauen, Prof. Hauser



Assessment of a Solar-Assisted District Heating for a New Building Area in Bielefeld „Hof Hallau“, Germany

contracted by the Public works service of the city of Bielefeld at the Fraunhofer Institute for Building Physics

Optimisation of the energetic standard of the buildings, investigation of the applicability of solar-assisted district heating to the building area, cost-effectiveness in comparison to a building-wise gas heat supply

1998 - 1999

Scientific Consulting of the Planning and Construction of Low-Energy Buildings in Pfullingen, Germany

contracted by the Building Co-operative Pfullingen at the Fraunhofer Institute for Building Physics

50 apartments in low-energy standard, examination the energy audit calculations, thermal bridges, the execution of construction work

1996 - 1999



Concepts for Future Oriented Pre-Fabricated Houses (Weber-Haus) and Their Execution for Demonstration Purposes

contracted by Hans Weber Hausbau GmbH, funded by the Federal Ministry of Economics and Technology (BMWi) at the Fraunhofer Institute for Building Physics

development of 3 different building concepts for pre-fabricated timber-frame houses: low-energy building, ultra-low-energy building, zero-heating-energy building, consulting during the execution of construction work, monitoring of energy consumption

1998 - 1999

Development of a Concept to Minimise the HVAC Systems and Assessment of the Moisture Protection for the Thermal Bath in Templin, Germany

contracted by KT Investitions Consulting GmbH, Templin at the Fraunhofer Institute of Building Physics

1996 - 1998

Exemplary Energetic Retrofitting of a Multi-Storey Residential Building in Heilbronn, Germany

funded by the Ministry of Economics of Baden-Württemberg, Germany at the Fraunhofer Institute for Building Physics

energy concept, details/thermal bridges

1997 - 1998



Scientific Consulting of the Construction of a Low-Energy Housing Area "Auf dem Burgholz" in Stuttgart, Germany

contracted by the city of Stuttgart, Germany at the Fraunhofer Institute for Building Physics

800 apartments in low-energy standard
examination of the energy audit calculations, construction details for thermal bridges and suggestion of improvements, controlling the construction work to meet the requirements

1996 - 1997

Concept Development "Caracalla Klimahaus"

contracted by Caracalla Produktentwicklung at the Fraunhofer Institute for Building Physics

Assessment of the building shape and design with regard to energy efficiency, energetic optimisation of the building design, concept development for the heating and ventilation system

1996 - 1997

Concept for a Future-Oriented Low-Energy Building in Bayreuth, Germany

contracted by Bayernwerke AG at the Fraunhofer Institute for Building Physics

development of a concept for a low-energy single-family house with a heating energy demand 50% below the requirements according to the Energy Saving Ordinance, focus on electric power based systems and demand reducing passive measures as insulation, passive solar energy use