

Curriculum Vitae for Pär Johansson

Personal information



Full name: Pär David Anders Johansson
Nationality: Swedish
Date of birth: 1986-09-30
Place of birth: Eksjö, Sweden

Home adress: Färgfabriksgatan 14, 417 24 Göteborg
Phone: +46 (0)31-772 19 66
E-mail: par.johansson@chalmers.se

Current position: Associate Professor (Docent)
Business address: Department of Architecture and Civil Engineering, Division of Building Technology, Chalmers University of Technology, SE-412 96 Göteborg

Academic qualifications

2019-08-26 Associate Professor (Docent) in Building Physics, Chalmers University of Technology
2014-03-14 PhD in Building Physics, Chalmers University of Technology: *Building Retrofit using Vacuum Insulation Panels: Hygrothermal Performance and Durability*, Supervisors: Carl-Eric Hagentoft and Angela Sasic Kalagasidis
2012-03-19 Licentiate in Building Physics, Chalmers University of Technology: *Retrofitting of old Exterior Wall with Vacuum Insulation Panels: Measurements of Thermal Properties, Moisture Performance and Practical Considerations*, Supervisors: Carl-Eric Hagentoft and Angela Sasic Kalagasidis
2010 MSc in Civil and Environmental Engineering, Chalmers University of Technology: *Roof Constructions with Controlled and Natural Ventilation: Field Measurements and Mold Growth Potential Assessment*
2008 BSc in Civil and Environmental Engineering, Chalmers University of Technology: *Design conditions for cooling power - Applied on a new hospital building at Sahlgrenska University hospital*

Employment history

2019-09 - Associate Professor Div. Building Technology, Chalmers
2019-06 – 2019-09 Researcher Div. Building Technology, Chalmers
2015-06 – 2019-05 Assistant Professor Div. Building Technology, Chalmers
2014-04 – 2015-06 Post-Doc, Div. Building Technology, Chalmers
2010-01 – 2014-03 PhD student, Div. Building Technology, Chalmers
2008-02 – 2009-12 Teaching Assistant, Div. Building technology, Chalmers
2009-06 – 2009-07 Assistant Designer, Sweco Systems AB, Göteborg

On-going projects

- 2019-2023 Super insulation render for renovation and new constructions, Swedish Energy Agency - E2B2 (Ali Naman Karim)
- 2016-2020 Potentials of using existing roofs for mitigation of storm water flooding risks in urban areas, Formas (Kaj Pettersson)
- 2016-2019 Preserve and improve energy efficiency in listed buildings using super insulation materials, Swedish Energy Agency
- 2015-2020 Solar thermal storage with phase change materials for larger energy savings, Swedish Energy Agency - E2B2 (Pepe Tan)
- 2015-2019 Re-renovation: Possibilities for increased energy efficiency and the re-creation of cultural historical values, Swedish Energy Agency - Save and Preserve
- 2014-2019 National Transdisciplinary Centre of Excellence for Integrated Sustainable Renovation (SIRen), Formas

Bibliometrics

Orcid: 0000-0003-0935-7703

Google Scholar: 57 documents; citations (since 2014): 334; h-index: 10; i10-index: 10

Scopus: 20 documents; citations: 127; h-index: 7

Web of Science: 12 documents; citations: 104; h-index: 6

List of publications

Peer-reviewed International Journal papers

1. Mirzanamadi, R. Hagentoft, C.E., **Johansson, P.** (2020). Coupling a Hydronic Heating Pavement to a Horizontal Ground Heat Exchanger for harvesting solar energy and heating road surfaces. *Renewable Energy*, 147(1), 447-463; <https://doi.org/10.1016/j.renene.2019.08.107>
2. Hagentoft, C.-E., **Johansson, P.** (2019). Generic algorithm to assess moisture susceptibility of simplified wall assemblies. *Canadian Journal of Civil Engineering (In press)*.
<http://doi.org/10.1139/cjce-2018-0592>.
3. Mirzanamadi, R., Hagentoft, C.-E., **Johansson, P.** (2018). Numerical investigation of harvesting solar energy and anti-icing road surfaces using a hydronic heating pavement and borehole thermal energy storage. *Energies* 2018, 11, 3443; <https://doi.org/10.3390/en11123443>.
4. Mirzanamadi, R., Hagentoft, C.-E., **Johansson, P.** (2018). An analysis of hydronic heating pavement to optimize the required energy for anti-icing. *Applied Thermal Engineering*, 144, 278-290; <https://doi.org/10.1016/j.applthermaleng.2018.08.053>.
5. Tan P., Brütting, M., Vidi, S., Ebert, H.-P., **Johansson, P.**, Sasic Kalagasidis, A. (2018). Characterizing phase change materials using the T-History method: On the factors influencing the accuracy and precision of the enthalpy-temperature curve. *Thermochimica Acta*, 666, 212-228; <https://doi.org/10.1016/j.tca.2018.07.004>.
6. Mirzanamadi, R., Hagentoft, C.-E., **Johansson, P.**, Johansson, J. (2018). Anti-icing of road surfaces using hydronic heating pavement with low temperature. *Cold Regions Science and Technology*, 145, p. 106-118; <https://doi.org/10.1016/j.coldregions.2017.10.006>.
7. Mirzanamadi, R., **Johansson, P.**, Grammatikos, S. (2018) Thermal properties of asphalt concrete: a numerical and experimental study. *Construction & Building Materials*, 158, p. 774-785; <https://doi.org/10.1016/j.conbuildmat.2017.10.068>.
8. Tan, P., Brütting, M., Vidi, S., Ebert, H.-P., **Johansson, P.**, Jansson, H., Sasic Kalagasidis, A. (2017). Correction of the enthalpy–temperature curve of phase change materials obtained from the T-History method based on a transient heat conduction model. *International Journal of Heat and Mass Transfer*, 105 (February 2017), p. 573–588; <https://doi.org/10.1016/j.ijheatmasstransfer.2016.10.001>.
9. **Johansson, P.**, Adl-Zarrabi, B., Sasic Kalagasidis, A. (2016). Evaluation of 5 years' performance of VIPs in a retrofitted building façade. *Energy and Buildings*, 130, p. 488-494; <https://doi.org/10.1016/j.enbuild.2016.08.073>.
10. Pettersson, K., Krajnovic, S., Sasic Kalagasidis, A., **Johansson, P.** (2016) Simulating wind-driven rain on building facades using Eulerian multiphase with rain phase turbulence model. *Building and Environment*, 106, p. 1-9; <https://doi.org/10.1016/j.buildenv.2016.06.012>.
11. **Johansson, P.**, Geving, S., Hagentoft, C.-E., Jelle, B. P., Rognvik, E., Sasic Kalagasidis, A., Time, B. (2014). Interior insulation retrofit of a historical brick wall using vacuum insulation panels: Hygrothermal numerical simulations and laboratory investigations. *Building and Environment*, 79(0), p. 31-45; <https://doi.org/10.1016/j.buildenv.2014.04.014>.
12. **Johansson, P.**, Sasic Kalagasidis, A., Hagentoft, C.-E. (2014). Retrofitting of a listed brick and wood building using vacuum insulation panels on the exterior of the façade: measurements and simulations. *Energy and Buildings*, 73(April 2014), p. 92-104; <https://doi.org/10.1016/j.enbuild.2014.01.019>.
13. **Johansson, P.**, Adl-Zarrabi, B., Hagentoft, C.-E. (2012). Using Transient Plane Source Meter for Determination of Thermal Properties of Vacuum Insulation Panels. *Frontiers of Architectural Research*, 1(4), p. 334-340; <https://doi.org/10.1016/j.foar.2012.09.004>.

Peer-reviewed International Conference papers

1. Mirzanamadi, R. Hagentoft, C.E., **Johansson, P.** (2019). Numerical Investigation of Anti-Icing Road Surfaces using Hydronic Heating Pavement- Parametric Study. Building simulation 2019, September 2-4, 2019, Rome, Italy.
2. **Johansson, P.**, Wahlgren, P. (2018). Interior insulation retrofit of a brick wall using super insulation materials: design of a field testing in an industrial brick building. Proceedings of the IBPC 2018, September 23-26, 2018, Syracuse, NY, USA.
3. **Johansson, P.**, Adl-Zarrabi, B. (2018). Super insulation materials in the building sector: Field studies and future challenges. Proceedings of the IBPC 2018, September 23-26, 2018, Syracuse, NY, USA.
4. Femenias, P., Eriksson, P, Thuvander, L., Wahlgren, P., **Johansson, P.** (2018). Value creation by re- renovation – focus on the user perspective. Proceedings of the 3rd Conference on Energy Efficiency in Historic Buildings, EEHB 2018, September 26-27, 2018, Visby, Sweden.
5. **Johansson P.**, Donarelli A., Strandberg, P. (2018). Performance of new materials for historic buildings: case-studies comparing super insulation materials and hemp-lime mortar. Proceedings of the 3rd Conference on Energy Efficiency in Historic Buildings, EEHB 2018, September 26-27, 2018, Visby, Sweden.
6. Femenias, P., Thuvander, L., **Johansson, P.**, Wahlgren, P, Eriksson, P. (2018). Renovating the housing stock built before 1945: Exploring the relations between energy efficiency, embodied energy and heritage values. Proceedings of the Cold Climate HVAC 2018, March 12-15, 2018, Kiruna Sweden.
7. Mirzanamadi, R., Hagentoft, C.-E., **Johansson, P.** (2018). Hydronic Heating Pavement with Low Temperature: The Effect of Pre-Heating and Fluid Temperatures on the Required Energy and Slippery Conditions. Proceedings of the Cold Climate HVAC 2018, March 12-15, 2018, Kiruna Sweden.
8. **Johansson, P.**, Wahlgren, P. (2017). Renovation of buildings from before 1945: status assessment and energy efficiency measures. 11th Nordic Symposium on Building Physics, Proceedings of the NSB2017, June 11-14, 2017, Trondheim, Norway
9. **Johansson, P.**, Wahlgren, P. (2017). Recreation of cultural historical values in buildings from before 1945: Inventory with focus on building physics performance. Proceedings of the XIV DBMC 2017, May 28-31, 2017, Ghent, Belgium.
10. Sasic Kalagasidis, A., Brycke, E., Nilssen, J., **Johansson, P.** (2016). Evaluation of a modified co-heating test for in-situ measurements of thermal transmittance of single family houses. Proceedings of the Buildings XIII Conference - Thermal Performance of the Exterior Envelope of Whole Buildings, December 4-8, 2016, Clearwater Beach, FL, USA.
11. **Johansson, P.**, Paberit, R., Öjeborn, J. and Jansson, H. (2016). Evaluation of PCM activation using changes in physical properties during phase transition for visualization of passive building envelope technologies. Proceedings of the 9th International Conference on Indoor Air Quality Ventilation & Energy Conservation In Buildings, IAQVEC 2016, October 23-26, 2016, Songdo, Incheon, Republic of Korea.
12. **Johansson, P.**, Femenias, P., Thuvander, L. and Wahlgren, P. (2016). Pending for Renovations: Understanding the Conditions of the Multi-family Housing Stock from before 1945. Energy Procedia: Proceedings of the Sustainable Built Environment Tallinn and Helsinki Conference SBE16 — Build Green and Renovate Deep. 96 p. 170-179.
13. **Johansson, P.**, Adl-Zarrabi, B., Berge, A. (2015). Evaluation of long-term performance of VIPs, Energy Procedia: Proceedings of the 6th International Building Physics Conference, IBPC 2015. 78 p. 388-393.

14. **Johansson, P.**, Sasic Kalagasidis, A., Jansson, H. (2015). Investigating PCM activation using transient plane source method, *Energy Procedia: Proceedings of the 6th International Building Physics Conference, IBPC 2015*. 78 p. 800-805.
15. **Johansson, P.**, Claesson, J. (2014). Analytical model to calculate the temperature increase in a low conductive material covered by a highly conductive film. *Proceedings of the 10th Nordic Symposium on Building Physics, Lund, Sweden*.
16. **Johansson, P.**, Geving, S., Hagentoft, C.-E., Jelle, B. P., Rognvik, E., Sasic Kalagasidis, A., Time, B. (2014). Retrofitting a brick wall using vacuum insulation panels: measured hygrothermal effect on the existing structure. *Proceedings of the 10th Nordic Symposium on Building Physics, Lund, Sweden*.
17. **Johansson, P.**, Time, B., Geving, S., Jelle, B. P., Sasic Kalagasidis, A., Hagentoft, C.-E., Rognvik, E. (2013). Interior Insulation Retrofit of a Brick Wall Using Vacuum Insulation Panels: Design of a Laboratory Study to Determine the Hygrothermal Effect on Existing Structure and Wooden Beam Ends. *Proceedings of the 12th International Conference on Thermal Performance of the Exterior Envelopes of Whole Buildings, December 1-5, 2013, Clearwater Beach, FL, USA*.
18. Pallin, S., **Johansson, P.** and Hagentoft, C.-E. (2011). Stochastic Modeling of Moisture Supply in Dwellings based on Moisture Production and Moisture Buffering Capacity. *Proceedings of the 12th Conference of the International Building Performance Simulation Association. November 14-16, 2011, Sydney, Australia, pp. 366-373*.
19. **Johansson, P.** (2011). In situ Measurements of Façade Retrofitted with Vacuum Insulation Panels. *Proceedings of the 10th International Vacuum Insulation Symposium. September 15-16, 2011, Ottawa, Canada, pp. 107-111*.
20. **Johansson, P.**, Adl-Zarrabi, B. and Hagentoft, C.-E. (2011). Measurements of Thermal Properties of Vacuum Insulation Panels by using Transient Plane Source Sensor. *Proceedings of the 10th International Vacuum Insulation Symposium, September 15-16, 2011, Ottawa, Canada, pp. 18-21*.
21. **Johansson, P.** (2011). Assessment of the Risk for Mold Growth in a Wall Retrofitted with Vacuum Insulation Panels. *Proceedings of the 9th Nordic Symposium on Building Physics. May 29-June 2, 2011, Tampere, Finland, pp. 349-356*.
22. **Johansson, P.**, Pallin, S. and Shahriari, M. (2011). Development of a Risk Assessment Procedure Applied on Building Physics: Part One; Model Development. *Proceedings of the 12th International Conference on Building Materials and Components. April 12-15, 2011, Porto, Portugal*.
23. Pallin, S., **Johansson, P.** and Shahriari, M. (2011). Development of a Risk Assessment Procedure Applied on Building Physics: Part Two; an Applicability Study. *Proceedings of the 12th International Conference on Building Materials and Components. April 12-15, 2011, Porto, Portugal*.
24. **Johansson, P.** (2010). Hygrothermal Conditions in Ventilated Cathedral Ceilings: Influences on Roof Ventilation and Emissivity; Field Study and Analysis. *Proceedings of the 11th International Conference on Thermal Performance of the Exterior Envelopes of Whole Buildings, December 5-9, 2010, Clearwater Beach, Florida, USA*.

Other International Publications

1. Adl-Zarrabi, B., **Johansson, P.**, Marzbanrad, A. (2019). Determination of Anisotropic Thermal Conductivity of VIP Laminate using Transient Plane Source Method. *Proceedings of the 14th International Vacuum Insulation Symposium, September 19-20, 2019, Kyoto, Japan. (Extended abstract)*
2. Karim, A.N., **Johansson, P.**, Sasic Kalagasidis, A. (2019). Long-term Performance of Silica Aerogel and Aerogel Based Composites: A Literature Review Highlighting Pathways for Further Studies.

- Proceedings of the 14th International Vacuum Insulation Symposium, September 19-20, 2019, Kyoto, Japan. (Extended abstract)
3. **Johansson, P.** (2017). Results from real life performance assessment of aerogel blankets in buildings. Presentation at the Advanced Building Skins Conference, October 2-3, 2017, Bern, Switzerland. (Presentation)
 4. **Johansson, P.**, Wahlgren, P. (2017). Using SIMs to re-create cultural historical values in buildings from before 1945. Proceedings of the 13th International Vacuum Insulation Symposium, September 20-21, 2017, Paris, France. (Extended abstract presentation)
 5. **Johansson, P.**, Adl-Zarrabi, B. (2017). Practical Applications of SIMs: Retrofitting at the Building Scale. Proceedings of the 13th International Vacuum Insulation Symposium, September 20-21, 2017, Paris, France. (Poster presentation)
 6. **Johansson, P.**, Wahlgren, P. (2016). Interior Insulation Retrofit of a Brick Wall Using Vacuum Insulation Panels: Re-Creation of Cultural Historical Values in Buildings from before 1945, Proceeding of the International RILEM Conference Materials, Systems and Structures in Civil Engineering 2016: Segment on Historical Masonry, August 22-24, 2016, Lyngby, Denmark. (Poster presentation)
 7. Tan, P., **Johansson, P.**, Sasic Kalagasidis, A. (2016). Design evaluation and improvements of a latent heat based thermal energy storage system, Proceedings of the INNOSTORAGE conference, Beer Sheva, Israel. (Paper presentation)
 8. Göhl, J., Paberit, R., Rilby, E., Swenson, J., **Johansson, P.** and Jansson, H. (2016) Manipulation of phase transition temperatures and supercooling of sugar alcohols based Phase Change Materials (PCMs) by urea. Proceedings of the INNOSTORAGE conference, Beer Sheva, Israel. (Paper presentation)
 9. **Johansson, P.**, Wahlgren, P. (2015). Spread in energy use in buildings dependent on choice of heating and ventilation system, Proceedings of the 36th AIVC Conference, 23–24 September, 2015, Madrid, Spain. p. 204-212. (Paper presentation)
 10. **Johansson, P.**, Adl-Zarrabi, B., Berge, A. (2015). Long-term performance of vacuum insulations panels in buildings and building systems, Proceedings of the 12th International Vacuum Insulation Symposium, September 19-20, 2015, Nanjing, China. p. 136-139. (Paper presentation)
 11. **Johansson, P.**, Sasic Kalagasidis, A. (2014). Air leakages in a retrofitted façade originally from 1930: measurements and numerical simulations. Proceedings of the 35th AIVC-4th Tightvent & 2nd Venticool Conference, September 24-25, 2014, Poznań, Poland. (Paper presentation)
 12. Brunner, S., Wakili, K. G., & **Johansson, P.** 2013. Vacuum insulation panels (VIP) in refrigerator room, freezing room & fridge. Proceedings of the 11th International Vacuum Insulation Symposium, Dübendorf, Switzerland, September 18-19, 2013. (Paper presentation)

Popular Science Papers

1. Femenias, P., Wahlgren P., **Johansson, P.**, Thuvander L., Eriksson, P. (2019). Om-renovering: möjligheter för energieffektivisering när äldre flerbostadshus renoveras en andra gång. Bygg och teknik 2/2019.
2. Femenias, P., Mörk, K., Eriksson, P., Thuvander L., **Johansson, P.**, Wahlgren, P., (2018). Om-renovering av flerfamiljshus före 1945. De boendes perspektiv. Bygg och teknik, 5/2018.
3. **Johansson, P.**, Wahlgren, P. Fältnätning på äldre tegelkonstruktion med invändig tilläggsisolering av superisoleringsmaterial. Bygg och teknik, 5/2018.
4. Pettersson, K., **Johansson, P.**, Sasic Kalagasidis, A. En introduktion till dagvattenflödesmodellering i gröna tak, Bygg och teknik, 4/2018
5. **Johansson, P.**, Adl-Zarrabi, B., Wallbaum, H., Kono, J. Superisoleringsmaterial i byggnader: Rekommendationer från IEA EBC Annex 65. Bygg och teknik, 2/2018.

6. Adl-Zarrabi, B., **Johansson, P.** (2017). Superisoleringsmaterial i byggnader: Rekommendationer från IEA EBC Annex 65. Eskilstuna: Statens Energimyndighet, Rapport 2017:24.
7. Femenias, P., **Johansson, P.**, Wahlgren, P., Thuvander L., Mörk, K. (2017). Renoveringsbehov i äldre hus: möjligheter för energieffektivisering och bevarande av kulturmiljö. Bygg och teknik, 2/2017, 32-37.
8. **Johansson, P.**, Sasic Kalagasidis, A., Pettersson, K., Krajnovic, S. and Kjellström, E. (2016) Tak i urbana miljöer för att minska risken för översvämning vid skyfall [Roofs in the urban environment to reduce the risk for flooding caused by storm water]. Bygg och teknik, 4/2016, 48-50.
9. **Johansson, P.**, Dalenbäck, J.-O., Wahlgren, P., Rydholm, W., Elgered, E., and Rosengren, P. (2015). Energideklarationerna behöver kvalitetssäkras [Energy certificates needs quality assurance]. Bygg och teknik, 2/2015, 44-45.
10. **Johansson, P.**, Geving, S., Hagentoft, C.-E., Jelle, B. P., Sasic Kalagasidis, A., and Time, B. (2015). Vakuumisoleringspaneler i gamla byggnader [Vacuum insulation panels in old buildings]. Bygg och teknik, 2/2015, 57-60.
11. **Johansson, P.** (2012). Tilläggsisolering av gamla byggnader med vakuumisolering [Retrofitting of old buildings using vacuum insulation panels]. Bygg och teknik, 5/2012, 26-31.
12. Stein, J., Hagentoft, C.-E., Arfvidsson, J., Harderup, L.-E., **Johansson, P.**, Mjörnell, K., Pallin, S., Pietrzyk, K., Sasic Kalagasidis, A., Ståhl, F. and Svennberg, K. (2011). Energieffektiviseringar – vilka risker finns och hur ska de hanteras? [Energy efficiency measures – what risks are there and how should they be addressed?]. Bygg och teknik, 2/2011, 30-33.

Other publications, reports

1. Adl-Zarrabi, B., **Johansson, P.** (2017) Superisoleringsmaterial i byggnader: Rekommendationer från IEA EBC Annex 65. Rapport 2017:24. Energimyndigheten.
2. **Johansson, P.**, Wahlgren, P., Dalenbäck, J.-O. (2016). Sweden – Differences between Measured and Calculated Energy Use in EPCs versus Building Permits (New field study/2016). Qualicheck report 2016.
3. **Johansson, P.** (2014). Building Retrofit using Vacuum Insulation Panels: Hygrothermal Performance and Durability. PhD Dissertation, Chalmers University of Technology, Department of Civil and Environmental Engineering, Gothenburg, Sweden.
4. **Johansson, P.** (2012). Retrofitting of old Exterior Wall with Vacuum Insulation Panels: Measurements of Thermal Properties, Moisture Performance and Practical Considerations. Licentiate thesis, Chalmers University of Technology, Department of Civil and Environmental Engineering, Gothenburg, Sweden.
5. Berge, A. and **Johansson, P.** (2012). Literature Review of High Performance Thermal Insulation (Report 2012:2). Chalmers University of Technology, Department of Civil and Environmental Engineering, Gothenburg, Sweden.
6. **Johansson, P.** (2012). Vacuum Insulation Panels in Buildings: Literature Review (Report 2012:1). Chalmers University of Technology, Department of Civil and Environmental Engineering, Gothenburg, Sweden.
7. **Johansson, P.** (2009). Roof Constructions with Controlled and Natural Ventilation: Field Measurements and Mold Growth Potential Assessment. Master's Thesis 2009:105, Chalmers University of Technology, Department of Civil and Environmental Engineering, Gothenburg, Sweden.

Supervision, list of candidates for graduate degrees

Post doc co-supervisor

1. Zakariaa Refaa (2019-): Thermal Energy Storage for Building Applications. Co-supervisor: Angela Sasic Kalagasidis.
2. Nikolaos Stathopoulos (2017-2018): Thermal Energy Storage for Building Applications. (Since 2018-10 working at Solar and Energy Systems Laboratory - Greek National Research Center "Demokritos" in Athens, responsible for PCM and TES R&D). Co-supervisor: Angela Sasic Kalagasidis.

PhD student main supervisor

1. Ali Karim (2019-): *Super insulation render for renovation and new constructions.*

PhD student co-supervisor

1. Raheb Mirzanamadi (2016-2019): PhD 2019-02-01: *Utilizing solar energy for anti-icing road surfaces using hydronic heating pavement with low temperature.* Licentiate 2017-03-07: *Ice free roads using hydronic heating pavement with low temperature: Thermal properties of asphalt concretes and numerical simulations.* (Since 2019-03 working at ÅF Infrastructure, road engineering). Main supervisor: Carl-Eric Hagentoft.
2. Kaj Pettersson (2016-): Potentials of using existing roofs for mitigation of storm water flooding risks in urban areas. Licentiate 2018-10-26: *Modeling stormwater transport through unsaturated green roof substrates.* Main supervisor: Angela Sasic Kalagasidis.
3. Pepe Tan (2015-): Solar thermal storage with phase change materials for larger energy savings. Licentiate 2018-02-26: *On the Design Considerations for Thermal Energy Storage with Phase Change Materials: Material Characterization and Modelling.* Main supervisor: Angela Sasic Kalagasidis.

MSc thesis main supervisor

1. Bjartur Guangze Hu, 2017. *Impact of facade glazing on Energy Demand & Indoor Environment Quality - Process for early glazing design of office buildings*
2. Augustine Lauby, 2013. *Retrofitting an old warehouse using vacuum insulation panels: Hygrothermal analysis and life cycle cost assessment.*
3. Hannes Nyberg, 2011. *Thermal bridges at foundations: Evaluation of heat calculation methods.*

MSc thesis co-supervisor

1. Filippa Svensson, 2017. *DetailDrawings - A Digital Repertoire and Source for Knowledge Sharing.* (MP Architecture).
2. Gustav Thuresson, 2017. *Energy use in a re-renovated building from 1910 - A parametric study using numerical simulations.*
3. Robert Paberit, Johan Öjeborn, 2016. *Detecting State of Charge in PCMs - Experimental investigation of changes in chemical and physical properties during phase transitions.*
4. Lukas Lång, Efraim Sandgren, 2016. *Renovation of brick buildings constructed 1870-1930 - Investigation of the thermal envelope in renovated and re-renovated dwellings.*
5. Kaj Pettersson, 2015. *Simulating wind-driven rain on building facades using Eulerian multiphase with standard $k - \epsilon$ turbulence model.*
6. Emma Brycke, Jannicke Nilssen, 2015. *Assessment of Co-heating Test - A Practical Method to Evaluate the In-situ Heat Transfer Coefficient in Dwellings.*

BSc thesis main supervisor (Civil Engineering, 5-year programme)

1. Elvira Gustafsson Staffan Heiker, Maja Sjöstedt, Rebecka Strutz, 2019. Byggföretags medvetenhet om byggmaterials miljöpåverkan (Construction companies' awareness of the environmental effects of building materials).
2. Pontus Johansson, Gabriella Josefsson, Maria Daoud Rajha, 2018. Energieffektivisering av tegelfasad med kulturhistoriskt värde (*Energy efficiency of brick façade with cultural historical value*).

BSc thesis main supervisor (Civil and Environmental Engineering, 3-year programme)

1. Olof Nilsson, 2017. Hydrofob ytbehandling av tegel (*Hydrophobic surface treatment of brick facades*).
2. Fredrik Lindberg, Joachim Jakobsson, 2016. Solenergi inom lantbruk - Spannmålstorkning och mjölkkyllning (*Solar energy within agriculture - Grain drying and milk cooling*).

BSc thesis co-supervisor (Civil and Environmental Engineering, 3-year programme)

1. Caroline Browall, Linnéa Lindh, 2015. Energianvändning i enbostadshus - Skillnader mellan beräknad och uppföljd energianvändning i Lerums kommun (*Energy use in single family houses - Differences between calculated and measured energy use in Lerum Municipality*).
2. Jimmy Forsberg, Remi Sörensen, 2012. VIP-paneler och högeffektiva isoleringsmaterial. Analys och mätningar av Vakuumisoleringspaneler (*VIP-panels and high-efficient insulation materials - Analysis and measurements*).
3. Andreas Agstrand, Leo Odby, 2011. Studie av vakuumisoleringspaneler i ytterväggskonstruktioner (*Study of vacuum insulation panels in exterior wall construction*).

Internship students (3 months) main supervisor

1. Mathis Gelot, 2018, École Nationale Supérieure d'Ingénieurs de Poitiers
2. Claire Choplin, 2016, École Nationale Supérieure d'Ingénieurs de Poitiers
3. Paul-Clement Rivère, 2015, École d'ingénieurs de l'Université Savoie Mont Blanc

Teaching, list of undergraduate courses

Bachelor's Programmes TKSAM Civil Engineering, TISAM Civil and Environmental Engineering, TKATK Architecture and Engineering, TAFFS Business Development and Entrepreneurship

Y1, VBF051 Byggande i samhället (*Building in society*). 120 students. Supervisor group work, booking study visits. Examiner Mihail Serkitjis.

Y1, BOM195 Byggnadsmaterial (*Building materials*). 260 students. Supervisor for laboratory experiments, examination. Examiner Ingemar Segerholm.

Y2, VBF019 Byggnadsfysik (*Building physics*). 30 students. Supervisor for construction exercise, examination. Examiner Paula Wahlgren.

Y2, BOM101 Byggnadsfysik, inneklimat och tekniska system (*Building physics, indoor climate and technical systems*). 120 students. Supervisor for construction exercise, written examination. Examiner Bijan Adl Zarrabi/Paula Wahlgren.

Y2, BOM265 Byggnadsteknologi (*Building technology*). 230 students. Supervisor for construction exercise, written examination. Examiner Bijan Adl Zarrabi.

Master's Programme MPSEB Structural Engineering and Building Technology

Y4, BOM285 Building performance: Design and assessment, 7.5 credits. 60 students. Compulsory course. Course development, lecturer, supervisor, course administration, responsible for 2 course weeks, oral/written examination. Examiner Paula Wahlgren. (2015-)

Y4, VBF021 Building Physics, Advanced Course. 20 students. Elective course. 2h lecture and exercise on super insulation materials, internal insulation. Examiner Angela Sasic Kalagasidis.

Y5, BOM175 Building technology engineering, 7.5 credits. 16 students. Elective course. Course development, lecturer, supervisor, course administration, oral/written examination. Examiner Pär Johansson. (2018-)

Bachelor's Programme TKARK Architecture, 80-90 students, examiner Paula Wahlgren

Y1, ARK253 Arkitektur, miljö och hållbar utveckling (*Architecture, environment and sustainable development*). Lecture energy in buildings, tutor and critique exercise.

Y1, AFT062 Boendets rum (*Space for living*). Lectures in Building physics, building envelope, tutor, examination.

Y2, ARK064 Bevarande och omvandling (*Renovation and urban revitalization*). Lectures in Building physics, heat and moisture transfer, internal insulation, tutor, examination.

Y2, ARK063 Stadsbostaden (*Housing in an urban context*). Lectures in Building physics, energy balance for buildings, tutor, examination.

Research funding, list of research grants

Research grants

2019 – Energimyndigheten: Optimized design and operation of thermal energy storage with phase change materials. Demonstration of a cold storage with PCM for an office building, 2 300 kSEK (Angela Sasic Kalagasidis)

2018 – Formas: Innovative compact heat storage technologies and management schemes for buildings connected to smart grids, 3 000 kSEK (Angela Sasic Kalagasidis)

2018 – Energimyndigheten E2B2 utlysning 1, programperiod 2: Super insulation render for renovation and new constructions, 3 456 kSEK (Pär Johansson)

2016 - Naturvårdsverket Innovationer för hållbara städer: Demonstrationsanläggning för lagring av kyla i fasändringsmaterial, 427 kSEK (Pär Johansson)

2016 - Energimyndigheten - enskilt projekt: Preserve and improve energy efficiency in listed buildings using super insulation materials, 2 132 kSEK (Pär Johansson)

2015 - Energimyndigheten E2B2 utlysning 3: Super-Insulating Materials in Building Components & Systems: Long-term Performance, IEA-EBC Annex 65, 920 kSEK (Bijan Adl-Zarrabi) – my part 235 kSEK

2015 - Energimyndigheten Spara och Bevara etapp 3: Re-renovation: Possibilities for increased energy efficiency and the re-creation of cultural historical values in balance with modern demand for function, use, management and architectural aesthetics when once renovated multi-family housing are to be renovated a second time, 3 895 kSEK (Paula Femenías) – my part 465 kSEK

2015 - Formas Sustainable building and planning: Potentials of using existing roofs for mitigation of storm water flooding risks in urban areas, 4 211 kSEK (Angela Sasic Kalagasidis) – my part 252 kSEK

2014 - Energimyndigheten E2B2 utlysning 2: Evaluation and optimization of a heat storage with phase change materials for better energy management in buildings - field studies, modeling and laboratory experiments, 3 583 kSEK (Angela Sasic Kalagasidis) – my part 119 kSEK

Number of grants below 300 kSEK, 2012–present: 16.

List of lectures (as an invited speaker), seminars, conference talks, and assignments as a peer reviewer of journal, conference

Popular science presentations (invited)

1. 'Framgångsrika metoder för energieffektivisering i äldre byggnader, Energideklarationsdagen (2019), Stockholm, 23 januari, 2019
2. 'Indlæg om IEA EBC Annex 65', Ingeniørforeningen Danmark, Köpenhamn, 24 januari, 2018
3. 'Superisolering i historiska byggnader', Byggnadsvårdens konvent (2017), Mariestad, 28 september, 2017
4. 'Vakuumpaneler på historiska byggnader', SIREn workshop: Energieffektivisering i praktiken – antikvariska aspekter (2017), Riksantikvarieämbetet, Stockholm, 19 juni, 2017
5. 'Lagring av Energi', Hushållningssällskapets Energigrupp workshop (2016). Uppsala, 4 October, 2016
6. 'Tunn superisolering ger nya möjligheter', Seminarium Conservator: Renovera för framtiden (2016). Kalmar, 6 April, 2016
7. 'Erfarenheter från arbetet med energideklarationer i andra EU-länder', Energideklarationsdagen (2016). Stockholm, 27 January, 2016
8. 'Blågrønt takprosjekt ved Chalmers tekniska högskola', Blågrøne tak - Erfaringar, utfordringer og utprøving TEMASAMLING (2015). NTNU/Sintef, Trondheim, 3 December, 2015.
9. 'Tilläggsisolering i hus med höga bevarandevärden', Workshop Superinsulation materials (2015). Chalmers, 2 December, 2015.
10. 'Verneverdige bygg kan også energieffektiviseres!', ZEB konferensen. (2014). Oslo, Norway, 4 September, 2014.
11. 'Gamla byggnader med vakuumisolering, mätningar och beräkningar', Fuktcentrums informationsdag. (2014). Stockholm, 8 May, 2014.
12. 'Energieffektivisering av byggnader med superisolering', Chalmers Energy Area of Advance, popular science lectures on the theme of energy. (2014). Göteborg, 24 April, 2014.
13. 'Gamla byggnader med vakuumisolering, mätningar och beräkningar', Fuktcentrums informationsdag. (2014). Göteborg, 25 March, 2014.
14. 'Gamla byggnader med vakuumisolering, mätningar och beräkningar', Fuktcentrums informationsdag. (2013). Lund, 20 November, 2013.
15. 'High performance thermal insulation materials: Reducing energy use in buildings', Chalmers Energy Conference. (2013). Göteborg, 16 May, 2013.
16. 'Invändig isolering med vakuumpaneler, Seminarium om miljonprogrammets fasader', Sveriges Murnings- och Putsentreprenörförening (SPEF) (2013). Göteborg, 9 April, 2013.
17. 'Tilläggsisolering av landshövdingehus med vakuumisolering', Seminarium hyresgästföreningen: Ekologisk stadsdel Majorna. (2011). Göteborg, 21 February, 2011.

Opinion papers (reach 543 000)

1. Replik debattartikel GP: Nej, småhus är inte mer energieffektiva www.gp.se/nyheter/debatt/1.4381909, 26 juni, 2017
2. Genmäle debattartikel GP: Viktigt att göra relevanta jämförelser <http://www.gp.se/nyheter/debatt/1.4412173> 4 juli, 2017

Peer reviewer in journals

Energy and Buildings (>20), Energies (>1), Canadian Journal of Civil Engineering (>1), Vacuum (>1), Selected Technical Papers (>1), Building Performance Simulation (1), Building and Environment (1), Cold Regions Science and Technology (1), Cultural Heritage (1), Frontiers of Architectural Research (1), BioResources (1), Wood Material Science and Engineering (1), Geosciences (1), Cultural Heritage (1).

Peer reviewer in conferences, memberships of scientific committees for conferences

Buildings XIV Conference, 2019, Clearwater Beach, FL, USA; IVIS 2019, Kyoto, Japan; Forum Wood Building Baltic 2019, Tallinn, Estonia; EEHB 2018, Visby, Gotland; IBPC 2018, Syracuse, USA; IVIS 2017, Paris, France; Buildings XIII 2016, Clearwater Beach, USA; IBPC 2015, Kyoto, Japan.

Opponent at PhD defense

2018-03-06 Klodian Gradeci, NTNU, Norway: *A probabilistic-based methodology for evaluation of timber façade constructions - The performance to withstand biodeterioration.*
Supervisors: Prof. Salvatore Carlucci (NTNU) and Dr. Berit Time (SINTEF).

Conference Session chairman

2019 Buildings XIV Conference, 9-12 December, Clearwater Beach, FL, USA.
2019 14th International Vacuum Insulation Symposium, September 19-20, 2019, Kyoto, Japan.
2017 14th International Conference on Durability of Building Materials and Components, XIV DBMC 2017, May 28-31, 2017, Ghent, Belgium

Commissions

2019- Coordinator for the Swedish Universities of the Built Environment (SBU)
2019- AIVC Board member
2018- CIB W040 'Heat and Moisture transfer in Buildings'. Member of working group.
2018- CIB W080 'Prediction of Service Life of Building Materials and Components'. Member of working group.
2016-2018 IEA ECES Annex 30. Thermal Energy Storage for Cost-Effective Energy Management and CO2 Mitigation. Member of working group.
2015- Co-profile leader and work package leader Thermal Energy Storage, Energy in Urban Development, Area of Advance Energy, Chalmers University of Technology. Budget 400 kSEK (2016), 300 kSEK (2017), 1100 kSEK (2018), 600 kSEK (2019).
2013-2017 IEA EBC Annex 65. Long Term Performance of Super-Insulating Materials in Building Components and Systems. Co-leader Task 3 and member of working group.
2009-2013 IEA ECBCS Annex 55. Reliability of Energy Efficient Building Retrofitting – Probability Assessment of Performance and Cost (RAP-RETRO). Member of working group. Took part in several common exercises on probabilistic tools.

Positions of trust

2019- Member of the board of Lundby City District Administration, City of Gothenburg
2019- Member of the HBTQ-council, City of Gothenburg, appointed by the municipal executive committee
2018- Chairman of the board of Lundby Socialdemokratiska förening.
2018- Treasurer in HBT Göteborgs Socialdemokratiska förening
2017- Treasurer in Lundby Socialdemokratiska stadsdelskrets

- 2017-2018 Member of the board of purchasing and procurement, City of Gothenburg
- 2016- Coordinator Yimby Göteborg, Yes in my backyard is an internet based network aiming at improving the urban environment in Göteborg. Yimby wants to be a positive and constructive voice in the debate. We participate in events, are invited speakers and write statements on development plans in the city.
- 2016-2017 Member of the board of Lundby Socialdemokratiska förening.
- 2016 Deputy auditor supervisor (revisorssuppleant) in Lundby Socialdemokratiska stadsdelskrets
- 2014- Chairman of the nominating committee of the housing cooperative BRF Verona in Göteborg.
- 2012-2013 Member of the board of the housing cooperative BRF Björkhagen in Kungsbacka
The cooperative owns a property with 92 apartments divided on 2 buildings, finished in 2010. I was one of 7 members in the board that took over the responsibility of the building from the construction company. I shared responsibility for the budget and managed the 49 parking places. I was also responsible for contacts with the municipality and construction company and managed claims for damages caused by the construction and building mistakes. I also managed the energy performance certificate and established a maintenance plan.
- 2011-2013 Member of the PhD student council at Civil and Environmental Engineering
I took part in monthly meetings and organized social activities for the PhD students at the department. I was one of two responsible for organizing a one-week study trip to Kiruna in 2011 for 20 PhD students.