

Peer-reviewed conference articles

2025

Huttunen, P. & Vinha, J. 2025. **Hygrothermal Performance of Wood Shavings as Thermal Insulation of Exterior Walls in Cold Climate**. International Building Physics Conference, IBPC 2024, Toronto, Canada.

2024

Raunima, T., Ketko, J., Laukkarinen, A. & Vinha, J. 2024. **The effects of nightly shutdown of ventilation on indoor air pressure difference conditions and TVOC and radon concentrations in Finnish schools and day-care centres**. RoomVent 2024 Conference, Stockholm, Sweden.

Salo, L., Silvonen, V., Raunima, T., Vojtisek-Lom, M., Ondracek, J., Topinka, J., Schins, R., Lepistö, T., Lintusaari, H., Saarikoski, S., Barreira, L., Hoivala, J., Markkula, L., Kulmala, I., Vinha, J., Karjalainen, P. & Rönkkö, T. 2024. **Particle number concentrations in office spaces around Europe**. 18th International Conference on Indoor Air Quality and Climate, INDOOR AIR 2024 - Honolulu, United States.

2023

Tuominen, E. & Vinha, J. 2023. **Ruggedness test made with mortars by free water intake test**. Proceedings of the 13th Nordic Symposium on Building Physics, NSB 2023, Aalborg, Denmark.

Sekki, P., Raunima, T. & Vinha, J. 2023. **Measurement and modelling of the moisture distribution in early-age concrete in the joint of composite beam and hollow core slab**. Proceedings of the 13th Nordic Symposium on Building Physics, NSB 2023, Aalborg, Denmark.

Karjala, P., Tuurala, I., Tuominen, E., Valovirta, I. & Vinha, J. 2023. **Hygrothermal properties of hollow brick masonry used in veneer**. Proceedings of the 13th Nordic Symposium on Building Physics, NSB 2023, Aalborg, Denmark.

Raunima, T., Tuominen, E. & Vinha, J. 2023. **Effects of coating a drying Calcium Sulphate Floor on the relative humidity of the Structure**. Proceedings of the 13th Nordic Symposium on Building Physics, NSB 2023, Aalborg, Denmark.

Moisio, T., Valovirta, I., Laukkarinen, A. & Vinha, J. 2023. **Hygrothermal performance of corners and floor junctions of timber-framed exterior walls: a simulation study.** Proceedings of the 13th Nordic Symposium on Building Physics, NSB 2023, Aalborg, Denmark.

Vänttinen, K., Tuominen, O., Tuominen, E., Valovirta, I., Karjala, P., Tuurala, I. & Vinha, J. 2023. **Equilibrium Moisture Content of High Strength Concrete Used in Hollow Core Slabs.** Proceedings of the 13th Nordic Symposium on Building Physics, NSB 2023, Aalborg, Denmark.

Rantanen, O., Järvisjö, S., Valovirta, I. & Vinha, J. 2023. **Cooling Demand and Indoor Temperatures of a Detached House in Southern Finland: Feasibility of a Monthly calculation Method.** Proceedings of the 13th Nordic Symposium on Building Physics, NSB 2023, Aalborg, Denmark.

2022

Silvonen, V., Salo, L., Kulmala, I., Vinha, J., Karjalainen, P. & Rönkkö, T. 2022. **Aerosol particles in a mechanically ventilated office in Helsinki, Finland—studying the infiltration of outdoor air and particle characteristics.** 11th International Aerosol Conference, IAC 2022. Athens, Greece.

Silvonen, V., Salo, L., Kulmala, I., Raunima, T., Karjalainen, P., Vinha, J., Nikka, M. & Rönkkö, T. 2022. **Characterization of indoor and outdoor particles in a mechanically ventilated office building.** Indoor Air 2022: The 17th international conference of Indoor Air Quality and Climate. Kuopio, Finland.

Salo, L., Silvonen, V., Raunima, T., Karjalainen, P., Vinha, J. & Rönkkö, T. 2022. **Measured LDSA concentrations indoors and outdoors at four schools/daycares in Finland.** Indoor Air 2022: The 17th international conference of Indoor Air Quality and Climate. Kuopio, Finland.

Huttunen, P. & Vinha, J. 2022. **Overview of a research project of novel and rapid in-situ U-value measurements.** 5th International Conference on Building Energy and Environment, COBEE 2022.

Glass, S., Kalamees, T., Pallin, S. & Vinha, J. 2022. **Water vapor generation in residential buildings: comparing probabilistic simulations and field measurements.** Proceedings Buildings XV Conference, Thermal Performance of the Exterior Envelopes of Whole Buildings. Clearwater Beach, Florida.

Kulmala, I., Silvonen, V., Salo, L., Rönkkö, T., Raunima, T. & Vinha, J. 2022. **Modelling of particle size resolved I/O ratio in an office building**. Indoor Air 2022: The 17th international conference of Indoor Air Quality and Climate. Kuopio, Finland.

Kilpikari, J., Raunima, T. & Vinha, J. 2022. **Field measurements of settled mineral fibers in public and office buildings**. Indoor Air 2022: The 17th international conference of Indoor Air Quality and Climate. Kuopio, Finland.

Silvonen, V., Salo, L., Raunima, T., Karjalainen, P., Vinha, J. & Rönkkö, T. 2022. **ISO EPM1 60 % grade type filter (F7) behavior in a building with air recirculation**. FILTECH 2022 Conference Proceedings. Cologne, Germany.

2021

Laukkarinen, A., Jokela, T., Moisio, T. & Vinha, J. 2021. **Hygrothermal simulations of timber-framed walls with air leakages**. 8th international Building Physics Conference, IBPC 2021.

Morishita-Steffen, N., Laukkarinen, A., Lewis, T., Wolny, S., Peuhkuri, R., Vinha, J. & Bednar, T. 2021. **CIB W040: International surveys considering moisture safety in buildings during design and construction**, E3S Web of Conferences, vol. 172, 17006.

2020

Laukkarinen, A., Vinha, J., Kalbe, K., Kesti, J., Kalamees, T. & Honkakoski, E. 2020. **Laboratory tests and modelling of mineral wool insulated steel sandwich panels**.

2019

Tuominen, E. & Vinha, J. 2019. **Calculation method to determine capillary properties of building materials with automatic free water intake test**, MATEC Web of Conferences, vol. 282, 02037.

Ruusala, A., Laukkarinen, A. & Vinha, J. 2019, **Comparison between calculated and billed building energy consumption values of schools and daycare centers**, MATEC Web of Conferences, vol. 282, 02085.

Tuominen, E., Tuominen, O., Vainio, M., Ruuska, T. & Vinha, J. 2019, **Thermal and moisture properties of calcium silicate insulation boards**, MATEC Web of Conferences, vol. 282, 02065.

Tuominen, E., Vinha, J. & Raunima, T. 2019, **Behavior of capacitive humidity sensors in monitoring the drying of concrete walls**, MATEC Web of Conferences, vol. 282, 02053.

Jokisalo, J., Sankelo, P., Vinha, J., Sirén, K. & Kosonen, R. 2019. **Cost optimal energy performance renovation measures in a municipal service building in a cold climate**. in CLIMA 2019 Congress: Bucharest, Romania, May 26-29, 2019. E3S Web of Conferences, vol. 111, EDP Sciences, REHVA World Congress, Bucharest, Romania, 26/05/19.

Vinha, J., Piironen, J. & Kiviste, M. 2018, **Impacts of Energy Efficient Constant Output Heating on the Moisture Conditions of Unoccupied Summer Cottages in Finland**. in Cold Climate HVAC 2018: Sustainable Buildings in Cold Climates. Springer Proceedings in Energy, Springer, pp. 79-86, Cold Climate HVAC conference, Kiruna, Sweden, 12/03/18.

2018

Marttila, T., Annala, P., Suonketo, J., Vinha, J. & Hyvärinen, A. 2018. **Updated Constructional Guidelines for Implementation of Healthy Building in Remediation in Finland**. Proceedings of the 15th Conference of the International Society of Indoor Air Quality & Climate (ISIAQ), Indoor Air 2018, Philadelphia, PA, USA, July 22–27, 2 p.

2016

Haverinen-Shaughnessy, U., Pekkonen, M., Turunen, M., Aaltonen, A. & Leivo, V. 2016. **Building energy retrofits, occupant health and wellbeing**. CIB World Building Congress 2016 Proceedings: Volume 2 Environmental Opportunities and challenges - Constructing commitment and acknowledging human experiences. Vol. 2, p. 679–687.

Du, L., Prasauskas, T., Leivo, V., Turunen, M., Kiviste, M., Martuzevicius, D. & Haverinen-Shaughnessy, U. 2016. **The effects of improved energy efficiency on indoor environmental quality in multi-family buildings**. Indoor Air 2016: The 14th international conference of Indoor Air Quality and Climate Ghent, Belgium July 3–8 2016. 737.

Leivo, V., Aaltonen, A., Turunen, M., Du, L., Kiviste, M. & Haverinen-Shaughnessy, U. 2016. **Ventilation rates and CO₂-levels before and after energy retrofit in Finnish apartment buildings**. CLIMA 2016 - Proceedings of the 12th REHVA World Congress. Aalborg. Aalborg University. Department of Civil Engineering: Volume 1. 192. Building Retrofit.

Leivo, V., Turunen, M., Aaltonen, A., Kiviste, M. & Haverinen-Shaughnessy, U. 2016. **Ventilation rates before and after energy retrofit in multi-family buildings in Finland**.

Indoor Air 2016: The 14th international conference of Indoor Air Quality and Climate. Ghent, Belgium, July 3–8 2016. 764

2015

Du, L., Leivo, V., Kiviste, M., Martuzevicius, D., Turunen, M., Prasauskas, T. & Haverinen-Shaughnessy, U. 2015. **Development of an assesment protocol: the impact of energy retrofits on indoor environmental quality and public health in the existing building stock.** Healthy Buildings 2015 Europe HB2015. International Society for Indoor Air Quality and Climate.

Martuzevicius, D., Prasauskas, T., Du, L., Täubel, M., Leivo, V., Kiviste, M. & Haverinen-Shaughnessy, U. 2015. **Energy efficient Modernization of Housing Stock: Demonstration of Impacts on Indoor Environmental Quality in Northern Europe.** Healthy Buildings Europe HB2015. International Society for Indoor Air Quality and Climate.

Turunen, M., Leivo, V., Aaltonen, A., Pekkonen, M., Prasauskas, T., Martuzevicius, D. & Haverinen-Shaughnessy, U. 2015. **Health assesment aspect on energy efficiency renovations.** Healthy Buildings Europe HB2015. International Society of Indoor Air Quality and Climate.

Leivo, V., Aaltonen, A., Kiviste, M., Du, L., Prasauskas, T., Martuzevicius, D. & Haverinen-Shaughnessy, U. 2015. **Insulate project - building assesment as a part of assesment impacts of energy efficiency on indoor environmental quality and health.** Healthy Buildings Europe HB2015. International Society for Indoor Air Quality and Climate.

Leivo, V., Kiviste, M., Aaltonen, A., Turunen, M. & Haverinen-Shaughnessy U. 2015. **Air pressure difference between indoor and outdoor or staircase in multi-family buildings with exhaust ventilation system in Finland.** 6th International Building Physics Conference, IBPC 2015.

Du, L., Leivo, V., Prasauskas, T., Turunen, M., Kiviste, M., Martuzevicius, D. & Haverinen-Shaughnessy U. 2015. **Energy retrofits in multi-family buildings in north-east Europe: the impacts on thermal conditions.** 6th International Building Physics Conference, IBPC 2015.

2014

Leivo, V., Haverinen-Shaughnessy, U., Martuzevicius, D., Prasauskas, T., Kiviste, M., Turunen, M., Pekkonen, M. & Aaltonen, A. 2014. **Assesment protocol development: impacts of**

energy efficiency on indoor environmental quality in multi-family buildings. World Sustainable Building Conference SB 14. October 28–30, 2014, Barcelona, Spain. 6 pages.

Du, L., Prasauskas, T., Leivo, V., Turunen, M., Aaltonen, A., Kiviste, M., Martuzevicius, D. & Haverinen-Shaughnessy, U. 2014. **Building Energy-efficiency Interventions in North-East Europe: Effects on Indoor Environmental Quality and Public Health.** The 13th International Conference on Indoor Air Quality and Climate (Indoor Air) 2014. July 7–12, 2014, Hong Kong: International Society for Indoor Air Quality and Climate.

Laukkarinen, A., Huttunen, P. & Vinha, J. 2014. **Evaluating the desired accuracy for mould index calculations and recommendations for crawlspace simulations.** Proceedings of the 10th Nordic Symposium on Building Physics, NSB 2014, Lund, Sweden, June 15–19, pp. 295–302.

Ojanen, T., Holopainen, R., Viitanen, H., Lehtovaara, J., Kero, P. & Vinha, J. 2014. **Methodology to ensure good indoor environment in energy efficient retrofitting.** Proceedings of the 10th Nordic Symposium on Building Physics, NSB 2014, Lund, Sweden, June 15–19, pp. 1197–1204.

Vinha, J. 2014. **New analysis method for moisture performance of envelope structures.** Proceedings of the 10th Nordic Symposium on Building Physics, NSB 2014, Lund, Sweden, June 15–19, pp. 1085–1092.

Kiviste, M. & Lindberg, R. 2014. **Application of phase change materials in building structures in Nordic climate.** 14th International Multidisciplinary Scientific Geoconference SGEM 2014. GeoConference on Nano, Bio and Green – technologies for a sustainable future. Volume II. Green Buildings Technologies and Materials. Best presentation award on section Green Design and Sustainable Architecture. (49–56) Sofia: STEF92 Technology Ltd.

2013

Huttunen, P. & Vinha, J. 2013. **Effect of natural convection on the thermal transmittance of exterior walls with air-permeable insulation.** Proceedings of Thermal Performance of the Exterior Envelopes of Whole Buildings XII, Clearwater Beach, Florida, USA, December 1–5. Session VII, 10 p.

Kiviste, M., Lindberg, R. & Leivo, V. 2013. **Effect of solar radiation on thermal performance of external wall structures based on long-term measured data.** Proceedings of the 6th international scientific conference Rural Development 2013: Innovations and Sustainability, November 28–29, 2013, Kaunas: Aleksandras Stulginskis University, Lithuania.

Martuzevicius, D., Prasauskas, T., Turunen, M., Leivo, V., Aaltonen, A., Krugly, E., Tichonovas, M., Sidaraviciute, R., Ciuzas, D., Pekkonen, M., Kiviste, M. & Haverinen-Shaughnessy, U. 2013. **Improving Energy Efficiency of Housing Stock: Demonstration of Impacts on Indoor Environmental Quality and Public Health in Northern Europe**. ASHRAE IAQ 2013: Environmental Health in Low Energy Buildings, October 15–18, 2013, Vancouver, British Columbia, Canada.

Ojanen, T., Holopainen, R., Viitanen, H., Lehtovaara, J., Kero, P. & Vinha, J. 2013. **Methodology to integrate energy efficiency, safe moisture performance and indoor environment quality in building renovation projects**. Proceedings of the 2nd Central European Symposium of Building Physics, CESBP 2013, Vienna, Austria, September 9–11, pp. 937–942.

Haverinen-Shaughnessy, U., Leivo, V., Martuzevicius, D., Kiviste, M. & Turunen, M. 2013. **Early results of a study on improving energy efficiency of housing stock, IEQ and public health in North-East Europe**. Proceedings of conference of ISEE, ISES and ISIAQ: Environment and Health: Bridging South, North, East and West, August 19–23, 2013, Basel, Switzerland.

Kiviste, M., Lindberg, R. & Leivo, V. 2013. **Improving calculations of building energy consumption based on ten year measured data**. Proceedings (volume 12) of the 12th International Scientific Conference Engineering for Rural Development. May 23–24, 2013, Jelgava, Latvia.

Kiviste, M., Leivo, V., Haverinen-Shaughnessy, U., Aaltonen, A. & Martuzevicius, D. 2013. **Sustainable Renovation in Urban Environment: Current Situation in Finnish Case Study Buildings**. Proceedings of Conference SB13 Oulu: Sustainable Procurement in Urban Regeneration and Renovation, May 21–25, 2013, Oulu, Finland.

Turunen, M., Kiviste, M., Pekkonen, M., Leivo, V., Aaltonen, A. & Haverinen-Shaughnessy, U. 2013. **The influence of energy efficiency improvements to the indoor air quality and public health in Europe, situation of the project (In Finnish)**. Paper for Finnish Indoor Air Quality seminar, FISIAQ 2013. March 13, 2013, Helsinki, Finland. 6 pages.

2012

Prasauskas, T., Martuzevicius, D., Krugly, E., Ciuzas, D., Haverinen-Shaughnessy, U., Turunen, M., Leivo, V., Aaltonen, A. & Kiviste, M. 2012. **Variations of PM concentrations in Lithuanian multifamily buildings: Preliminary results from INSULAtE study**. Poster presentation in European Aerosol Conference 2012. September 2–7, 2012. Granada, Spain.

Haverinen-Shaughnessy, U., Turunen, M., Leivo, V. & Martuzevicius, D. 2012. **Assessment of Impacts of Improving Energy Efficiency on Indoor Environmental Quality and Public Health in Europe: the INSULAtE protocol**. HB2012 Healthy Buildings conference, 8–12 July, Brisbane, Australia.

Leivo, V., Aaltonen, A., Turunen, M., Pekkonen, M., Haverinen-Shaughnessy, U. & Kiviste, M. 2012. **The influence of improved energy efficiency to the indoor air quality and public health in Europe (In Finnish)**. Paper for Finnish Indoor Air Quality seminar, FISIAQ 2012. March 14, 2012, Espoo, Finland. 5 pages.

2011

Martuzevicius, D., Prasauskas T., Turunen M., Krugly E., Seduikyte L., Täubel M., Leivo V. & Haverinen-Shaughnessy, U. 2011. **Assessment of PM Levels in the Process of Energy Efficiency Improvement of Apartment Buildings: Measurement Approach in INSULAtE Project**. NOSA2011 conference, 9–11 November. Tampere.

Leivo, V., Turunen, M., Prasauskas, T., Pekkonen, M., Martuzevicius, D., Aaltonen, A., Haverinen-Shaughnessy, U. & Kiviste, M. 2011. **Assessment of Improving Energy Efficiency of Buildings: Impacts on Indoor Environmental Quality and Public Health in Europe**. Proceedings of the SB11: World Sustainable Building Conference, October 18–21, 2011, Helsinki, Finland. 9 pages.

Aaltonen, A., Lähdesmäki, K. & Vinha, J. 2011. **Air tightness of structural elements and internal air leakages in a multi-apartment building**. Proceedings of the 9th Nordic Symposium on Building Physics, NSB 2011, Tampere, Finland, May 29–June 2, Vol. 1, pp. 79–86.

Laukkarinen, A. & Vinha, J. 2011. **Comparison of calculated and measured values of wall assembly tests using Delphin 5**. Proceedings of the 9th Nordic Symposium on Building Physics, NSB 2011, Tampere, Finland, May 29–June 2, Vol. 1, pp. 155–162.

Lähdesmäki, K., Salminen, K., Vinha, J., Viitanen, H., Ojanen, T. & Peuhkuri, R. 2011. **Mould growth on building materials in laboratory and field experiments**. Proceedings of the 9th Nordic Symposium on Building Physics, NSB 2011, Tampere, Finland, May 29–June 2, Vol. 2, pp. 859–866.

Manelius, E. & Vinha, J. 2011. **The effect of leakage through the sealant in the cup test method**. Proceedings of the 9th Nordic Symposium on Building Physics, NSB 2011, Tampere, Finland, May 29–June 2, Vol. 2, pp. 601–608.

Ojanen, T., Peuhkuri, R., Viitanen, H., Lähdesmäki, K., Vinha, J. & Salminen, K. 2011.

Classification of material sensitivity – New approach for mould growth modelling.

Proceedings of the 9th Nordic Symposium on Building Physics, NSB 2011, Tampere, Finland, May 29–June 2, Vol. 2, pp. 867–874.

Viitanen, H., Vinha, J. et al. & Peuhkuri 2011. **Mould growth modeling of building structures using sensitivity classes of materials.** Proceedings of 12th International Conference on Building Materials and Components, Porto, Portugal, April 12–15. Session II-B, 10 p.

2010

Ojanen, T., Viitanen, H., Peuhkuri, R., Lähdesmäki, K., Vinha, J. & Salminen, K. 2010. **Mould growth modeling of building structures using sensitivity classes of materials.**

Proceedings of Thermal Performance of the Exterior Envelopes of Whole Buildings XI International Conference, Buildings XI, Clearwater Beach, Florida, USA, December 5–9. Session II-B, 10 p.

Järnström, H., Lähdesmäki, K., Vinha, J., Puolakka, M., Halonen, L., Viitanen, H., Tuomaala, P. & Holopainen, R. 2010. **A concept for ensuring high indoor environment quality and structure moisture performance in energy efficiency renovations.** Proceedings of Sustainable Community – buildingSMART, SB10 Finland, Helsinki, September 22–24, pp. 66–67.

Vinha, J., Korpi, M., Salminen, K. & Kurnitski, J. 2010. **Air tightness of residential buildings in Finland.** Proceedings of International Conference on Building Envelope Systems and Technologies, ICBEST 2010, Vancouver, Canada, Vol. 2, pp. 279–280.

2008

Eskola, L., Kurnitski, J. & Vinha, J. 2008. **Air change rate in Finnish houses and apartments.** Proceedings of the 11th International Conference on Indoor Air Quality and Climate, Indoor Air 2008, Copenhagen, Denmark, August 17–22, paper ID 958, 7 p.

Kalamees, T., Kurnitski, J., Keto, M., Eskola, L., Jokisalo, J., Korpi, M. & Vinha, J. 2008. **Indoor temperature and humidity conditions in Finnish dwellings.** Proceedings of the 11th International Conference on Indoor Air Quality and Climate.

Aho, H., Vinha, J. & Korpi, M. 2008. **Implementation of airtight constructions and joints in residential buildings.** Proceedings of the 8th Symposium on Building Physics in the Nordic Countries.

Kalamees, T., Korpi, M., Eskola, L., Kurnitski, J. & Vinha, J. 2008. **The distribution of the air leakage places and thermal bridges in Finnish detached houses and apartment buildings.** Proceedings of the 8th Symposium on Building Physics in the Nordic Countries.

Korpi, M., Kalamees, T., Vinha, J. & Kurnitski, J. 2008. **The influence of exterior walls on the level and stability of indoor humidity and temperature in detached houses.** Proceedings of the 8th Symposium on Building Physics in the Nordic Countries.

Korpi, M., Vinha, J. & Kurnitski, J. 2008. **Airtightness of single-family houses and apartments.** Proceedings of the 8th Symposium on Building Physics in the Nordic Countries.

Lähdesmäki, K., Vinha, J., Viitanen, H., Salminen, K., Peuhkuri, R., Ojanen, T., Paajanen, L., Iitti, H. & Strander, T. 2008. **Development of an improved model for mould growth: Laboratory and field experiments.** Proceedings of the 8th Symposium on Building Physics in the Nordic Countries.

Viitanen, H., Vinha, J., Peuhkuri, R., Ojanen, T., Lähdesmäki, K. & Salminen, K. 2008. **Development of an improved model for mould growth: Modelling.** Proceedings of the 8th Symposium on Building Physics in the Nordic Countries.

Vinha, J. 2008. **Analysis method to determine sufficient water vapour retarder to timber-framed walls.** Proceedings of the 8th Symposium on Building Physics in the Nordic Countries.

Viitanen, H., Vinha, J., Salminen, K., Ojanen, T., Peuhkuri, R., Paajanen, L. & Lähdesmäki, K. 2008. **Moisture and biodeterioration risk of building materials and structures.** BEST 1 Conference Building Enclosure Science & Technology, June 10–12, 2008 Minneapolis, USA

2007

Kalamees, T., Kurnitski, J., Vinha, J. & Korpi, M. 2007. **Indoor climate conditions in lightweight detached houses in cold climate.** Proceedings of IAQVEC 2007, The Sixth International Conference on Indoor Air Quality, Ventilation & Energy Conservation in Buildings, Sustainable Built Environment, Sendai, Japan, October 28–31, 2007.

Eskola, L., Kurnitski, J., Jokisalo, J., Jokiranta, K., Palonen, J. & Vinha, J. 2007. **Room airflow rates in Finnish houses.** Proceedings of Clima 2007 WellBeing Indoors, 10–14 June, Helsinki, Finland.

Jokisalo, J., Kalamees, T., Kurnitski, J., Eskola, L., Jokiranta, K. & Vinha, J. 2007. **Infiltration simulation in a detached house – empirical model validation.** Proceedings of Clima 2007 WellBeing Indoors, 10–14 June, Helsinki, Finland.

Jokisalo, J., Kurnitski, J. & Vinha, J. 2007. **Building leakage, infiltration and energy performance analyses for Finnish detached houses**. Proceedings of Clima 2007 WellBeing Indoors, 10–14 June, Helsinki, Finland.

Kalamees, T., Kurnitski, J., Jokisalo, J., Eskola, L., Jokiranta, K. & Vinha J. 2007. **Air pressure conditions in Finnish residences**. Proceedings of Clima 2007 WellBeing Indoors, 10–14 June, Helsinki, Finland.

2006

Leivo V. & Rantala J. 2006. **Heat flow into the ground from the heated slab-on-ground structure – field measurements**. Research in Building Physics and Building Engineering, Proceedings of the Third International Building Physics Conference, Montreal, Canada, pp. 497–500.

Leivo V. & Rantala J. 2006. **Microbiological Growth beneath Slab-on-ground Structures**. Healthy Buildings 2006. Proceedings, Vol II, pp. 349–352. ISIAQ. Lisbon, Portugal.

2005

Kalamees, T., Kurnitski, J. & Vinha, J. 2005. **Indoor humidity loads in Finnish detached houses**. Proceedings of the 7th Symposium on Building Physics in the Nordic Countries. Vol. 2, pp. 1163–1170, Reykjavik, Iceland.

Leivo, V. & Rantala J. 2005. **Heat Losses from a Slab-on-ground with a Low Temperature Floor Heating System in Nordic Climate**. Proceedings of the 2005 World Sustainable Building Conference, SB05. Pp. 23–30 (CD), Tokyo, Japan.

Leivo, V. & Rantala J. 2005. **Initial drying period of an in situ cast massive concrete ground slab and the fulfilment of the covering criteria**. Proceedings of Third International Structural Engineering and Construction Conference, ISEC03, Collaboration and Harmonization in Creative Systems. Pp. 245–252, Shunan, Japan.

Lindberg, R. & Leivo, V. 2005. **Building energy consumption and thermal performance of the Autoclaved Aerated Concrete (AAC) exterior walls**. Proceedings of the 4th International Conference on Autoclaved Aerated Concrete. Pp. 519–523, Kingston University, London, UK.

2004

Kalamees, T., Kurnitski, J. & Vinha., J. 2004. **Indoor Temperature, Humidity, and Moisture Production in Lightweight Timber-Framed Detached Houses**. Proceedings of IX

international Conference on Performance of Exterior Envelopes of Whole buildings. Session IIA, 13 p. (CD), Florida, USA.

Korpi, M., Vinha, J. & Kurnitski, J. 2004. **Airtightness of Timber-Framed Houses with Different Structural Solutions**. Proceedings of IX international Conference on Performance of Exterior Envelopes of Whole buildings. Session XIB, 6 p. (CD), Florida, USA.

Valovirta, I. & Vinha, J. 2004. **Water Vapor Permeability and Thermal Conductivity as a Function of Temperature and Relative Humidity**. Proceedings of IX international Conference on Performance of Exterior Envelopes of Whole buildings. Session XIII A, 16 p. (CD), Florida, USA.

Vinha, J. & Käkelä, P. 2004. **Drying Rate of Timber-Framed External Wall Assemblies in Nordic Climate**. Proceedings of IX international Conference on Performance of Exterior Envelopes of Whole buildings. Session VIA, 11 p. (CD), Florida, USA.

2003

Rantala, J. & Leivo, V. 2003. **Moisture behavior of slab-on-ground structures**. Proceedings of the Second International Conference on Building Physics. Pp. 345–351, Antwerpen, Belgium.

Vinha, J. & Kalamees, T. 2003. **Principles to Analyse The Moisture Performance of Timber-Framed External Wall Assembly Due to Diffusion**. Proceedings of the Ninth Conference on Building Science and Technology, Design and Construction of Durable Building Envelopes. Pp. 123–140, Vancouver, Canada.

2002

Käkelä, P. & Vinha, J. 2002. **Outdoor Field Test of Timber-Framed External Wall Element Structure**. Proceedings of the 6th Symposium on Building Physics in the Nordic Countries. Vol. 2, pp. 843–849, Trondheim, Norway.

Valovirta, I. & Vinha, J. 2002. **Hemp as Insulation Material in Wooden Houses**. Proceedings of the 6th Symposium on Building Physics in the Nordic Countries. Vol. 2, pp. 469–472, Trondheim, Norway.

Vinha, J., Mikkilä, A., Valovirta, I. & Lindberg, R. 2002. **Water Vapour Resistance of Materials as a Function of Humidity**. Proceedings of the 6th Symposium on Building Physics in the Nordic Countries. Vol. 2, pp. 501–508, Trondheim, Norway.

Vinha, J., Käkelä, P. & Lindberg, R. 2002. **Moisture Transport in Timber-Framed External Wall Structures in Nordic Climate – Laboratory Tests**. Proceedings of the 6th Symposium on Building Physics in the Nordic Countries. Vol. 2, pp. 595–602, Trondheim, Norway.

2001

Leivo, V., Lindberg, R., Rantala, J. & Hartikainen, J. 2001. **Moisture Behavior of Ground Floor Structures**. Proceedings of International Conference on Indoor Air Quality 2001, Moisture, Microbes and Health Effects: Indoor Air Quality and Moisture in Buildings. 7 p. (CD), San Francisco, USA.

Vinha, J., Käkelä, P. & Lindberg, R. 2001. **Moisture Behavior of Timber-Framed External Wall Structures in Nordic Climate**. Proceedings of International Conference on Indoor Air Quality 2001, Moisture, Microbes and Health Effects: Indoor Air Quality and Moisture in Buildings. Session 4, 8 p. (CD), San Francisco, USA.

Käkelä, P., Vinha, J. & Lindberg, R. 2001. **Moisture Performance of Timber-Framed External Wall Element Structure Under Finnish Outdoor Climate, Field Test**. Proceedings of International Conference on Building Envelope Systems and Technologies, ICBEST 2001. Vol. 1., pp. 217–221, Ottawa, Canada.

Vinha, J., Käkelä, P. & Lindberg, R. 2001. **Moisture Performance of Timber-Framed External Wall Structures**. Proceedings of International Conference on Building Envelope Systems and Technologies, ICBEST 2001. Vol. 1., pp. 137–142, Ottawa, Canada.

2000

Binamu, A. & Lindberg, R. 2000. **The Influence of Variations in Base Temperature Over the Calculated Ventilation Energy Demand**. Proceedings of 21st AIVC Conference, Innovations in Ventilation Technology. 10 p., Hague, Netherlands.

Binamu, A. & Lindberg, R. 2000. **Efficiency of Ventilation Systems with Heat Recovery as a Function of the Air Tightness of the Building Envelope**. Proceedings of Roomvent 2000 Conference, Air Distribution in Rooms. Ventilation for Health and Sustainable Environment. Pp. 1061–1066, Berkshide, UK.

Binamu, A. 2000. **Ventilation systems with heat recovery capabilities are beneficial but, where and when?** Proceedings of Healthy Buildings 2000 Conference, Microbes, Moisture and Building Physics. Vol. 2, pp. 315–320, Espoo, Finland.

Kilpeläinen, M., Luukkonen, I., Vinha, J. & Käkelä, P. 2000. **Heat and Moisture Distribution at the Connection of Floor and External Wall in Multi-Storey Timber Frame Houses.**

Proceedings of World Conference of Timber Engineering, WCTE 2000. Session 5, 9 p. (CD), Whistler Resort, Canada.

Leivo, V., Rantala, J., Lindberg, R. & Hartikainen, J. 2000. **Moisture behavior of the subsoil under the ground floor structures.** Proceedings of Healthy Buildings 2000 Conference, Microbes, Moisture and Building Physics. Vol. 3, pp. 225–230, Espoo, Finland.

Niemi, H., Haverinen, U., Koivisto, J., Toivola, M., Husman, T., Seeste, J. Korkalainen, H., Vepsäläinen, K. & Lindberg, R. 2000. **Moisture problems in hospital washrooms – improving durability of gypsum board-covered wall structure.** Proceedings of Healthy Buildings 2000 Conference, Microbes, Moisture and Building Physics. Vol. 3, pp. 191–196, Espoo, Finland.

Pessi, A., Suonketo, J., Pentti, M., Kurkilahti, M., Rantio-Lehtimäki, A. 2000. **Microbial growth in insulation of external walls: modelling the indoor air biocontamination sources.** Proceedings of Healthy Buildings 2000 Conference, Microbes, Moisture and Building Physics. Vol. 3, pp. 295–300, Espoo, Finland.

Suonketo, J., Pessi, A. 2000. **The air flows and microbial contamination to indoor air from sandwich facade – case study.** Proceedings of Healthy Buildings 2000 Conference, Microbes, Moisture and Building Physics. Vol. 3, pp. 147–152, Espoo, Finland.

Vinha, J. 2000. **Drying of timber-framed wall structures.** Proceedings of Healthy Buildings 2000 Conference, Microbes, Moisture and Building Physics. Vol. 3, pp. 203–204, Espoo, Finland.

Vinha, J. & Käkelä, P. 2000. **Water vapour transmission in wall structures due to diffusion and convection.** Proceedings of Healthy Buildings 2000 Conference, Microbes, Moisture and Building Physics. Vol. 3, pp. 197–202, Espoo, Finland.

Wahlman, J., Suonketo, J. & Lindberg, R. 2000. **Moisture flow through different floor structures and its influence on floor coverings.** Proceedings of Healthy Buildings 2000 Conference, Microbes, Moisture and Building Physics. Vol. 3, pp. 133–134, Espoo, Finland.