

**FUKTCENTRUM**

## Välkomna Fuktcentrums informationsdag 2012

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Tid	Program	
09:20	Välkommen Viktiga händelser under året Gamla erfarenheter Dagens huvudtema	Anders Kumlin Lars-Erik Harderup Kenneth Sandin Lars-Erik Harderup
10:15	Byggefukt	Peter Brander
10:45	Kort paus med kaffe och frukt	
11:00	Resultat från mätningar och beräkningar på demonstrationshus Jämförelser mellan mätningar och beräkningar av energibehov	Carl-Magnus Capener Stephen Burke
12:00	Lunch	

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Tid	Program	
13:00	Problem i nya lättbetonghus Fuktens inverkan på energibehovet i nya byggnader	Anders Kumlin Folke Björk
14:00	En exposé över problem och möjligheter med målade tråfasader Energi och fukt i tegelfasader	Stefan Hjort Per Andersson
15:00	Kaffe och fika	
15:20	Vatteninträngning genom sprickor på putsad stenullisolering – Vart tar vattnet vägen? Mögelväxt under varierande fukt- och temperaturförhållanden Fuktsäkra tråregelväggar och verifierade beräkningsverktyg	Johan Jönsson Lars-Olof Nilsson Olof Mundt-Petersen
16:20	Nytt om NSB2014	Jesper Arvidsson
16:30	Slut för dagen	

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## Viktiga händelser under 2011 och 2012

En översiktlig tillbakablick av vad  
som har hänt inom fuktområdet.

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## Rapporter

*Magnus Åhs* Fuktgenskaper för byggnadsmaterial - en litteraturstudie Report, Byggnadsmaterial LTH, Lunds universitet, 2012.  
*Göran Fagerlund* Effect of water-cement ratio, air content and age on the risk of frost damage of concrete : some experimental studies Report, Div of Building Materials LTH, Lund university, 2012.  
*Magnus Åhs* Förstudie - Mätsystem med trådlösa sensorer ingjutna i betong Report, Avd Byggnadsmaterial LTH, Lunds universitet, 2011.  
*Göran Fagerlund* Effect of cement type on durability of concrete - results of a cooperative test Report, Div of Building Materials LTH, Lund university, 2011.  
*Peter Johansson* Uttorkning av betong : laboratoriestudien bakom TorkaS3 Report, Byggnadsmaterial LTH, Lunds universitet, 2012.

**FUKTCENTRUM**

*Göran Fagerlund* Ytreparation av betongkonstruktioner: metoder, beständighet Report, Avd Byggnadsmaterial LTH, Lunds universitet, 2011.  
*Göran Fagerlund* NOVACEM : Magnesiumbaserat cement med gynnsam miljöprofil - bedömning av cementets potential Report, Avd Byggnadsmaterial LTH, Lunds universitet, 2011.  
*Göran Fagerlund* The threshold chloride level for initiation of reinforcement corrosion in concrete : some theoretical considerations Report, Div of Building Materials LTH, Lund university, 2011.  
*Göran Fagerlund, Manouchehr Hassanzadeh* Self-healing of cracks in concrete exposed to different types of water : effect on chloride penetration Report, Div of Building Materials LTH, Lund university, 2011.

**FUKTCENTRUM**

Hagentoft CE, Sasic Kalagashidis A. Chapter: Hygrothermal Conditions and Mould Growth Potential in Cold Attics: Impact of Weather, Building System and Construction Design Characteristics in Building Pathology and Rehabilitation. Editors: Freitas, V. Peixoto de, Costa, Anibal, Delgado, João M.P.Q. Springer. 2012.

**Claes Bankvall, Boken om luft. 2012.**

Kehler, M. Pallin, S. Extended version of Condensation Risk of Mechanically Attached Roof Systems in Cold Climate Zones, Intended to be published in Drying and Wetting of Building Materials and Components, Editors: V. Peixoto de Freitas, J.M.P.Q. Delgado. 2013.

Olaya Ciruela Pérez. The behavior of aerogel blankets as insulation material in external walls at high temperatures, Master of Science Thesis in the Master's Programme Structural Engineering and Building Technology, Chalmers. Includes chapter MOISTURE PROPERTIES (Determination of aerogel blankets vapor permeability). Examensarbete

**FUKTCENTRUM**

Thelandersson S, Suttie E, Viitanen H, Jermer J, Isaksson T, Gröll G. Engineering design guideline for wood in outdoor above ground applications, Report TVBK-3060, SP-Report 2011:15, Lund, Sweden. 2011

Thelandersson S, Isaksson T, Suttie E, Frühwald E, Toratti, T, Gröll G, Viitanen H, Jermer, J. Background document for "Engineering design guideline for wood in outdoor above ground applications". Report TVBK-3061, Lund, Sweden. 2011

Suttie E, Englund F, Viitanen H, Thelandersson S, Jermer J, Podgorski L, Gröll G, Bollmus S, Alfredsen G, Hofstetter K. Exterior wood cladding: Five keys for extending service life. 2011

Jeppsson, H, Lindahl, K. Klimatförändringarnas inverkan på mögel- och rötangrepp. Examensarbete. LTH-rapport TVBK-5193. 2011

Kjellberg, N. Mögelriskanalys av ytterväggar. Undersökning av beräkningsmetoder och kritiska parametrar. Examensarbete. LTH-rapport TVBK-5200. 2011

**FUKTCENTRUM**

Johansson P. Critical Moisture Conditions for Mould Growth on Building Materials. TVBH-3051 Lic. 2012.

Hägerstedt S. O. Fuktssäkra träkonstruktioner. Vägledning för utformning av tråbaserade väggar. TVBH-3052, 2012.

Mundt-Petersen S. O. Literature study / State-of-the-art. Mould and moisture safety in constructions. TVBH-3053, 2012.

Olsson F. Fuktberäkningar avbärande glas- och träparti. TVBH-5066, 2012. Examensarbete.

Al Hamami M. Fuktssäkerhetsgranskning av nybyggnation -Fallstudie av ett byggprojekt i Skåne. TVBH-5067, 2012. Examensarbete.

**FUKTCENTRUM****Artiklar**

Katarzyna Dymek, Petr Dejmek, Valentina Panarese, Antonio A. Vicente, Lars Wadsö, Christine Finnie, Federico Gomez Effect of pulsed electric field on the germination of barley seeds - LWT-Food Science and Technology, 2012, 47, 1, 161 - 166

Jörgen Falk, Kenneth Sandin Ventilated rainscreen cladding: Measurements of cavity air velocities, estimation of air change rates and evaluation of driving forces Journal article, Building and Environment, 2012

Lars-Olof Nilsson, Jens M. Frederiksen On uncertainties and inaccuracies in empirical chloride ingress modelling Journal article, European Journal of Environmental and Civil Engineering, 2011, 15, 7, 981 - 990

Sebastian Björklund, Lars Wadsö A calorimetric method to determine water activity Journal article, Review of Scientific Instruments, 2011, 82, 11, 114903

**FUKTCENTRUM**

E. Dubina, Lars Wadsö, J. Plank A sorption balance study of water vapour sorption on anhydrous cement minerals and cement constituents Journal article, Cement and Concrete Research, 2011, 41, 11, 1196 - 1204

Yoshifumi Hosokawa, Kazuo Yamada, Björn Johannesson, Lars-Olof Nilsson Development of a multi-species mass transport model for concrete with account to thermodynamic phase equilibria Journal article, Materials and Structures, 2011, Online 2011-03-18

Yujing Li, Lars Wadsö Simultaneous measurements of colony size and heat production rate of a mould (*Penicillium brevicompactum*) growing on agar Journal article, Journal of Thermal Analysis and Calorimetry, 2011, 104, 1, 105 – 111

Lars Wadsö, Yujing Li, Xi Li Isothermal Titration Calorimetry in the Student Laboratory Journal article, Journal of Chemical Education, 2011, 88, 1, 101 - 105

**FUKTCENTRUM**

Natalia Volkova, Victor Ibrahim, Rajni Hatti-Kaul, Lars Wadsö Water sorption isotherms of Kraft lignin and its composites Journal article, Carbohydrate Polymers, 2011, 87, 2, 1817 - 1821

Göran Fagerlund Nytt cement med gynnsam miljöprofil - Bygg & teknik, 2012, 7, 28 - 32

Göran Fagerlund, Manouchehr Hassanzadeh Självläckning av sprickor i betong - Bygg & Teknik, 2012, 2, 66 – 71

Göran Fagerlund Projekt Bygginnovationen: Betongreparation Journal article, Bygg & Teknik, 2011, 103, 7, 12 – 17

Jörgen Falk Ventilerad fasad med puts på skiva Journal article, Bygg & Teknik, 2012, 4, 59 – 63

**FUKTCENTRUM**

*Johansson, Pär.* (2012). Tillägg isolering av gamla byggnader med vakuumisolering. Bygg och teknik, 5/2012.

*C-E Hagentoft*. Potential impact on innovative and active building envelope components and materials., 5th International Building Physics Conference, Kyoto, Japan, May 2012.

*Pallin, S. Kehler, M.* 2012/2013. Hygrothermal Simulations of Foundations: Part 1 - Soil Material Properties: Part 1 - Soil Material Properties. Accepted for Journal of Building Physics. Volume and issue are to be determined.

*Kehler, M., & Pallin, S.* 2013. Condensation Risk of Mechanically Attached Roof Systems in Cold Climate Zones. Paper will be presented at the RCI 28th International Convention & Trade Show March 14-19, 2013, Orlando, Florida.

*Yutaka Goto, Karim Ghazi Wakili, Thomas Frank, Thomas Stahl, York Ostermeyer, Naoto Ando, Holger Wallbaum.* Heat and moisture balance simulation of a building with vapor-open envelope system for subtropical regions. BUILD SIMUL (2010) 3: 273–280, DOI 10.1007/s12273-012-0086-3

**FUKTCENTRUM**

*Y. Goto, K. Ghazi Wakili, Y. Ostermeyer, Th. Frank, N. Ando, H. Wallbaum.* Preliminary investigation of a vapor-open envelope tailored for subtropical climate. Building and Environment 46 (2011) 719-728

*Y. Goto, Y. Ostermeyer, K. Ghazi Wakili, H. Wallbaum.* Economic, ecological and thermo-hygic optimization of a vapor-open envelope for subtropical climates Energy and Buildings (2012), doi:10.1016/j.enbuild.2012.10.015

*N. M. M. Ramos, A. S. Kalagasisidis, V. P. de Freitas, J. M. P. Q. Delgado.* Numerical simulation of transient moisture transport for hygroscopic inertia assessment. Journal of Porous Media, 15 (8): 793–804 (2012)

*Nik M.V., Sasic Kalagasisidis A., Kjellström, E.* Assessment of hygro-thermal performance and mould growth risk in ventilated attics in respect to possible climate changes in Sweden. Building and Environment 55, 96-109, 2012

**FUKTCENTRUM**

*Isaksson T., Thelandersson S., Ekstrand-Tobin, A., Johansson P.* Mould resistance design (MRD) model for evaluation of risk for microbial growth under varying climate conditions. Journal article to be submitted to Building and Environment. 2012

*Frühwald Hansson, E., Brischke, C., Meyer, L., Isaksson, T., Thelandersson, S., Kavurmacı, D.* Durability of timber outdoor structures – modeling performance and climate impacts. WCTE, Auckland, New Zealand, 16-19 July 2012.

*Isaksson T., Brischke C., Thelandersson S.* Development of decay performance models for outdoor timber structures. Materials and Structures. DOI 10.1617/s11527-012-9965-4. 2012

*Thelandersson, S., Isaksson T., Sutie E., Frühwald E., Toratti T., Grüll G., Viitanen H., Jermer J.* Quantitative design guideline for wood outdoors above ground applications. Document IRG/WP 11-20465, International Research Group on Wood Protection, Queenstown, New Zealand. 2011

**FUKTCENTRUM**

*Brischke, C., Frühwald-Hansson, E.* Modeling biodegradation of timber - Dose-response models for above-ground decay and its climate-dependent variability. Shatis 11th International Conference on Structural Health Assessment of Timber Structures. Lissabon, 16-17 juni 2011.

*Brischke, C., Frühwald-Hansson, Kavurmacı, D., Thelandersson, S.* Decay hazard mapping for Europe. Int. Research Group on Wood Protection. IRG/WP 11-20463, Queenstown, New Zealand. 2011.

*Thelandersson S., Isaksson T., Häglund M., Frühwald E.* Probabilistic methods for performance based service life evaluation of wooden components. 11th International Conference on Applications of Statistics and Probability in Civil Engineering (ICASP11), Zurich, Switzerland. 2011

*Viitanen H., Toratti T., Makkonen L., Thelandersson S., Isaksson T., Frühwald E., Jermer J., Englund F., Sutie E.* Modelling of service life and durability of wooden structure. Proceedings NSB 2011, 9th Nordic Symposium on Building Physics, Tampere, Finland 29 May – 2 June 2011.

**FUKTCENTRUM**

*Brischke, C., Welzbacher, C R., Meyer, L., Bornemann, T., Larsson-Brelid, P., Pilgård, A., Frühwald-Hansson, E., Westin, M., Rapp, A O., Thelandersson, S., Jermer, J.* Service life prediction of wooden components – Part 3: Approaching a comprehensive test methodology. Int. Research Group on Wood Protection. IRG/WP 11-20464, Queenstown, New Zealand. 2011

*Thelandersson, S.* Fuktssäkerhet – hur kan man bedöma risken för mögelangrepp? Bygg & Teknik 5-11. 2011

*Thelandersson, S., Jermer, J.* Beständighet hos träfasader – hur kan man bedöma risk för röta? Bygg & Teknik 8-11. 2011

**FUKTCENTRUM**

*Harderup L-E., Arvifidsson J.* Moisture safety in cold attics with thick thermal insulation. Journal of Architectural Engineering. Accepted for publication, 2011.

*Hägerstedt S.O., Harderup L-E.* Control of moisture safety design by comparison and measurements in passive house walls made of wood. XII DBMC. Porto, April 18-20 2011.

*Hägerstedt S.O., Harderup L-E.* Comparison of measured and calculated temperature and relative humidity with varied and constant air flow in the facade air gap. 9th Nordic Symposium on Building Physics, Tammerfors, Finland, 30 May-2 June, 2011.

Olof Mundt-Petersen (Hägerstedt)  
Lic. rapport på gång!

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Luftboken  
Claes Bankvall

Informationsblad finns i utdelat material

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**Bygg-torkning**

ENHANDBOK FRÅN SVERIGES BYGGINDUSTRIER  
Forsysd

Peter Brander  
SBUF:12485

Undvik fel och fällor i bygg-torkning

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Rapporter  
Lars-Olof Nilsson

Byggförlodning 9  
En handbok i anslutning till  
Boverket:s byggnörder

Lars-Olof Nilsson

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Delreparation av tätskiktsfolier och plastmatta för keramiska våtrumskonstruktioner

SP rapport 2012:23  
Anders Jansson

Stiftelsen Länsförsäkringsbolagens Forskningsfond

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WoodBuild – overall goals

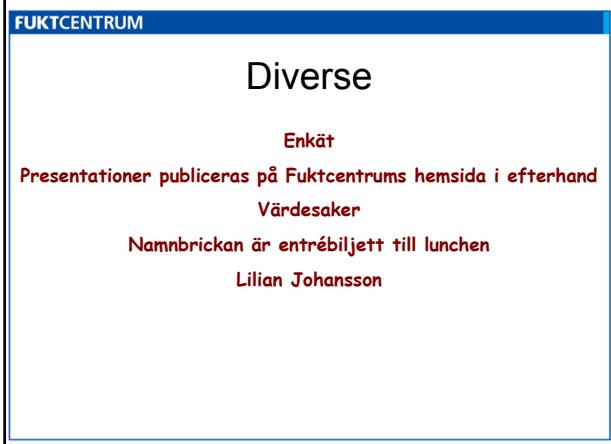
• Generate new knowledge about exposure conditions and biological mechanisms to.....

- identify sustainable and scientifically verified design solutions in wood construction
- improve and develop new methods for testing of resistance against mould growth and decay for wood and wood-based materials
- develop engineering tools for service life design of wood structures and commodities targeted at building practice

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**Byggaf**

Branschstandard  
Arbetsgrupp  
Kristina Mjörnell, SP



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09:20	Välkommen Viktiga händelser under året Gamla erfarenheter Dagens huvudtema	Anders Kumlin Lars-Erik Harderup Kenneth Sandin Lars-Erik Harderup
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12:00	Lunch	