

Curriculum Vitae

SATU HOLOPAINEN

Date and place of birth

9 June 1971, Kouvola, Finland

Education

M.Sc. (Tech.) 1995 Helsinki University of Technology

Major: Fire and Safety Engineering

Minor: Structural Engineering

Name of thesis:

Fire Safety Classification of Wood Based Surface Linings, 2000



Postgraduate Studies:

Tech. Lic. 2003 Helsinki University of Technology

Major: Fire and Safety Engineering

Minor: Structural Engineering

Licentiate's thesis: The Fire Safety of Wooden Public Hall Buildings, 2000

Specialisation

Performance based fire safety design

Language proficiency

Finnish (1), English (3), Swedish (3), German (3)

(1=mother tongue, 2=excellent, 3=good, 4=fair)

Professional background

<u>Company / organization</u>	<u>Line of business</u>	<u>Years</u>	<u>Position</u>
HUT/ Laboratory of Structural Engineering and Building Physics	Research	1995-2000	Research Scientist/ Fire and Safety Engineering
Olof Granlund Oy	Consulting engineering	2000-2003	Fire Safety Engineer
Kauriala Ltd.	Consulting engineering	2003-2006	Project Manager
Kauriala Ltd.	Consulting engineering	2006-2007	Project Leader
Kauriala Ltd.	Consulting engineering	2007-2011	Area Director
KK-Fireconsult Ltd.	Consulting engineering	2011-	Chief Specialist

Memberships

Association of Finnish Civil Engineers (RIL)

Association of Fire Engineers (Paloinsinööriryhdistys ry)

Professional training

Timber construction and Structural design, courses and seminars, HUT, 1994-1999

Fire Simulation risk, reliability and statistical analysis courses, HUT, 1996-1998

Wood Science and Engineering Graduate School, courses, HUT, 1996-1997

aFire Safe Wooden House, seminar, TRÅTEK, Stockholm, 1997
 Fire Safety of Medium-Rise Timber Frame Residential Buildings, COST Action E5 Workshop, 1997
 Courses of fire safety planning, 1998-2001
 Project Management, HUT, 1998
 Communication Skills for Project Managers, HUT, 1998
 ADP courses, 1998-2001
 Fluid Dynamics, HUT, 1999
 Investigation of the Cause of the Fire, HUT, 2000
 Airflow modeling solutions for fire and HVAC engineers, AEA Technology, Denmark, 2000
 Project management (5 sessions), Olof Granlund Oy, 2001
 School of Fire Protection Engineering Technology Canada, FDS Distance Education Course, 2003
 Other courses and seminars in fire engineering 2000-2012

Publications

Fire Safety of Wood Based Surface Linings, Palontorjuntatekniikka (1995)3.
 Cellulosic Fiber Insulation of Timber Frame Multi-Storey Buildings, Rakennustekniikka (1996)2.
 Wooden Additional Storey to Russian Multi Storey Buildings, VTT/Building Technology, Test Report No. RTE11165/95:E and Test Report No. RTE11007/96.
 Bullet Resistant Plywood Structure. Helsinki 1997, Maanpuolustuksen Tieteellinen Neuvottelukunta, Raporttisarja A 1997/4.
 Deformation Measurements of the Timber Frame Multi-Storey Building in Viikki, HUT/Laboratory of Structural Engineering and Building Physics, report TRT290897SH.
 Structural Cluing of Wood: Gluing of Timber Structures on the Construction Site. Espoo 1998, HUT-LSEBP-87.
 Instructions for Designing Wooden Facade, Part: Fire Safe Solution of Wooden Facades, HUT/LSEBP, report TRT050399SH.
 The Fire Safety of Wooden Public Hall Buildings. Espoo 2000, HUT- LSEBP-110.
 Fire Safety Design of Wooden Public Hall Buildings, 2002, (to be published)
 The Fire Safety of Agricultural Buildings by the Means of Performance Based Methods, Olof Granlund Oy, 2001.
 Instruction for Designing Fire Safe Shelters for Animals, Proposal for Instructions of Ministry of Agriculture and Forestry, 2003. (unpublished)

Lectures

Fire Safe Wooden Block, HUT 1997
 Fire Safety of Buildings/ Instructions of Finnish Building Regulations E1, HUT 1997
 Fire Safety of Animal Shelters/Agricultural Building Research Seminar, Vihti, 2002
 Structural Fire Safety/Risks and Safety of Farms, Valio Oyj / Jyväskylä 2003
 Lectures of performance based fire safety design 2000-2010

Hobbies

Physical exercise, backpacking and sailing

REFERENCE PROJECTS**Fire safety design**

Project	Aika
Länsimetron jatke, underground, Espoo	2015
Lahden Rantakartano, exiting from high building, Lahti	2015
Helsingin keskustakirjasto, library, statement	2015
Kauppakeskus IsoKristiina, shopping centre, Lappeenranta, statement	2015
Espoon sairaala, hospital, subconsult	2014-2015
Vantaan Valurauta ja Popniitti, residential buildings	2014
Stora Enso WOOPS, factory renovation, Varkaus	2014
Vantaan kaivospysäköinti, parking garage and residential buildings	2014
K-Rauta Kokkola, simulation of steel structures	2014
Munkkiniemen Saga, senior residence and nursing home, Helsinki	2014
Covered street around the town hall, Lappeenranta	2014
Helsingin kuvataidelukio, school, Helsinki	2014
Kaunialan sairaala, hospital, Kauniainen	2014
CIN- kortteli, residential buildings, Helsinki	2014
Renewa Epinal, power plant, France	2014
Ikano Retail Center, simulation of steel structures of K-Rauta, Tampere	2013
Autokomppania, market and nursing home, Helsinki	2013-2015
Munksnäs Högstadieskola, school, Helsinki	2013-2014
Lintsiburger, Linnanmäki, Helsinki	2013
MB Airport, car store, Vantaa	2013-2014
Puukuokka, wooden multistorey building, Jyväskylä	2013
Eskolantie, wooden multistorey buildings, Helsinki	2013
Tank area, Sweden	2013
Pieksämäen veturitalli, restaurants	2013
Swimming hall, Rajamäki	2013
Hospital, F-building, Vaasa	2013
Prisma, store, Imatra	2013
Aurinkokivi school, Vantaa	2013

REFERENCE PROJECTS**Fire safety design**

Project	Aika
Glassworks, Iittala	2013
Berliinin-/Lontoonpiha, residential buildings, Helsinki	2013
Kvarteret Victoria, city block, Helsinki	2013-2015
Tank area, Höljäkkä, calculation of thermal radiation	2013
Malski, residential buildings and parking garage extension, Lahti	2013-2015
Akavatalo, office building, Helsinki	2013
Best Hall, Agility hall, Lohja, statement	2013
Riikinvoima, ecopower plant, Varkaus	2013
Data Center Yandex, Mäntsälä	2013-2015
OP-Pohjola Vallilla, office building, statement	2013-2014
Waste power plant, Vantaa, statement	2013-2014
Folkhälsan, office building, Helsinki	2013
Lintuviita, wooden multistorey building, Seinäjoki, statement	2013
Hospital, Lahti	2013
Karstula Ice Hall	2013
Vuorimestari, residential building, Vantaa	2013
Lampan talo, simulation of the atrium, Helsinki	2013
MAPA, power plant, Chile	2012-2013
Berliinin ja Lontoonpiha, residential buildings, Helsinki	2012
Jokiniemi, residential building and parking garage, Vantaa	2012-2013
Viikinmäen korttelitalo, school and day care centre, Helsinki	2012
Opinmäki school and day care centre, Espoo	2012-2013
Leppävaara swimming baths, Espoo	2012-2013
Sibeliusakatemia, school, Helsinki	2012-2013
Päivänkehrä school, Espoo	2012
Mälaren, power plant, Sweden	2012
Prisma, shopping center, Kokkola	2012
Citymarket, shopping center, Kokkola	2012

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Project	Aika
Bulevardi 10, residential building, Helsinki	2011
Kivikonkaari, residential building, Helsinki	2011
Niittymaa, residential building and parking garage, Espoo	2011-2013
Joenpyro, biodiesel power plant, Joensuu	2011-2012
Piccadilly, residential building, Vantaa	2011
Kariston palvelukeskus, school and day care center, Lahti	2011
Pihlajamäen ala-aste, school, Helsinki	2011
Kauniaisten Kvantetti, residential building, Kauniainen	2011
Meilahden ala-aste, school, Helsinki	2011-2013
Lehtisaaren senioritalo ja ryhmäkoti, residential and nursing home, Helsinki	2011-2013
Albergan pysäköintitalo, parking garage, Espoo	2011
Hangon Grand, residential building, Hanko	2011
Naistenklinikka, renovation of the hospital, Helsinki	2011-2012
Suvilahti Gas Container, multipurpose hall, Helsinki	2011
Shopping Mall, parking, shopping, office and residence spaces, Oulu	2011
Lahden suurhallit Oy, multipurpose halls, Lahti	2011
Tullintori, Shopping Mall, Tampere	2011
Kanervakoti, nursing home, Espoo	2011
Bunkkeri, sport center ja school, Helsinki	2010-2011
Metso Paper and Fiber Tehcnology, paper mill, China	2010
HOAS Jätkäsaari, student apartment/summer hotel, Helsinki	2010
Raisio Kaaren teollisuuspuisto Oy, esther mill, Raisio	2010
Isku Areena, sport hall, Lahti	2010
Ice hall, Imatra	2010-2012
Campus Kungsgården, school, Vaasa	2010
Koskikeskus, Shopping mall, Tampere	2010
Kevitsa, concentration plant of the mine, Sodankylä	2010
VW-Center, automobile shop, garage and parking hall, Espoo	2010

REFERENCE PROJECTS**Fire safety design**

Project	Aika
Olkiluoto, nuclear power plant	2010
Termopanelis, cow house	2010
UPM, mill, Savonlinna	2010
Logistic Center, HKI	2010
Karsikkoparkki, park house, Vantaa	2009
Paviljonki, Hotel, Jyväskylä	2009
Terra Kolmenkulma, commercial building, Nokia	2009
UPM-Kymmene PK2, plant, Kajaani	2009
Pajulahti hall, sport hall, Nastola	2009
Axxell Karis, school, Karjaa	2009
Kauppapaikka Herman, shopping mall, Kuopio	2009-2011
KOY Keilarannanpuisto, office building and parking garage, Espoo	2009
Ruohoparkki, parking garage, Helsinki	2009
Motonet, commercial building, Jyväskylä	2009
Prisma, shopping center, Kotka	2009
Lohjanharju shopping mall, Lohja	2009
Football arena, Espoo	2009
Primula bakery, Järvenpää	2009
LAK Airfix, office building & aircraft hangar, Vantaa	2009
Suurpelto waste terminal, Espoo	2009
Kiinteistö Oy Oulun Ritaharju, shopping mall, Oulu	2009
SLC, logistics center, airport Vantaa	2009
Town hall, Salo	2009-2011
3 NPP Turbine Island for EPR, Olkiluoto	2009
Ämmässuo dump, gas collectig building, Espoo	2009
Helsinki-Vantaa airport, renovation of terminals T2 and T3	2008-2009
Skanska Ruskeasuo office building, Helsinki	2008-2009
YTHS, health-care centre, Helsinki	2008

REFERENCE PROJECTS**Fire safety design**

Project	Aika
Viikki collection and conservation center, museum, Helsinki	2008
Kiinteistö Oy Vierumäen portti, hotel, Vierumäki	2008
Tarjoustalo, shopping center, Lieto	2008
Pietarsaari Cultural Center	2008
Kaakkurinkulma Shopping Center, Oulu	2008
Oulu Center Underground Parking Garage	2008
Olinda, Shopping mall, Lithuania	2008
Family Center, shopping mall, Lappeenranta	2008-2009
Kuopion Energia, power plant, Kuopio	2008
Kemijärvi district heating, power plant	2008
ETRA Logistics, logistics center, Hämeenlinna	2008
HOAS, student apartment, Pasila	2008
Kuopion Alatori, parking garage and shopping mall, Kuopio	2007-2009
Ajasto Tarto Factory, industrial building, Estonia	2007
Moventas, machine workshop, Jyväskylä	2007
Huhtamäki-Leiras, office building, Turku	2007
Foster Wheeler, power plant, Tornio	2007
Digismart, industrial building, Estonia	2007
Retail Park, shopping mall, Salo	2007
Prisma, shopping mall, Raahe	2007
Kotkan Energia, power plant, Kotka	2007
Luhta Home Center, shopping mall, Lahti	2007-2009
Prisma, shopping mall, Hämeenlinna	2007
Paperinkekäys Oy, waste paper collection, industrial building, Lahti	2007
Saariselän Kieppi, hotel, Saariselkä	2007
Metso Power Oy, power plant, Sweden	2007
Myllyn Paras Oy, bakery, Hyvinkää	2007
Sokos, commercial center, Lahti	2006-2008

REFERENCE PROJECTS**Fire safety design**

Project	Aika
Pietarin Stockmann, shopping mall, St. Petersburg, Russia	2006-2007
Karibian Cruiser GENESIS, international project	2005-2009
Holiday City Tallinn, spa and hotel, Estonia	2005-2006
Renovation of Pasila Old Workshop Area to commercial building, Helsinki	2006
Exhibition hall, Lahti	2006
Ruskeasuo bus depot, Helsinki	2006
Forum, shopping mall, Mikkeli	2006
Citymarket, commercial building, Hämeenlinna	2006
Merkos, shopping mall, Riihimäki	2006
Etelä-Hermannin Senior Apartments, Helsinki	2006
Autotalo Laakkonen, car store, Porvoo	2006
Varma Salmisaari, office building, Helsinki	2006
BOTNIA, pulp mill, Uruguay	2006
Hybex Piteå, power plant, Ruotsi	2006
Porvoon Laamanninpolku, wooden multi-storey building, Porvoo	2005
Ruukki, parking garage, Espoo	2005
NCC, Myyrmäki Health Care Center, Vantaa	2005
Rasti, logistics center, Vantaa	2005
Versowood, main office, Vierumäki	2005
Cowhouse	2005
Cowshed where the cows are kept unchained	2005
AVIA FORUM 2, office building, Vantaa	2005
Hopeatie 2, office building, Helsinki	2004
Stopfire, shopping mall, Moscow, Russia	2004
UPM Kymmene, mills, China	2004
OMG Harjavalta Nickel Oy, mills, Harjavalta	2004
Rantakartano, nursing home, Helsinki	2004
VELJEKSET KESKINEN, extension of the shopping mall, Tuuri	2003-2009

REFERENCE PROJECTS**Fire safety design**

Project	Aika
Maskun Kalustetalo Oy, commercial building, Masku	2003
Lappeenranta, renovation and extension of the ice hall	2003
Onninen Oy, storage, Vantaa	2003
Onninen Oy, storage- and commercial building, Tampere	2003
Koulumestari, school and day care centre, Espoo	2003
Pohjoiskarjala Central Hospital, renovation, department 4 ja 5, Joensuu	2003
Hewlett Packard, office building, Espoo	2003
Nokia, proposal for content of the instructions of the fire safety design	2003
Helsingin Vesi, water treatment plant, Helsinki	2003
Metsämuseo Lusto, extension of the museum, Punkaharju	2003
Novo Group Oyj, office building, Helsinki	2003
HUS, hospital, Helsinki	2002
Ympyrätalo, commercial and office building, Helsinki	2002
Jumbo, shopping center extension, Vantaa	2002
Kone Oyj, elevator factory, Hyvinkää	2002
Danisko Sugar, office building, Kantvik	2002
PFIZER-Talo, office building, Helsinki	2002
Korso Parking Garage, Vantaa	2002
SELLO, shopping mall (performance based fire safety design), Espoo	2000-2003
ONKALO, Transportation tunnel for nuclear power plant waste final repository cave, Olkiluoto	2002
ONKALO, final repository cave for nuclear power plant waste, Olkiluoto	2001
IKEA, shopping center, Vantaa	2001
TUAS-Rakennus, office building, Espoo	2001
PRODUKTIONSZENTRUM 1 MIT BÜROGEBÄUDE, office building, Bochum, Germany	2001
NYYLAN KORTTELI, commercial building, Kuopio	2001
ITÄKESKUS, extension of the shopping mall, Helsinki	2001
LAUNE, shopping mall, Lahti	2001

REFERENCE PROJECTS**Fire safety design**

Project	Aika
LINTULAHDENKUJA 4-6, office building, Helsinki	2000
ULVILAN HANSA, shopping center, Ulvila	2000
HIGH TECH CENTER, office building, Helsinki	2000
UNIVERSITY, Vaasa	2000
ILMAILULAITOS, Terminal Hotel, Vantaa	2000
NOKIA, Karaportti/industrial and storage building, Espoo	2000
MEGAHERTSI, commercial and office building, Helsinki	2000

Sprinkler design

WÄRTSILÄ NSD FINLAND OY, mill, Vaasa	2000
KIINTEISTÖ OY MIEKKAKALA, Helsinki	2000
MEDIA54, commercial and office building, Tampere	2000
NOKIA, Karaportti/industrial and storage building, Espoo	2000

Research projects during work in the consulting companies

Versowood, investigation of a fire incident, Vierumäki	2006
Firesafety of garbage cans	2005
The fire safe use of front facade and roof structures insulated with EPS	2003-2004
Fire Safety of Big Animal Shelters	2001-2002
BILD-IT, fire simulation	2000-2002