

LUBOŠ KRAJČI

294A Surrey Hill Road, New Plymouth 4374

NZ – New Zealand / Landline: +64 (0)6 752 7042 / Cellphone: +64 (0)27 966 2442

E-Mail: L.Krajci@soundtherm.co.nz

Professional strengths	<ul style="list-style-type: none">• Experienced building physics engineer.• Extensive knowledge and experience in the areas of building acoustics, environmental acoustics and noise control.• Experience in measurement techniques and testing according to international standards as well as noise monitoring.• Experience in low energy building design, moisture and humidity control inside of buildings• Collaboration with industry, research centers and universities.• Responsibility and leadership in multicultural and multilingual environments.• Experience of independent work roles as well as part of a team.
------------------------	---

Employment	<p>Company Marshall Day Acoustics, NZ <i>Since August 2013 – present</i> <i>Acoustic consultant</i></p> <ul style="list-style-type: none">- Consulted with architects, private and public authorities concerning construction design and material properties in the field of the physics of buildings- Calculated acoustic solutions for the sound insulation of buildings (airborne, impact and structural noise)- Predicted and calculated environmental noise propagation and prescribed noise control measures- Environmental acoustic noise monitoring, noise mapping and noise control- Carried out field environmental noise monitoring
	<p>Company Mühlebach PLC, Wiesendangen, CH <i>Since July 2012 – present</i> <i>Acoustic consultant and commercial partner</i></p> <ul style="list-style-type: none">- Consulted with architects, private and public authorities concerning construction design and material properties in the field of the physics of buildings- Created acoustic solutions for the sound insulation of buildings (airborne, impact and structural noise)- Predicted and calculated sound insulation at the building planning stage and prescribed noise control measures- Environmental acoustic noise monitoring, noise mapping and noise control- Carried out field measurements in building, room and environmental acoustics
	<p>Company Soundtherm Ltd., Schlattigen, CH <i>October 2008 -.present</i> <i>Shareholder, founded own company Soundtherm Ltd., consultancy of Building Physics focused on building, room and environmental acoustics, energy consumption as well as heat transfer and moisture.</i></p> <ul style="list-style-type: none">- Independently carried out similar work to that described in the above role. In addition the following responsibilities:- Evaluated the energy consumption of buildings (energy balance, determination of energy losses, thermal bridges, U-Value calculations, sustainable energy gains)- Created thermal solutions and construction design to fulfill energy balance requirements (e.g. low energy or self-sufficient buildings)- Calculated steady state and non-stationary humidity and moisture transfer through external separating elements

LUBOŠ KRAJČI

294A Surrey Hill Road, New Plymouth 4374

NZ – New Zealand / Landline: +64 (0)6 752 7042 / Cellphone: +64 (0)27 966 2442

E-Mail: L.Krajci@soundtherm.co.nz

	<p>Swiss Federal Laboratories for Materials Science, CH and Technology, Empa Dübendorf <i>June 2008 – June 2012</i> <i>Head of the Building Acoustics Group, Laboratory for Acoustics/Noise Control</i></p> <ul style="list-style-type: none">- Led a research and technical team- Carried out field and laboratory testing according to international standards- Established collaboration between industry and research to drive application oriented research and product development- Promoted knowledge transfer to industry- Acquired a national research project NFP 66 and several knowledge transfer partnerships (KTP)- Supervised PhD students, master and bachelor students- Provided several expert witness opinions in the field of building and room acoustics- Designed and developed an unique multifunctional facility for testing of direct and flanking way sound transmissions in multifamily dwellings- Taught graduate students in the field of building acoustics at the Lucerne University of applied sciences and art, department of building technology and architecture. <p>Project references:</p> <ul style="list-style-type: none">• Acoustically optimised floor system made of hardwood with improved sound insulation below 100 Hz (<i>National Research Program NFP 66, Swiss National Research Foundation, Collaboration with ARU Liverpool Great Britain, UC Canterbury New Zealand and HSRO Rosenheim Germany</i>) Development of a new floor system with improved sound insulation in the low frequency range and multifunctional optimisation in the field of Life Cycle Analysis (LCA). http://www.nrp66.ch/E/PROJECTS/WOOD-BASED-STRUCTURES-BUILDINGS/Pages/default.aspx• Sound insulation in timber based structures and buildings (<i>Research Project funding by Federal Office for the Environment FOEN</i>) Development of lightweight/heavyweight separating elements and their junctions with reduced flanking transmissions. http://www.lignum.ch/holz_a_z/schallschutz (only in German or French language)
	<p>Company Mühlebach PLC, Wiesendangen, CH <i>January 2005 – Mai 2008</i> <i>Acoustic consultant</i></p> <ul style="list-style-type: none">- Consulted with architects, private and public authorities concerning construction design and material properties in the field of the physics of buildings- Created acoustic solutions for the sound insulation of buildings (airborne, impact and structural noise)- Predicted and calculated sound insulation at the building planning stage and prescribed noise control measures- Environmental acoustic noise monitoring, noise mapping and noise control- Carried out field measurements in building, room and environmental acoustics
	<p>Company Blumer-Lehmann PLC, Gossau, CH <i>September 2003 – December 2004</i> <i>Development Manager</i></p> <ul style="list-style-type: none">- Developed, calculated and optimized timber based constructions to fulfill for thermal and sound insulation requirements

LUBOŠ KRAJČI

294A Surrey Hill Road, New Plymouth 4374

NZ – New Zealand / Landline: +64 (0)6 752 7042 / Cellphone: +64 (0)27 966 2442

E-Mail: L.Krajci@soundtherm.co.nz

	<p>Swiss Federal Institute of Technology ETH Zürich <i>February 2001 – February 2003</i> Chair of Physics of Buildings <i>PhD Student and Scientific Assistant</i></p> <p>- Researched and composed PhD thesis - Supervised graduate students at the ETH Zürich Department of Architecture</p>
Education	<p>Swiss Federal Institute of Technology ETH Zürich (Switzerland) in collaboration with Technical University Zvolen (Slovak Republic) <i>Doctor of Philosophy in Civil Engineering</i> <i>February 2001 – February 2003</i></p> <p>Thesis: Impact sound insulation measurements of timber based construction using Frequency Response Function FRF. - Evaluated a method for the determination of impact sound insulation using FRF and modal analysis - Research funded by KTP / Federal Office for the Environment FOEN</p> <p>Technical University Zvolen (Slovak Republic) <i>Master of Science in Civil Engineering</i> <i>September 1995 – August 2000</i> Honours degree in timber based constructions</p> <p>Thesis: Non-stationary thermal properties of timber wall systems - Non-stationary heat transfer through inhomogeneous timber based constructions - Long term measurements of energy flows, determination and calculation of dynamic U-values - Research funded by Company Bucina Zvolen</p>
Professional Associations	<ul style="list-style-type: none">• Member of the Standards Committee SIA 181 Sound Insulation of Buildings for the Swiss Society of Engineers and Architects SIA, Zurich• Head of the Swiss Delegation in the Technical Committee CEN/TC126/WG2 – Building Acoustics of the European Committee for Standardization CEN, Brussels• Member of the Swiss Acoustical Society SGA-SSA.• Member of the Acoustical Society of Germany DEGA• Member of the Acoustical Society New Zealand• Member of the Passive House Institute New Zealand

LUBOŠ KRAJČI

294A Surrey Hill Road, New Plymouth 4374

NZ – New Zealand / Landline: +64 (0)6 752 7042 / Cellphone: +64 (0)27 966 2442

E-Mail: L.Krajci@soundtherm.co.nz

Selected Publications	<ul style="list-style-type: none">• Krajčí, L., Keller, B. und Walk, M.: Hochschalldämmende Holzdecken, 11. bauakustisches Symposium 2002, Dresden (D)• Krajčí, L.: Dissertation: 'Impact sound insulation measurements of wooden construction based on modal analysis using Frequency Response Function FRF'; Technische Universität SK-96001 Zvolen, Slowkei (SK), 2004• Churchill C., Hopkins C., Krajčí L. 2011 -Modelling airborne sound transmission across a hybrid heavyweight-lightweight floor using Statistical Energy Analysis, Forum Acusticum 2011, European Acoustics Association, ISBN: 978-84-694-1520-7, ISSN: 221-3767• Krajčí, L., Hopkins, C., Davy, J.L., and Tröbs, HM.: Airborne sound transmission of a cross-laminated timber plate with orthotropic stiffness; Euronoise 2012 Prag; pp. 202–207, Invited; PACS no. 43.55.Rg, 43.55.Ti, 43.40.Rj, 43.20.Rz.; ISSN 2226-5147; ISBN 978-80-01-05013-2• Geyer, Ch., Tröbs, HM.; Bütikofer; R.; Krajčí, L.: Measurements of flanking transmissions using a newly developed radiation efficiency measurement method in a flanking transmission suite; Euronoise 2012 Prag; pp. 677–681, Contributed; PACS no. 43.55.Rg, 43.55.Ti, 43.40.Rj, 43.20.Rz.; ISSN 2226-5147; ISBN 978-80-01-05013-2• Mahn, J., Hopkins, C., Schanda, U., Krajčí, L.: Competitive wooden floor systems - multi-objective optimization based on acoustics improvement, Internoise 2013 Innsbruck, Austria 2013• Mahn, J., Filippoupolitis, M., Hopkins, C., Vörtl, R., Schanda, U., Krajčí, L.: The Optimization of a Wooden Floor Design Based on Validated Finite Element Models, Internoise 2014 Melbourne Australia 2014• Filippoupolitis, M., Hopkins C., Vörtl, R., Schanda, U., Mahn, J., Krajčí, L.: Experimentally validated finite element models for the modal response of a solid timber floor formed from dowel-connected joists, Forum Acusticum, Krakow, Poland 2014• Davy, J.L., Mahn, J., Krajčí, L., Wareing, R. and Pearse, J.: Comparison Of Theoretical Predictions Of Radiation Efficiency With Experimental Measurements, ICSV22 2015, International Congress on Sound and Vibration, Florence, Italy 2015• Hopkins C., Filippoupolitis, M., Ferreira, N., Vörtl, R., Schanda, U., Mahn, J., Krajčí, L.: Vibroacoustic finite element modelling of the low-frequency performance of a solid timber floor formed from dowel-connected joists, Internoise 2016, Hamburg 2016
-----------------------	---

LUBOŠ KRAJČI

294A Surrey Hill Road, New Plymouth 4374

NZ – New Zealand / Landline: +64 (0)6 752 7042 / Cellphone: +64 (0)27 966 2442

E-Mail: L.Krajci@soundtherm.co.nz

Language skills	<ul style="list-style-type: none">• Slovak - mother tongue• Czech - fluent (spoken and written)• German - fluent (spoken and written)• English - fluent spoken / good written
Special Computer skills	<ul style="list-style-type: none">• Cadna A – noise calculation, noise prediction and noise mapping• Soundplan – noise calculation, noise prediction and noise mapping• Odeon – room acoustic prediction and auralisation• Wufi 2D – coupled heat and moisture transfer in building components• Flixo – thermal bridge analysis and reporting application• PHPP – Passive House Design Package

New Zealand, May 2016