

**Dr. Karol Sikora (Ireland)**

National University of Ireland  
Galway, Ireland

[karol.sikora\(at\)nuigalway.ie](mailto:karol.sikora@nuigalway.ie)

COST FP1402, MC Substitute Member, WG2 member

*Personal*

Years of experience in relevant field: 2  
Expertise: Testing, properties and durability of CLT  
Degree: PhD (07.03.2013)

*Organisation*

Civil Engineering Discipline, College of Engineering and Informatics ([www.irishtimber.org](http://www.irishtimber.org))  
Focus: theoretical and practical research / innovation and education / training  
Facilities: State-of-the art Structural Testing Laboratory (375 m<sup>2</sup>) and fully equipped Timber Engineering Laboratory (174 m<sup>2</sup>), including: two climate controlled rooms (39 m<sup>2</sup> and 9 m<sup>2</sup>), pressure chamber for durability testing, strength grading machines: Cook-Bolinders, MTG.

No. of staff	PhD students	MSc/year
2	2	1

*Research projects*

1. Innovation in Irish Timber Usage  
duration: 3 years (start: Jan 2013)

funded by the Department of Agriculture, Food and Marine of the Republic of Ireland under the FIRM/RSF/COFORD scheme; Queens University, Belfast (QUB) is collaborating partner

People involved:

Dr. Annette Harte (NUIG) - project coordinator, Dr. Danny McPollin (QUB) - principal investigator, Dr. Karol Sikora (NUIG) - postdoctoral researcher, Ms. Caoimhe O'Neill (QUB) - PhD student, Mr. Conan O'Ceallaigh (NUIG) - PhD student

website: [www.irishtimber.org](http://www.irishtimber.org)

2. Potential of Irish-grown Sitka Spruce for the manufacture of cross-laminated timber (CLT) panels  
duration: 4 years (start: Oct 2014)

People involved:

Ms. Caitriona Ui Chulain - PhD student, Dr. Annette Harte – supervisor, Dr. Karol Sikora - 2nd supervisor

*Publications*

Sikora K. S., Harte A. M., McPolin D., Bonding strength and durability of adhesive bonds in Sitka spruce cross-laminated timber, International Journal of Adhesion and Adhesives (2015) (article in preparation)

Sikora K., Harte A., McPolin D., Irish Timber – Bond quality of cross-laminated timber (CLT) from Irish Sitka spruce, Civil Engineering Research in Ireland, Belfast, UK, 28-29/08/2014

Sikora K., Harte A., McPolin D., Durability of adhesive bonds in cross-laminated timber (CLT) panels manufactured using Irish Sitka spruce, The 57th SWST (Society of Wood Science and Technology) International Convention, Zvolen, Slovakia, 23-27/06/2014

Raferly, G.M., Harte, A.M., 2013, Material characterisation of fast-grown plantation spruce, Structures and Buildings, DOI: 10.1680/stbu.12.00052

Raferly, G.M., Harte, A.M., 2013, Nonlinear numerical modelling of FRP reinforced glued laminated timber beams, Composites Part B: Engineering, 52(Sep2013)40-50, doi:10.1016/j.compositesb.2013.03.038

Baylor, G., Harte, A.M., 2013, Finite element modelling of castellated timber I-joists. Constr Build Mater 47(Oct 2013)680-688 <http://dx.doi.org/10.1016/j.conbuildmat.2013.05.076>

Zhang, B., Jorissen, A., Rasmussen, B., Harte, A., 2013, Comparison of vibrational comfort assessment criteria for design of timber floors among the European countries, Engineering Structures, 52(1)592-607. <http://dx.doi.org/10.1016/j.engstruct.2013.03.028>

Harte, A.M., Baylor, G., 2011, Structural evaluation of castellated timber I-joists, Engineering Structures, 33(12)3748-3754, doi:10.1016/j.engstruct.2011.08.011

