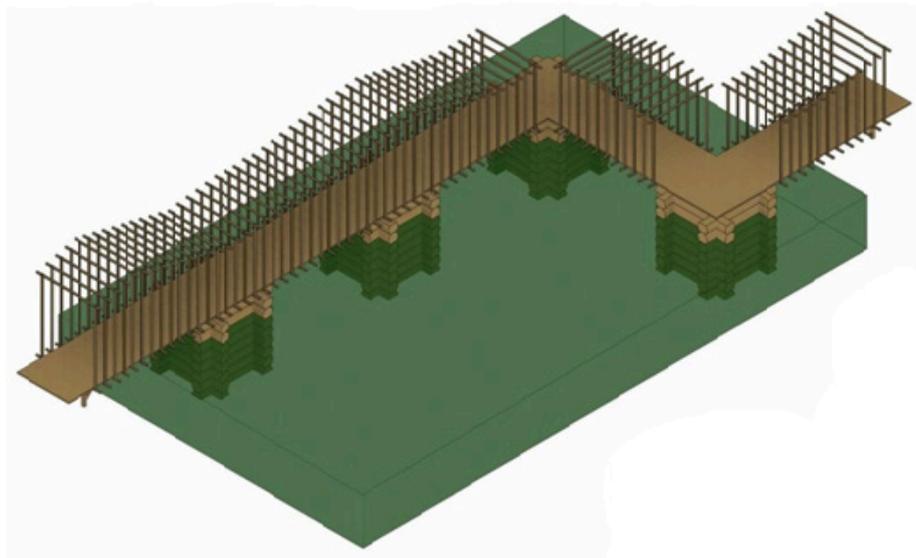
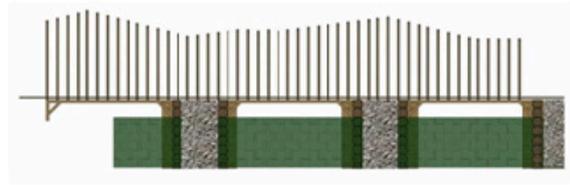
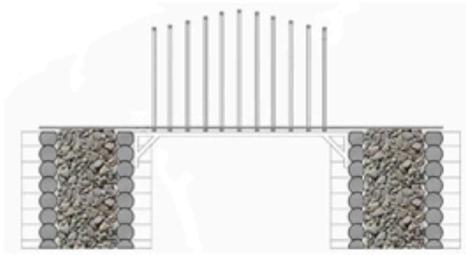


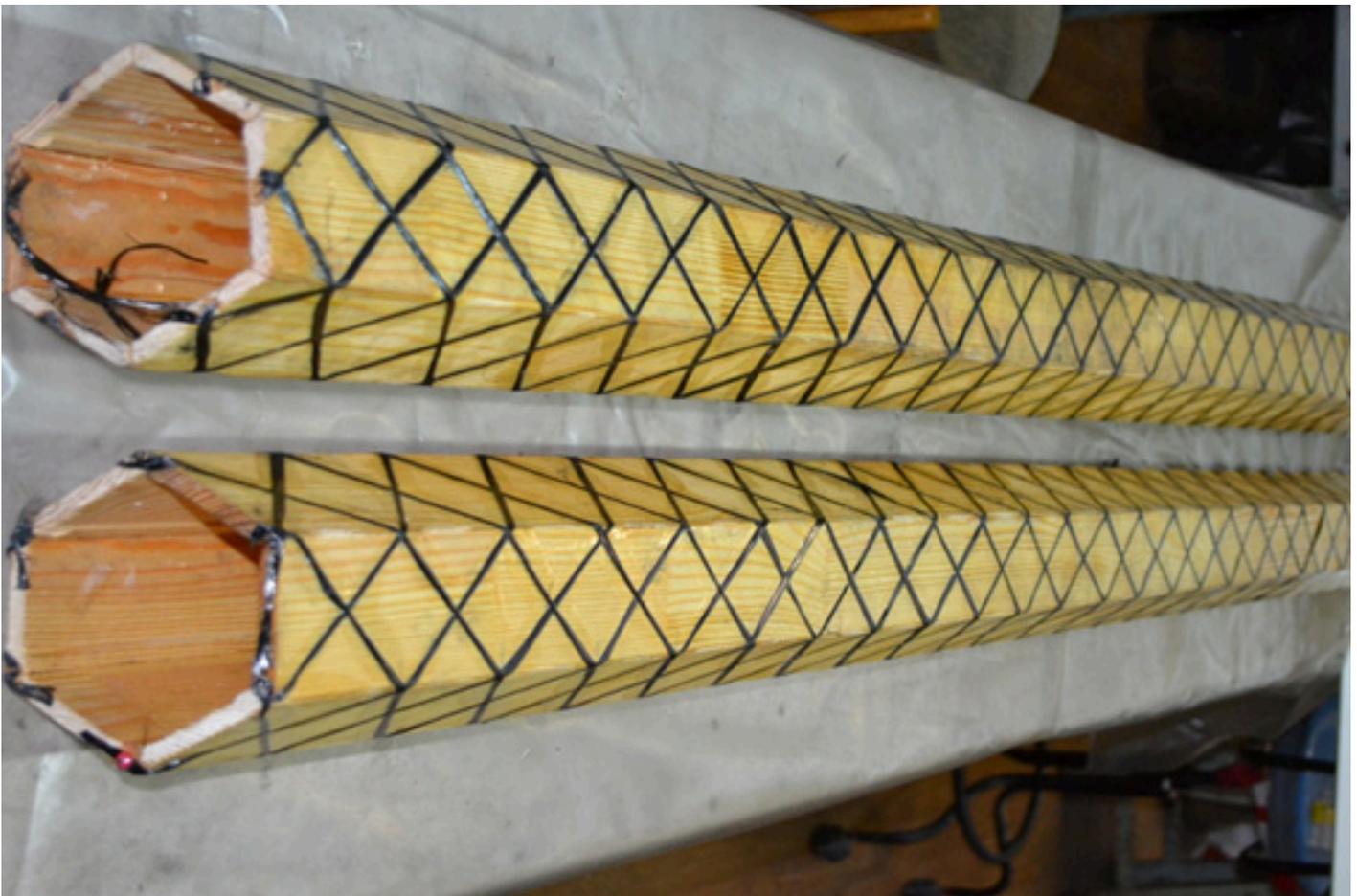
Pedestrian bridges of the wooden composite will be built in Russia and Finland



Peter the Great St. Petersburg Polytechnic University (SPbPU) in a consortium with a strategic partner [LUT University](#) (Finland) and the industrial partner Scientific and Technological Centre of Applied Nanotechnologies will build infrastructure elements from a hybrid wood-based material. The project "Lightweight hybrid wooden composite materials for sustainable construction technology" (SUSTECH) was awarded in the second call of South-East Finland - Russia Cross-Border Cooperation Program 2014-2020.



In the framework of the project, researchers plan to create a hybrid wooden composite with advanced properties. The experts of SPbPU Institute of Civil Engineering suggested a method of strengthening wooden constructions through high-module fibers with the simultaneous comprehensive protection of wood. In the framework of the SUSTECH project, the international research team will carry out the refinement and testing of technology. The brassboards and full-scale construction samples will be manufactured and installed in Russia and Finland. "This technology may be used in rough swampy areas, possibly, in nature parks. The developed material exceeds raw wood in strength and durability with the best properties of wood remaining untouched. At the same time, the developed constructions will be lighter and more eco-friendly. The testing results demonstrate that this material is resistant to ignition, icing and mould," mentioned Andrey Ponomarev, Head of SPbPU research team.



Researchers came to an agreement with administration of "Vinnitsa rural settlement of the Podporozhsky municipal district of the Leningrad Region" on the installation of constructions made of the new material in the nature park "Vepssky Forest". In the framework of the SUSTECH project, it is planned to create new tourist routes, to build pedestrian bridges and arbors in this park. All tourist routes with constructions will be available for visitors when the project will be finished.

In addition, the constructions made of the new material will be installed in Finland. "We are negotiating with Lappeenranta city administration and other organizations in order to install the pedestrian bridges and arbors, created on the basis of wood reinforcement technology. Now we are discussing possible locations of these constructions," said Professor Timo Kärki, Head of LUT's Fiber Composite Laboratory.

As an educational aspect of the project, the obtained results will be used in programs curriculum for students of SPbPU and LUT University relevant departments, and will become the topics of scientific conferences, seminars and professional training programs.