



STRENGTHENING COLLABORATION ON INNOVATIVE WOOD QUALITY RESEARCH

Franco-Finnish Workshop



Research topic: **Engineering**

Place: **LUKE, Otaniemi Unit**

Institutions involved: **Luke (Finland), INRA Orléans (France)**

Dates: **29/08/2017 to 30/08/2017**

Program: **Maupertuis Programme**

PRESENTATION

Wood quality and resistance/resilience studies are of great importance for the sustainable use of renewable forest resources and for new innovations from forest biomasses. However, Dr. [Karoliina Niemi](#), the chairman of the first day of the workshop, stressed in her presentation the fact that megatrends do not see the borders and that collaboration is required to solve the global problems: collaboration over sector borders and over countries, between researchers and private sector as well as between different disciplines.

ACTIVITIES AND OUTCOMES

During the workshop, many new contacts were made, and new ideas were raised. The current wood quality related research and research facilities in [INRA](#), [Luke](#) and in some Finnish Universities was presented. Also, climatic aspects in relation to wood quality were stressed. Several presentations related to new phenotyping technologies on wood quality measurements showed that there will be possibilities for fast screening and grading of chemical quality of timber/wood. Contact between Prof [Markku Keinänen](#) ([University of Eastern Finland/Joensuu](#)) and [Jean Paul Charpentier](#) (INRA) was established for the implementation of a new technology for assessing the quality of forest tree seeds. They have the same problems for the sorting of softwood seeds for reproduction. For them in France Larch and Douglas and in Finland, Norway spruce and Scots pine. They started research at INRA Orléans for the use of NIRS technology to sort seeds and in Finland, the MK team has just published a research on the use of hyperspectral imaging for sorting spruce seeds. They have agreed to exchange vegetal material (lots of seeds) to test and evaluate the Finnish technique on French species.

Scientific relations with the Luke [Punkaharju](#) team will continue after the experiments undertaken in August on a forest of Scots pine (ISS EvoITree). The results of measurements of NIRS spectra taken directly from standing trees (very innovative and very new technique) will be analyzed by the French team (INRA Orleans) and analyzes on the stilbenes in the wood will be undertaken by the team Finnish (Luke). The team hopes to obtain very good correlations between the different techniques that will enable the genetic evaluation of Scots pine to progress in wood quality. The results will be published jointly.