



UNIVERZA NA PRIMORSKEM  
UNIVERSITÀ DEL LITORALE  
UNIVERSITY OF PRIMORSKA

# University of Primorska

Newly founded (in 2003) institution of higher education in the Slovenian coastal region

Located in Koper, Izola, and Portorož



# Faculty of Mathematics, Natural Sciences and Information Technologies (UP FAMNIT)

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UP FAMNIT is a member of the UP, founded in **2006**.  
The Faculty offers courses for all three levels of higher education and conducts research in the fields of:

- Department of Mathematics
- Department of Information Sciences and Technologies
- Department of Biodiversity
- Department of Applied Natural Sciences
- Department of Psychology



InnovaWood General Assembly,  
24-25th April 2014, Tullin/Vienna

# UP FAMNIT Data for the academic year 2012/13

## Students (700, 30):

- Undergraduate: 589 (18)
- Master's: 79 (5)
- Doctoral: 32 (7)

## Study programmes (15):

- Undergraduate: 8
- Master's: 4 (+ 1 in 2013/14)
- Doctoral: 3

## Graduates (September, 2013):

130 (Undergraduate = 102, Master's = 23, Doctoral = 5)

## Teaching and research staff:

- Full-time: 89 (8)
- Part-time: 45 (11)
- Alltogether: 134 (19)

## Administrative staff: 13



InnovaWood General Assembly,  
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# The Andrej Marušič Institute (UP IAM)

Wood research started in 2012

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The Andrej Marušič Institute (UP IAM) is a member of the University of Primorska, and was founded in 1999.

Covers various theoretical and applied aspects of research in natural sciences and technology

Staff: researchers - 72, administrative staff - 7



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# The Andrej Marušič Institute (UP IAM)

Wood research started in 2012

## Four departments:

- Department of Health
- Department of Mathematics
- Department of Computer Science
- **Department of Technology**

## Two centers:

- **Center for Industrial Applications**
- **Slovene Center for Suicide Research**

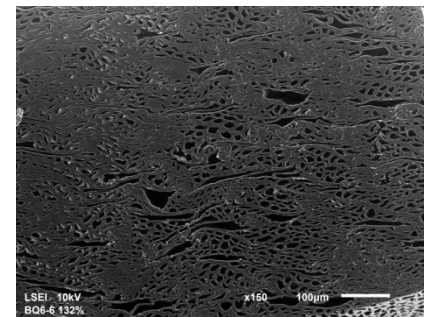
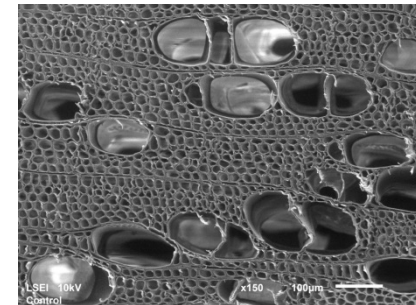
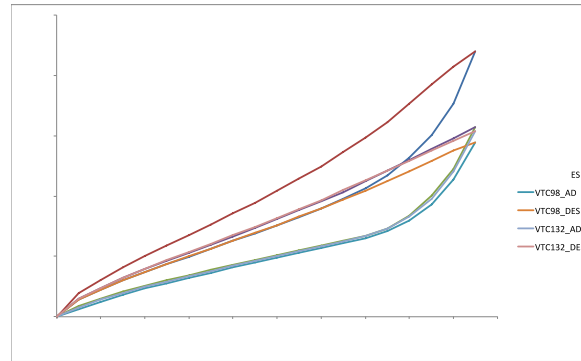


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**Rheological properties of ThermoHydroMechanical (THM) treated wood (Z4-5520-1669, Financed by Slovenian Research Agency; August 2013-July 2015)**  
Time dependent behavior of THM wood under bending, exposed to varying regimes of temperature and moisture (humidity) - creep deformation vs. density of THM wood.

Collaborating with:

- Oregon State University from USA
- EMPA and ETH from Switzerland
- Aalto University from Finland



## Descriptions of ongoing projects

### Wood as an element of Restorative Environmental Design

(PhD; October 2013-)

**Aim** - develop a matrix of test factors and levels related to wood in the built indoor environment that may affect human health;

**Includes:** salivary cortisol measurements of stress level; influence of cultural; naturalness of building materials

**Interdisciplinary** – involving also psychologist

Collaborating with:

- Tretesnik (Norway)
- Aalto University (Finland)



## Descriptions of ongoing projects

Network of Living Labs, virtuous in energy saving and in the development of renewable energy source (**EnergyViLLab**) (INTEREG, Italy-Slovenia Cross-border Cooperation Programme 2007-2013); <http://www.energyvillab.eu> (November 2011 – May 2014)

**SME ViLLab** – living laboratory (ecosystem for experimentation and co-creation with real users in real life environments) developed at UP FAMNIT

- energy efficiency of houses and healthy living environment can be achieved with the usage of wood.



**ENERGYViLLab**  
LIVING LAB FOR SUSTAINABLE DEVELOPMENT



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### **Cascading Recovered Wood (CaReWood; ERA-net+, WoodWisdom-Net Research Programme)**

- Up-grading concept for recovered solid timber as a source of clean and reliable secondary wooden products; Business model for cascade use of wood recovered from building renovation and demolition, the furniture sector and the packaging and transport industries.



WoodWisdom-Net

**What We Wood Believe? Societal perceptions of the forest-based sector and its products towards a sustainable society (W<sup>3</sup>B – Wood Believe; ERA-net+, WoodWisdom-Net Research Programme)**

- Creating and demonstrating innovative cost-efficient ways for communicating towards stakeholders the relevance of the European forest-based sector and its products for a sustainable bio-economy



WoodWisdom-Net

**LCA analysis** – environmental impact assessment included in all projects – **SimpaPro 8.0**

### **1. Bilateral project with Russia (Volga State University of Technology, Faculty of Timber Engineering)**

Thermohydro mechanical treatments of wood for new construction materials; National Agency for Research and Development of Slovenia (ARRS BI-RU/14-15-019)

### **2. Bilateral project with Russia (Saint Petersburg State Technological University of Plant Polymers)**

Environmental performance and impact assessments of paper; National Agency for Research and Development of Slovenia (BI-RU/14-15-014)

### **3. Bilateral project with USA (Oregon State University)**

Viscoelastic properties of thermo-hydro-mechanically treated wood; National Agency for Research and Development of Slovenia (BI-US/14-15-027)

### Active in COST Actions:

- COST Action **FP1303** – MC member and WG3 leader from UP
- COST Action **FP1302** – MC member from UP
- COST Action **FP1006** – Substitute MC member from UP
- COST Action **FP0904** – MC member from UP



Contract research with industry concerning furniture manufacturing  
Project **EKOINŽENIRING** lead by Brest-pohištvo d.o.o.

### Laboratory equipment:

XRF X-MET 7500 OXFORD Instruments (XRF – X-ray fluorescence – analyzer)

FTIR iS50 Thermo Scientific (FTIR – Fourier-transform infrared spectroscopy)

Thermal analyzer STA 449 F3 Jupiter Netzsch

Reactor Optimax Mettler Toledo

Laboratory Hot Press LZT-UK-30-L Langzauner

Microscope Leica DM 2700 M

Microtome Leica RM2125RTS Manual Rotary Microtome

Analytical balance KE-ABT220-5DM, KERN & SOHN

Climate chamber Kambič

Equipment for bioremediation: laminar, incubator