

## Opis delovnega mesta mladega raziskovalca/ke (*Description of the Young Researcher's position*)

1. Članica UL (*UL member*):

Biotehniška fakulteta // Biotechnical Faculty

2. Ime, priimek in elektronski naslov mentorja/ice (*Mentor's name, surname and email*):

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3. Raziskovalno področje (*Research field*):

4.01 Gozdarstvo, lesarstvo in papirništvo // 4.01 Forestry, wood and paper technology

4. Opis delovnega mesta mladega raziskovalca/ke (*Description of the Young Researcher's position*):

Vključuje morebitne dodatne pogoje, ki jih mora izpolnjevati kandidat/ka za mladega raziskovalca/ko, ki niso navedeni v razpisu za mlade raziskovalce.

*slo:*

Mladi raziskovalec se bo vključil v delo raziskovalnega programa P4-0430 z naslovom Gozdno lesna veriga in podnebne spremembe: prehod v krožno biogospodarstvo in Katedre za lesne škodljivce, zaščito in modifikacijo lesa na Oddelku za lesarstvo.

Vemo, da navkljub visokemu deležu gozdnatosti in bogatim naravnim virom gozdarski sektor v Sloveniji ostaja premalo izkoriščen, kar so prepoznali tudi oblikovalci politik. Posledično je bilo v zadnjem času sprejetih več ukrepov za krepitev trajnostnih (lokalnih) gozdno-lesnih vrednostnih verig, od drevesa v gozdu do končnega proizvoda z visoko dodano vrednostjo. Skupen cilj raziskovalnega programa je identifikacija trenutnih izzivov znotraj gozdno-lesne verige vrednosti (od stoječih dreves do končnih izdelkov) in iskanje optimalnih rešitev na podlagi znanja in razpoložljivih virov (laboratoriji in podatkovne zbirke). Program je organiziran v pet delovnih skupin (DS), ki pokrivajo vse načrtovane dejavnosti. V vsaki DS je opredeljenih 3-5 ciljev, ki pokrivajo ključne aktivnosti raziskovalnega programa:

DS1: Sodobno gojenje gozdov za višjo kakovost gozdnih proizvodov

DS2: Lastnosti lesa in izboljšani materiali na osnovi lesa

DS3: Učinkovita raba lesa v gradbeništvu

DS4: Gozdno-lesni sektor v biogospodarstvu

DS5: Projektno vodenje in diseminacija.

Raziskovalci treh raziskovalnih organizacij sestavljajo predlagano raziskovalno skupino z namenom zagotovitve medsektorskega (gozdarstvo, lesarstvo, gradnja z lesom) in inovativnega pristopa za doseganje zastavljenih ciljev ter povezovanje skupine z industrijo. Rdeča nit vseh DS je izmenjava znanja in raziskovalnih idej med izkušenimi raziskovalci z različnih znanstvenih področij.

Mladi raziskovalec bo v okviru usposabljanja najaktivneje raziskoval v sklopu DS2, katere cilj je celovito oceniti kakovost in lastnosti lesa v odvisnosti od rastnih razmer drevesa ter razvoj izboljšanih materialov na osnovi lesa z uporabo naprednih tehnologij, natančneje:

- Razvoj izdelkov z večjo dodano vrednostjo in kakovostnejše izdelke z izboljšanimi lastnostmi.
- Predelava stranskih proizvodov in ostankov ter prehod v krožno gospodarstvo z uporabo glivne biotehnologije.
- Ocena funkcionalne in estetske življenjske dobe razvitih izdelkov.

Zaželeno je, da ima kandidat:

- izobrazbo biotehniške, naravoslovne ali tehniške smeri
- aktivno znanje angleškega jezika,
- sposobnost samostojnega dela in željo po učenju in raziskovanju
- rad samostojno delo in delo v skupini

Mladi raziskovalec bo vključen v dinamično in raznoliko raziskovalno okolje in bo imel priložnost aktivne udeležbe na domačih in mednarodnih znanstvenih srečanjih in podporo pri objavljanju rezultatov v uglednih domačih in mednarodnih revijah.

*eng:*

The candidate will be involved in the work of the research programme P4-0430 entitled “Forest-wood value chain and climate change: transition to circular bioeconomy” and in the work of the Chair of Wood Pests, Wood Protection and Wood Modification at the Department of Wood Science and Technology.

Despite a high proportion of forest and abundant natural resources, Slovenian forests are still underutilised, which has also been recognised by policy makers. Therefore, several measures have been taken recently to strengthen sustainable forest-based value chains, from the tree in the forest to the product with high added value. The overall objective of this research programme is to identify the current challenges along the entire forest-based value chain and to search for optimal solutions using all available knowledge and resources (laboratories and databases). To facilitate the work, the programme is divided into five working groups (WGs) covering all planned activities. In each WG 3-5 objectives are defined that describe the main activities of the respective research programme:

- WG1: Modern silviculture for higher value forest products
- WG2: Wood properties and improved wood-based materials
- WG3: Efficient use of wood in construction
- WG4: Forest and wood-based bioeconomy
- WG5: Project management and dissemination.

Researchers from three research organisations form the research group to ensure a cross-sectoral (forestry, wood science and timber construction) and innovative approach to achieve the set objectives and to link the group with industry. The underlying theme of all working groups is the exchange of know-how and research ideas between researchers from different backgrounds.

During the training, the candidate will carry out the most active research within WG2, which aims to comprehensively evaluate the quality and properties of wood depending on the trees growth conditions and to develop improved wood based materials in more detail using advanced technologies:

- Developing higher value-added and higher quality products with improved properties.
- Upcycling of by-products and waste and transition to a circular economy using fungal biotechnology (development of new materials).
- Predicting the functional and aesthetic service life of the materials developed.

Desired candidate profile:

- Education in life sciences (including biology, biotechnology, bioengineering...), natural sciences or relevant technical fields
- Active knowledge of the English language
- Ability to work independently and a desire to learn and conduct research
- Enjoys working independently and in a team

The candidate will be involved in a dynamic research environment and will be given the opportunity to actively participate in national and international scientific meetings, as well as support in publishing results in prestigious national and international journals.