

Recrutement prévu dans le cadre du contrat recherche SSUCHY-Next

Job title	Post-doctoral fellowship – Mechanics of wood- and plant-based composites
Ref	offreEmploi_2024.06_IGR SSUCHY-Next Horizon
Job type (PhD, Post-doc, Engineer)	Post-doc
Contract duration (months)	48 months
Salary	Net monthly salary: 2 000€ - 2 700€ (based on experience)
Qualifications (Master degree, PhD...)	PhD in mechanics of wooden materials
Job hours (full time/ part time)	Part-time (50%)
Employer	UBFC – Université Bourgogne Franche-Comté
Host Laboratory	FEMTO-ST
URL Host Laboratory	https://www.femto-st.fr/en
Address Host Laboratory	Besançon, France
Job description	<p>Description of the project:</p> <p>SSUCHY-Next: Developing the supply chains for industrial hemp fibre and bio-based resins towards high performance circular bio-based composites</p> <p>SSUCHY-Next is a European project funded in the frame of the Circular Bio-based Europe Joint Undertaking (CBE JU), a partnership between the European Union and the Bio-based Industries Consortium (BIC). SSUHY-Next builds further where a previous European project (SSUCHY, www.ssuchy.eu) stopped in 2022.</p> <p>Ambition is to bring different parts of the hemp fibre supply chain to TRL 7, through production at scale of various fibre products, covering the complete value chain from field to composite. The appearance at industrial scale of high quality hemp fibres would give a boost to plant fibre composites in competition with glass fibre composites, offering both an environmentally sound and cost effective alternative. With hemp fibres which are largely circular, one of the major bottlenecks for a further breakthrough of bio-based composites has been the lack of (fully) bio-based, environmentally sound and as well cost efficient polymer matrices. Hence, our ambition in SSUCHY-Next to work on 3 bio-based resins. All systems developed to TRL 6 or 7. To demonstrate the viability of the materials, various inspiring applications are developed to TRL7. We demonstrate the design, production, testing and certification of a 12.6 meter long wind turbine</p>

	<p>blade, made from hemp and bio-based acrylic. Wood-based products are developed, based on infiltrated wood scaffolds. Large scale building applications are demonstrated, based on shorter fibres and benzoxazine. For each developed product we demonstrate its recyclability. All developments are monitored and adjusted by means of LCA.</p> <p>Description of the PhD position:</p> <p>The main objective of the post-doctoral research is to contribute to the development of new wood-based and plant-based composites and products for large-scale applications. The work will be carried out in close collaboration with the industrial and academic partners involved in this European project. The main tasks will include the design and development of new ideas, testing set-ups and methodologies, conducting mechanical characterization, managing technician and PhD candidates, overseeing tests, writing of reports and deliverables, participation in technical and consortium meetings, dissemination of results (writing scientific articles, conferences presentations, etc.).</p>
Supervisor(s)	Vincent PLACET, Research Engineer (HDR), University of Franche-Comté, vincent.placet@univ-fcomte.fr
Candidate profile	<ul style="list-style-type: none"> ▪ PhD in mechanical engineering, mechanics of materials & structures. ▪ Strong expertise in composite and wood and plant-based materials (manufacturing, testing and modelling). ▪ 5 years of prior experience (after PhD defense) in R&D project development and management. ▪ Software: proficient with Matlab and FEM ▪ Teamworking, managerial quality. ▪ Curious, self-motivated, hard-worker. ▪ English: fluent reading, writing and speaking with ease.
Keywords	Bio-based composites, wood, mechanics, structures
Application deadline	June the 30 th , 2024
Starting Job	September 2024

<p>Application Depending on the type of position</p>	<p>Post-doc position</p> <p>Please send the following documents (all in one PDF file) by e-mail to "indicate contact email" vincent.placet@univ-fcomte.fr :</p> <p>1) For EU candidates: Copy of your national ID card or of your passport page where your photo is printed. For non-EU candidates: Copy of your passport page where your photo is printed.</p> <p>2) Curriculum Vitae (may include hyperlinks to your ResearchID, Research Gate Google Scholar accounts).</p> <p>3) Detailed list of publications (may include hyperlinks to DOI of publications).</p> <p>4) Letter of motivation relatively to the position (Cover Letter) in which applicants describe themselves and their contributions to previous research projects (maximum 2 pages)</p> <p>5) Copy of your PhD degree if already available.</p> <p>6) Coordinates of reference persons (maximum 3, at least your master thesis supervisor): Title, Name, organization, e-mail.</p> <p><i>If you have questions regarding the application, please contact the supervisors.</i></p>
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