

Recrutement prévu dans le cadre du projet recherche H2020 PLASMONIAC

Job title	Integrated plasmonic for optical neural networks
Ref	2023.01_postdoc_H2020 Plasmoniac
Job type (PhD, Post-doc, Engineer)	Post-doc
Contract duration (months)	7 Months (Gross salary from 2100-2600 Euros/Month depending on experience)
Qualifications (Master degree, PhD...)	PhD
Job hours (full time/ part time)	Full time
Employer	UBFC – Université Bourgogne Franche-Comté
Host Laboratory	Laboratoire Interdisciplinaire Carnot de Bourgogne (LICB)
URL Host Laboratory	https://icb.u-bourgogne.fr/en/
Address Host Laboratory	Laboratoire Interdisciplinaire Carnot de Bourgogne – UMR CNRS 6303 9 avenue Alain Savary BP 47870 – 21 078 Dijon cedex
Job description	<p>Post-doc position offered in the context of an H2020 project ICT Application Driven Photonics Components starting on 01/01/2020 and ending on 10/31/2023. This project coordinated by AuTH (University of Thessaloniki, Greece) is build-up around 12 European partners.</p> <p>The candidate will be in charge of:</p> <ul style="list-style-type: none"> • Design and modelling of thermo-optical (TO) plasm-photoptic devices. Numerical modelling will be performed by using either a commercial software (Comsol multiphysics) or home-grown numerical codes relying on Fourier Modal Method. • Fabrication of TO plasm-photoptic devices: Standard micro-fabrication techniques such as UV/E-beam lithography, reactive ion etching, Physical Vapor Deposition (PVD) will be operated for the fabrication of the TO plasm-photoptic devices. The fabrication of the TO components will be most often conducted on chips equipped with optical integrated devices provided by different several partners of the project. • Optical characterizations: The TO devices will be characterized by using standard fiber-to-fiber optical characterization bench or leakage-radiation microscopy techniques. The goal of those characterizations will be

	<p>established the TO performances of the devices including power consumption, response time, stability in time...</p> <ul style="list-style-type: none"> • Follow-up and reporting: A tight follow-up of the scientific actions (design, modelling, fabrication, characterizations...) will be necessary in order to produce in a timely manner the expected reports and deliverables. The reports will compile not only the data from UBFC but also from other partners imposing daily-basis interactions with several members of the project consortium. • Contribution to review and technical meetings: Participations to review and technical meetings with the members of the consortium.
Supervisor	Pr. Jean-Claude Weeber – Mail : jcweeber@u-bourgogne.fr
Candidate profile	<p>The candidate should be PhD with a background in:</p> <ul style="list-style-type: none"> • Clean-room and micro-fabrication techniques (a training on each specific machines of the micro-fabrication plan will be organized at the start of the contract) • Integrated optics concepts including basic plasmonics • Numerical modeling in classical electrodynamics • Optical characterizations of integrated optics devices in the DC regime (Insertion losses, cut-back method, spectral response...)
Keywords	Integrated optics, Thermo-Optical properties, integrated plasmonics, neural networks, micro-fabrication and clean room, optical characterization
Application deadline	Feb 1 st 2023
Starting Job	March 1 st 2023
Application <i>Depending on the type of position</i>	<p>Post-doctoral Position Please send the following documents (all in one PDF file) by e-mail to jcweeber@u-bourgogne.fr :</p> <ol style="list-style-type: none"> 1) Curriculum Vitae. 2) Letter of motivation relatively to the position. 3) Copy of your PhD degree if already available. <p>If you have questions regarding the application, please contact the supervisor.</p>