

Open Position for a Senior Postdoctoral Researcher (Code: PD #1)

ERC Advanced Grant UMWP-CHIP

Universal microwave photonics programmable processor for seamlessly interfacing wireless and optical ICT systems

The ITEAM Research Institute (Universitat Politècnica de València, Spain) offers 1 Postdoctoral researcher position for candidates holding a PhD degree in Electronic/Telecommunications Engineering with a background in Photonics and Optical communications. The successful candidate will be affiliated to the Photonics Research Labs.

The contract is offered for up to a maximum of 3 years within the framework of the European ERC Advanced Grant UMWP-CHIP granted to Prof. José Capmany under the title “*Universal microwave photonics programmable processor for seamlessly interfacing wireless and optical IC*”.

The aim of UMWP-CHIP is the design, implementation and validation of a universal or general-purpose programmable photonic integrated circuit (PIC) capable of performing with the same hardware architecture the main functionalities required in microwave photonics. The processor core will be based on the novel concept of photonic waveguide mesh and will be integrated in a Silicon Photonics chip. Its three specific objectives are: (1) The architecture design and optimization of a technology agnostic universal MWP programmable signal processor, (2) The chip mask design, fabrication and testing of the processor and (3) The experimental demonstration and validation of the processor.

Job Description

In collaboration with the the Project Leader, and a Permanent Staff researcher the Postdoctoral Researcher will co-lead the work to be carried in Workpackage #2 of the project focused on the chip mask design processes of the optical core and the universal processor, its fabrication, packaging, measurement and validation. An important part of the work will imply the interaction and coordination of fabrication processes with the selected foundries. The work will imply as well the co-supervision of a and one PhD Student. In addition he/she will assist in the chip mask design processes of the optical core and the universal processor.

Benefits

The contract is offered for a maximum of up to 4 years after a test period of 4 months. The contract may be renewable after this period with the funds from other projects/grants. The selected candidate will receive full support from the group towards the obtention of a permanent position at UPV.

- Estimated starting date: 01/10/2017

Skills/Qualifications

The candidate should have a PhD degree in Telecommunications/Electronic Engineering with a specific specialization in integrated optics, issued by a University from a European Union member country or from a third country, provided it has been officially authorised by the Spanish Ministry of Education.

Skills to be positively valued for this position include:

- First Postdoctoral period completed
- Photonic IC design & test
- RF design & test
- Photonic IC design tools (PhoeniX, Lucedá, Lumerical)
- RF design tools (CST)
- Supervision skills
- Project management skills

For further information about the position, please contact **Prof. José Capmany** by email: jcapmany@iteam.upv.es. Please quote the position code in your email subject body.

Open Position for a Junior Postdoctoral Researcher (Code: PD #3)

ERC Advanced Grant UMWP-CHIP

Universal microwave photonics programmable processor for seamlessly interfacing wireless and optical ICT systems

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The contract is offered for up to a maximum of 3 years within the framework of the European ERC Advanced Grant UMWP-CHIP granted to Prof. José Capmany under the title “*Universal microwave photonics programmable processor for seamlessly interfacing wireless and optical IC*”.

The aim of UMWP-CHIP is the design, implementation and validation of a universal or general-purpose programmable photonic integrated circuit (PIC) capable of performing with the same hardware architecture the main functionalities required in microwave photonics. The processor core will be based on the novel concept of photonic waveguide mesh and will be integrated in a Silicon Photonics chip. Its three specific objectives are: (1) The architecture design and optimization of a technology agnostic universal MWP programmable signal processor, (2) The chip mask design, fabrication and testing of the processor and (3) The experimental demonstration and validation of the processor.

Job Description

In collaboration with the the Project Leader, the Postdoctoral Researcher will co-lead the work to be carried in Workpackage #1 of the project focused on the modeling and design of the top-level architecture of the MWP signal processor and its optical core and the optimization and drafting of specifications to be employed in its fabrication, assembly, testing and experimental demonstrations. The work will imply as well the co-supervision of a and one PhD Student. In addition he/she will assist in the chip mask design processes of the optical core and the universal processor.

Benefits

The contract is offered for a maximum of up to 4 years after a test period of 4 months. The contract may be renewable after this period with the funds from other projects/grants.

- Estimated starting date: 01/10/2017

Skills/Qualifications

The candidate should have a PhD degree either in Telecommunications/Electronic Engineering with a specific specialization in integrated optics, issued by a University from a European Union member country or from a third country, provided it has been officially authorised by the Spanish Ministry of Education.

Skills to be positively valued for this position include:

- Photonic IC modelling & simulation
- RF circuit modelling & simulation
- Photonic IC design tools (PhoeniX, Lucedá, Lumerical, COMSOL)
- RF design tools (CST)
- MATLAB / Mathematica
- Report writing
- Presentation skills
- Fluent in English

For further information about the position, please contact **Prof. José Capmany** by email: jcapmany@iteam.upv.es. Please quote the position code in your email subject body.

Open Position for a PhD candidate (Code: PhD #1)

ERC Advanced Grant UMWP-CHIP

Universal microwave photonics programmable processor for seamlessly interfacing wireless and optical ICT systems

The ITEAM Research Institute (Universitat Politècnica de València, Spain) offers 1 PhD position for candidates holding a BSc+MSc degree in Electronic/Telecommunications Engineering with a background in Photonics and Optical communications. The successful candidate will be affiliated to the Photonics Research Labs.

The contract is offered for up to a maximum of 4 years within the framework of the European ERC Advanced Grant UMWP-CHIP granted to Prof. José Capmany under the title “*Universal microwave photonics programmable processor for seamlessly interfacing wireless and optical IC*”.

The aim of UMWP-CHIP is the design, implementation and validation of a universal or general-purpose programmable photonic integrated circuit (PIC) capable of performing with the same hardware architecture the main functionalities required in microwave photonics. The processor core will be based on the novel concept of photonic waveguide mesh and will be integrated in a Silicon Photonics chip. Its three specific objectives are: (1) The architecture design and optimization of a technology agnostic universal MWP programmable signal processor, (2) The chip mask design, fabrication and testing of the processor and (3) The experimental demonstration and validation of the processor.

Job Description

Under the supervision of the Project Leader and one Postdoctoral Researcher, the PhD Student will focus his/her work mainly on the modeling and design of the top-level architecture of the MWP signal processor and its optical core and the optimization and drafting of specifications to be employed in its fabrication, assembly, testing and experimental demonstrations. In addition he/she will assist in the chip mask design processes of the optical core and the universal processor.

Benefits

The contract is offered for a maximum of up to 4 years after a test period of 4 months. The contract may be renewable after the PhD thesis period with the funds from other projects/grants.

- Estimated starting date: 01/10/2017

Skills/Qualifications

The candidate should have a BSc+MSc degree in Telecommunications/Electronic Engineering with an academic background on photonics and optical fiber communications, issued by a University from a European Union member country or from a third country, provided it has been officially authorised by the Spanish Ministry of Education.

Skills to be positively valued for this position include:

- RF System Engineering
- Photonic components & systems
- Microcontroller systems design (FPGA/DSP)
- MATLAB / Mathematica
- Data analysis / representation
- Report writing
- Presentation skills
- Fluent in English

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Open Position for a PhD candidate (Code: PhD #2)

ERC Advanced Grant UMWP-CHIP

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The aim of UMWP-CHIP is the design, implementation and validation of a universal or general-purpose programmable photonic integrated circuit (PIC) capable of performing with the same hardware architecture the main functionalities required in microwave photonics. The processor core will be based on the novel concept of photonic waveguide mesh and will be integrated in a Silicon Photonics chip. Its three specific objectives are: (1) The architecture design and optimization of a technology agnostic universal MWP programmable signal processor, (2) The chip mask design, fabrication and testing of the processor and (3) The experimental demonstration and validation of the processor.

Job Description

Under the supervision of the Project Leader, a Permanent Staff Researcher and a Postdoctoral Researcher, the PhD Student will focus his/her work mainly on the chip mask design processes of the optical core and the universal processor, its fabrication, packaging, measurement and validation.

Benefits

The contract is offered for a maximum of up to 4 years after a test period of 4 months. The contract may be renewable after the PhD thesis period with the funds from other projects/grants.

- Estimated starting date: 01/10/2017

Skills/Qualifications

The candidate should have a BSc+MSc degree in Telecommunications/Electronic Engineering with an academic background on photonics and optical fiber communications, issued by a University from a European Union member country or from a third country, provided it has been officially authorised by the Spanish Ministry of Education.

Skills to be positively valued for this position include:

- Photonic components
- RF engineering
- MATLAB / Mathematica
- Data analysis / representation
- Report writing
- Presentation skills
- Fluent in English
- Lab measurement automation (python/Labview)

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