



To Photonics21 Secretariat
via eMail: secretariat@photonics21.org

Dear Photonics21 Secretariat,

We herewith submit the nomination of the following Photonics21 Board of Stakeholders candidate
Universidad Carlos III de Madrid / Guillermo Carpintero-del-Barrio.

**- Letter of Nomination -
Photonics21 Board of Stakeholders
Election 2024**

Photonics21 Board of Stakeholders - Letter of Nomination

1. Full legal name of the affiliation nominated as BoS Member (candidate's organisation):

Universidad Carlos III de Madrid

2. Full contact details of the affiliation (street, postal code, country) nominated as BoS Member and invoice address *(In accordance with the Terms of Reference §5, which the Affiliation acknowledges having received, an Annual Service fee will be invoiced every year during the first quarter to the BoS Member. By signing the present letter, the BoS candidate agrees to pay this Membership Fee. The Fee will be considered an asset of the Photonics 21 AISBL in accordance with its statutes (article 12b).)*

Avenida de la Universidad, 30
28911 Leganes, Madrid
Spain

3. Name of the suggested BoS Representative (the personal candidate)

Guillermo Carpintero-del-Barrio

4. Information about the BoS candidate and the BoS representative

a) Description of the activities and information about the expected contribution and value added the nominated BoS member (candidate's organisation) will bring to the BoS¹

UC3M-Universidad Carlos III de Madrid, with 2.268 researchers, has ranked number one in Spain for its overall performance, according to the U-Ranking 2022 carried out by the Fundación BBVA and the Valencia Institute for Economic Research. At present, UC3M hosts 143 research groups within its 29 academic departments, 54 of these groups in engineering. Its infrastructures include three cleanrooms, dedicated to bioengineering, microsatellite assembly and photonic integrated circuit assembly and RF, as well as an electronic and mechanical workshops. Research lines encompass diverse areas, excelling in Information and Communication Technologies, with a leading role in 5GPPP and 6GSNS projects, developing the future communication networks pioneering the use of photonic integrated circuits for the mobile front end. We must highlight its Business Incubation and Acceleration Program, which has supported and contributed to the creation of more than 150 innovative companies, currently hosting 22 startups and 8 spin-offs.

As part as its commitment to the internationalization of research and education, UC3M has established alliances with academic institutions all over the world, highlighting:

- YERUN - Young European Research Universities -, the youngest of these networks, is aimed to strengthen and develop cooperation in the areas of research, academic

¹ The candidate is aware and accepts that according to the Photonics21 Terms of Reference (§ 5 (10) a membership fee - as determined by the General Assembly of the Association - needs to be paid to the Photonics21 association.

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education and service to society among a cluster of highly-ranked, young research universities in Europe on an equal basis and for their common benefit.

- YUFE - Young Universities for the Future of Europe -, which is one of the 17 alliances of European universities selected by the European Commission to develop and implement the first models for a European University.

b) Description of the activities and information about expected contribution and value added the BoS Representative (candidate / person) will bring to the BoS.

Guillermo Carpintero (MEng Universidad Politécnica de Madrid, PhD Universidad Carlos III de Madrid) – Full professor in Photonics and Optoelectronics and Laser Technology Group leader, invited professor at University College London and University of Osaka (h-index: 20, journal papers: > 70, conference talks: 100+, patent families: 5+, spin-offs: Leapwave Technologies)

- **PIC experience:** Ultrawide tunable hybrid integrated lasers with InP/SiN and InP/Polymer, Monolithically integrated RF transceivers, Ultra-broadband instrumentation, Integrated Microwave/Millimeter-wave/Terahertz Photonics, Terahertz spectroscopy, Photonic-based room-temperature millimeter-wave/Terahertz radiometers. In 2010 coordinated a FP7 STREP Project iPHOS, which developed the first full millimeter-wave transmitter on a single PIC, and in 2019 started the coordination of the H2020 FET Open TERAmeasure project using photonics to develop breakthrough technology for Terahertz instrumentation. Currently coordinates HE 6GSNS TERA6G project, developing photonic-based Terahertz antenna arrays.
- **Leadership:** Lead R&D teams, coordination of 3 and principal investigator of 6 EU projects. Has been principal investigator of more than 10 projects with industry, and more than 20 national and regional research projects.
- **Awards:** Extraordinary doctoral award 2000, 2000 PennWell's Heather W. Messenger Young Investigator Award, Excellence award 2009, Best cooperation European R&D project award 2011.