



To Photonics21 Secretariat
via eMail: secretariat@photonics21.org

Dear Photonics21 Secretariat,

We herewith submit the nomination of the following Photonics21 Board of Stakeholders candidate
CNRS, Centre National de la Recherche Scientifique / Arnaud Mussot.

**- 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):

CNRS, Centre National de la Recherche Scientifique

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).)*

CNRS, IRCICA/PHLAM
50 avenue de Halley
59650 Villeneuve d'Ascq
France

Invoicing address:
CNRS Laboratoire PhLAM UMR 8523 CNRS SCTD
2 rue Jean Zay TSA 41002
54519 Vandoeuvre les Nancy Cedex
France

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

Prof. Arnaud Mussot

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

The CNRS (Centre National de la Recherche Scientifique) stands as the largest French research institute, boasting over twelve thousand researchers spanning all scientific disciplines. It operates as a public organization under the supervision of the French Ministry of Higher Education and Research. Its mission, as outlined by governmental decree, encompasses the evaluation, and conduct of research endeavours aimed at advancing knowledge and delivering societal, cultural, and economic advantages. Additionally, it actively contributes to the dissemination and promotion of research outcomes, fosters scientific knowledge, supports research training, and engages in the analysis of both national and international scientific landscapes to inform the development of national policies.

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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As Europe's foremost fundamental research institution, CNRS encompasses a wide array of knowledge domains. Its interdisciplinary programs and initiatives provide entry points into novel scientific inquiries, facilitating CNRS's responsiveness to the requirements of society and industry. Spread across France, CNRS boasts more than 1,100 research units, including over 300 in photonics. They are associated with diverse research organizations, industrial partners, and with prestigious universities. This partnership plays a central role in the training of many doctoral students each year, tackling complex scientific issues. CNRS has thus established a robust national framework with a range of collaborative networks, such as GdR, GIS, EQUIPEX, and technological networks. This nationwide strategy contributes significantly to the CNRS's dynamism and productivity in Photonics. These efforts to organize and encourage innovation underline the CNRS's medium- and long-term vision for photonics. The results of this policy are reflected in numerous ERC projects, publications in high-impact journals (including Nature Publishing Group and Phys. Rev. Lett.), over 2,500 patents obtained since 2015, and the recent award of two French Nobel Prizes in Physics in 2018 (awarded to G. Mourou) and 2022 (awarded to A. Aspect).

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

Professor Arnaud Mussot has been an international leader in nonlinear fiber optics research over the past 18 years, with multiple outstanding contributions that have had major impact in nonlinear photonics including fiber supercontinuum generation, ultrafast nonlinear propagation instabilities, parametric frequency conversion, and frequency comb dynamics.

In addition to these achievements, Professor Mussot also directed a fiber fabrication group (50 people) during 3 years that has designed and drawn a range of novel photonic crystal fiber designs tailored specifically to explore fundamental aspects of nonlinear light-matter interactions as well as for applications with several companies such as Nokia, or Prysmian group for telecommunications or the French atomic agency (CEA) within the development of the Laser Megajoule.

The significance of Professor Mussot's many scientific contributions can be seen from his publication record: Over 400 papers including 157 international peer review papers, 60 invited presentations at major international conferences (CLEO, OFC,...), 8 patents (H-Index: 43/37, 6688/4340 citations [Google Scholar/Web of Science]). He regularly publishes in leading journals such as Nature Photonics, Physical Review Letters etc...

Professor Arnaud Mussot has also given great service to the scientific community through a wide range of volunteer and service roles, serving on several technical programme committees, founding advisor of the OSA Student Chapter at the University of Lille, serving during two terms (six years) as Topical Editor for Optics Letters or managing one of the 4 Hubs (Human-friendly digital world) of the initiative excellence in ULille (15 M€ in total) aiming at stimulating high level research and development.

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Professor Arnaud Mussot was Principal Investigator and Grant Holder of competitive and collaborative programs for more than 2.5 M€ in different founding agencies in Europe, French research agency... .

As well as his outstanding international research and service record, Professor Mussot is a highly committed educator who has received major recognition in France through his nomination to the prestigious Institut Universitaire de France, (twice, junior in 2019 and senior in 2024) and his appointment as the President of the French National University Council for the field of optical physics (650 members). This latter position is the senior national position representing all academics in the field, and he has overall responsibility for guiding and responding to national policies. He also has an extensive record of PhD supervision (12) and evaluation (60, in several countries in Europe), and the creation of multiple local and national research initiatives. For all these contributions, Professor Arnaud Mussot is OPTICA fellow 2023 (former OSA).

Professor Arnaud Mussot therefore possesses a wealth of expertise in photonics, both at academic and industrial level, as well as a good knowledge of the organization of research at European level. He will be able to put these aspects, his leadership and his vision, at the service of Photonics21 for the development of photonics in Europe.