



To Photonics21Secretariat
via eMail: secretariat@photonics21.org

Dear Photonics21 Secretariat

We herewith submit the nomination of the following Photonics21 Board of Stakeholder candidate
Nvidia Networking / Paraskevas Bakopoulos.

**- Letter of Nomination -
Photonics21 Board of Stakeholders
Election 2020**

Photonics21 Board of Stakeholders - Letter of Nomination

§ 5 BOARD OF STAKEHOLDERS (6) b....A candidate nomination will always contain the name of the candidate organisation together with its proposed BoS Representative, and voting on a candidate implies voting on this combination.

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

Nvidia Networking

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 Service Fee. The Service Fee will be considered an asset of the Photonics 21 AISBL in accordance with its statutes (article 12,c).*

Nvidia Networking
Hakidma 26
Ofar Industrial Park
Yokneam, Israel
Zip code 2069200

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

Paraskevas Bakopoulos

4. Information about the BoS candidate and the BoS representative

Extract Photonics21 Terms of Reference¹: “§ 5 BOARD OF STAKEHOLDERS; ...(6) Election of BoS Members: “Description of the activities of, and information about the added value and contribution to the BoS by both the nominated BoS member and the BoS Representative”

- a) Description of the activities and information about the expected contribution and value added the nominated BoS member (candidates organization) will bring to the BoS²

½ - 1 page description suggested

Nvidia networking is the new name of Mellanox Technologies, a leading supplier of networking solutions. Nvidia is a multinational company renowned for the design of graphics processing

¹ Photonics21 Terms of reference are available at

http://www.photonics21.org/download/general_inf/TermsOfReference/ETPPhotonics21TermsOfReference.pdf

² The candidate is aware and accepts that according to the Photonics21 Terms of Reference a service agreement and a service fee invoice is to be signed / paid with the Photonics21 association.

Photonics21 Board of Stakeholders - Letter of Nomination

units (GPUs). NVIDIA's invention of the GPU in 1999 sparked the growth of the PC gaming market, redefined modern computer graphics and revolutionized parallel computing. More recently, GPU deep learning ignited modern artificial intelligence (AI) — the next era of computing — with the GPU acting as the brain of computers, robots and self-driving cars that can perceive and understand the world. As of 27 April 2020, Nvidia acquired Mellanox Technologies which is now Nvidia Networking. The acquisition unites two of the world's leading companies in high performance and data center computing. Combining Nvidia's leading computing expertise with Mellanox's high-performance networking technology will enable higher performance, greater utilization of computing resources and lower operating costs. Mellanox/Nvidia Networking remains an independent business unit with internal R&D (>85% in Israel and Europe) and IP and retains its Ethernet and InfiniBand products.

Nvidia Networking is a leading supplier of end-to-end Ethernet and InfiniBand intelligent interconnect solutions and services for servers, storage, and hyper-converged infrastructure. Nvidia Networking offers a broad portfolio of optical interconnect products (e.g. active optical cables, transceivers) including multi-mode and single-mode solutions for various deployment scenarios in different datacenter tiers. As the networking arm of a leading HPC/data center organization the company will provide a unique perspective with broad insights to the Photonics21 BoS regarding system-level integration of photonics with computing systems, touching on complementarities, requirements and research directions. The perspective of Nvidia Networking opens up a massive market for photonics, extending well beyond "traditional" datacenters to artificial intelligence, high-performance computing, autonomous vehicles, edge computing etc.

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

½ - 1 page description suggested

Paraskevas Bakopoulos (born 1979) is a Senior Staff Engineer at Nvidia Networking (former Mellanox technologies), working on optical interconnects and optical switching for datacenter networks. He followed his studies at the National Technical University of Athens (NTUA), Greece, receiving a Diploma in Electrical Engineering and a Ph.D degree in optical communications for studies in networking applications of highly nonlinear fibers. He has authored or co-authored more than 120 peer-reviewed articles and conference papers and holds 4 patents. He has participated in organizing committees of photonics-related events.

During his Ph.D studies Paraskevas worked as a researcher at the Photonics Communications Research Laboratory, NTUA, where he investigated concepts for all-optical switching and signal processing. His research activities were funded by European research projects offering him the opportunity to practice collaboration with large, multi-cultural teams.

Following his PhD his early career continued at NTUA where he worked as a senior researcher from 2010 to 2017. In this position he was responsible for a team of Phd students and worked towards extending the group's activities synergizing photonic circuit design with system architectures. In this position Paraskevas interacted closely with several EU research consortia and initiated new collaborations with the industry.

Photonics21 Board of Stakeholders - Letter of Nomination

In August 2017 Paraskevas joined Mellanox Technologies (now Nvidia Networking) with the mandate to establish a new research group focusing on applications of photonic integrated circuits. He is currently heading the Optical Systems and Architectures lab of the Advanced Technologies unit, which is the company's research department for optical interconnects. Among his duties Paraskevas is actively involved in company-internal and EU collaborative research projects.

The added value to the Ph21 BoS brought by Paraskevas is summarized below:

- *Long standing, high quality research track record in applied research*
- *Large experience and active collaboration links with European photonics community, including SMEs and Universities/Research centers.*
- *Experience in bringing novel technologies to applied solutions*
- *Research experience in activities that fall under -and foster synergies between- WG1 and WG6*

Final information from the Photonics21 secretariat:

- *We recommend limiting the BoS nomination letter to 3-4 pages max.*
- *Letters of nominations should be submitted electronically to secretariat@photonics21.org .*
- *It is highly recommended to consult the Photonics21 Terms of Reference before submitting the nomination.*
- *Please note that the deadline for providing BoS nominations to the Photonics21 Secretariat is **25th August 2020**.*