



To Photonics21Secretariat
via eMail: secretariat@photonics21.org

Dear Photonics21 Secretariat

We herewith submit the nomination of the following Photonics21 Board of Stakeholder candidate (organization) / representative (person).

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

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§ 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):

Łukasiewicz Research Network – Institute of Electron Technology

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).*

**Aleja Lotnikow 32/46
02-668 Warsaw, Poland**

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

Kamil Pierściński

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

Institute of Electron Technology conducts research in semiconductor technologies for micro-electronics and photonics. Since the foundation ITE cooperates with polish and foreign industrial partners and universities. The leading position of ITE in the field of photonics, micro-electronics and nanotechnology results from the innovative research projects undertaken by the Institute being applied in area of semiconductor lasers, detectors, integrated circuits, microsystems and sensors. The excellence of ITE in both areas is supported by its participation in and leading of many application-oriented projects with polish high-tech companies. ITE strengthens its position in European research space by being involved in numerous UE funded research projects. Up to date, ITE took part in more than 50 projects, resulting in publica-

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.

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tion of papers and patents. In the last 5 years, ITE published more than 500 papers authored and coauthored by ITE employees. One of important activities of the Institute is creating conditions allowing to conduct research oriented at industrial partners in Poland and abroad, as well as academic society. ITE provides students with possibilities of internships and pursuing theses (MSc and PhD).

The area of photonics is one of main interests of the ITE since late 1960's, when the first polish semiconductor laser was demonstrated. Later, many other developments followed, including detectors, LEDs, and further advancement of laser sources. The Photonic Department continues this tradition, specializing in semiconductor lasers. Photonics Department is the leader of many scientific consortia in projects concerning semiconductor laser sources.

It conducts research on innovative light sources and detectors applied in medicine, environmental monitoring, industry and military. Majority of activities is focused on quantum cascade lasers emitting in mid infrared spectral range.

ITE has at its disposal 4 major technological lines: silicon microelectronics and detectors, III-V optoelectronics, GaN power electronics and LTCC. The portfolio of activities includes wide range of characterization techniques (devices, materials), device design, IC design and certification. The approach to technological lines results in openness to external services and orders from customers. This includes development of technology as well as production.

Participation in Photonics21 will strengthen the position of ITE as the research entity concentrating competences in the field of semiconductor laser sources in Poland. The active participation in Photonics21 initiatives and workgroups, opens an opportunity to promote polish point-of-view and interest in European structures. As a result of international networking, we expect the increased possibility of initiating international research or application projects, allowing polish teams to participate in large programs. As the research institute, we tend to aggregate the teams of polish photonics companies and enable them to make use of ITE competences and help them to initiate cooperation with foreign research entities.

Institute of Electron Technology belongs to Łukasiewicz Research Network (<https://lukasiewicz.gov.pl/en/>) gathering 33 key research institutes in Poland. Łukasiewicz is the third largest research network in Europe, employing 8000 specialists. ITE will serve as the representative of the Network in the area of photonics, having the support of wide group of specialists in the field and the biggest applied research potential in Poland. This gives the unique possibility for photonics to reach applications in various fields like automotive, material processing, process control or chemical industry.

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

Kamil Pierściński graduated from Warsaw University of Technology, Faculty of Physics in 2004 and the same year joined the Institute of Electron Technology where he received his Ph.D. degree in 2009. He developed his career at ITE, becoming the Head of Laboratory of Design and Characterization of Optoelectronic Devices in 2012, Deputy Head of the Photonics Department in 2017 and finally the Head of the Photonic Department in 2019. His present research activities focus on the design and development of mid-infrared quantum cascade lasers. Particularly, he is involved in the development of single mode laser based on monolithic coupled cavities design. Kamil Pierściński was and is involved in 2 EU and several Polish Na-

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tional Centre for Research and Development (NCBR) funded projects. He was also leading two Polish National Science Centre projects. The scientific and technological activities of Kamil Pierściński and his team at the Photonic Department are currently targeted on increasing the technology readiness level of the fabricated devices and increasing the application range of quantum cascade lasers within Polish industry. His actions include propagating the idea of application of mid-IR lasers in industry. The long-term goal is to increase the availability of mid-IR optoelectronics to Polish research teams and industry. Current projects in which the team is involved in cooperation with industrial partners are strongly applications oriented and concern gas detection systems as well as free space optical communications. The mid-IR photonics is a key enabling technology for economy and is very promising in terms of development of new applications. Therefore, having at the disposal the technology of design, growth and fabrication of the mid-IR laser sources, the ITE team undertakes the activities concerning the mid-IR photonic integrated circuits. This activity will also be performed with strong cooperation with Polish, high-tech industrial partner.

Kamil Pierściński serves as the reviewer for several JCR journals, as well as an expert of NCBR for the examination of industry-driven projects, in the field of optics, photonics and optical engineering. Kamil Pierściński is also actively involved in activities of Łukasiewicz Research Network. He belongs to Research Groups which are composed of selected researchers who are responsible for active development of the Network research policy and evaluation of the internal projects proposed by Institutes. Occasionally, Kamil Pierściński serves as the host of "Business to Łukasiewicz" inquiries, requiring preparation of Network's solution to a research problem of industrial partner.

Kamil Pierściński will work to facilitate the access of partners (industrial as well as academic) to researchers of Łukasiewicz Research Network, particularly in the area of photonics and optoelectronics, in order to propose solutions meeting market and industrial needs.

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**.*