



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 2018**

## 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):**

Academic Medical Center of the University of Amsterdam

**2. Full contact details of the affiliation (street, postal code, country) nominated as BoS Member and invoice address (in case the candidate is elected, the affiliation needs to pay an annual service fee according the Photonics21 Terms of Reference §5 (10)):**

AMC, Biomedical Engineering & Physics, Meibergdreef 9, 1105 AZ Amsterdam, the Netherlands

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

Prof Ton G van Leeuwen

**4. Information about the BoS candidate and the BoS representative**

*Extract Photonics21 Terms of Reference<sup>1</sup>: “§ 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 BoS<sup>2</sup>**

*The Academic Medical Center of the University of Amsterdam is one of the largest hospitals in the Netherlands. Within this hospital, 9 research institutes, together with the VU medical center, have been founded, see <http://www.amsterdamresearch.org/web/show>. These research institutes, which are either embedded within or in close proximity of the hospitals, perform fundamental and clinical research on various diseases. Research on the application of optical and photonic devices within research as well as in the clinic, has been performed for over 30 years, with the start of the Laser Center headed by Prof Martin van Gemert. His successor, the BoS Representative, is the head of the Biomedical Engineering and Physics department. Members of this department closely work together with clinicians, which stimulates the translation of optical techniques from bench to bedside. Furthermore, the close interaction with clinicians also provides valuable feedback on their needs in new photonic devices. Various clinical departments, e.g. gastro-enterology, pulmonology and urology, have close relationships with commercial endoscopic partners, resulting in collaborative research with these companies. The TTO of the AMC has ample experience in spinning out the knowledge obtained, and therefore can have a valuable contribution on explanations on the*

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<sup>1</sup> Photonics21 Terms of reference are available at [https://www.photonics21.org/download/about-us/structure/ETP\\_Photonics21\\_Terms\\_of\\_Reference\\_C3.pdf?m=1513688127&?m=1499877714](https://www.photonics21.org/download/about-us/structure/ETP_Photonics21_Terms_of_Reference_C3.pdf?m=1513688127&?m=1499877714)

<sup>2</sup> 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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*regulations for medical devices. Clearly, the experience in the basic research, the translation from bench to bedside, as well as from clean room to clinic, is valuable for the BoS.*

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

*Prof Ton G van Leeuwen obtained his MSc Physics at the University of Amsterdam on laser spectroscopy (1989) and his PhD at the University of Utrecht on laser ablation of soft tissue (1992). After a postdoc period in Utrecht and a fellowship on OCT in Cleveland (1997-1998) he became a staff member of the Laser Center of the Academic Medical Center of the University of Amsterdam (AMC-UvA). In 2001 he was appointed as Professor in Clinical Application of Biomedical Optics at the University of Twente (part time, 0.2). From 2003 - 2008, he headed the Biomedical Optics Group at the Science faculty and the Biomedical technology Institute at the UT (0.5 appointment). At the UT, he started and headed the spearhead project NIMTIK ("Non-Invasive Molecular Tumor Imaging and Killing). Based on this work, new projects were granted by STW and IOP - Photonic Devices. In 2008 he was appointed as Professor in Biomedical Photonics and head of the Biomedical Engineering and Physics department in the AMC-UvA. In 2009, he was appointed as full professor in Biomedical Physics. His research focuses on the physics of the interaction of light with tissue, and to use that knowledge for the development, introduction and clinical evaluation of (newly developed) optical imaging techniques. Next to the development of these photonic devices, also research is performed on specialized analysis of the optical signals in order to obtain quantitative functional and molecular information of tissue. Within his group, they focus on optical techniques as optical coherence tomography (OCT), spectrographic monitoring and imaging. He has supervised 35 PhD students towards their thesis defense. Examples of their projects are, e.g. IOP Photonic Devices ("IR SWEPT: IR swept source for high resolution functional imaging in medicine" and "low-cost handheld optical coherence tomography device") and Smartmix MEMPHIS ("Merging Electronics and Micro & nano-PHOTONICS in Integrated Systems), ZON-MW project "Sense, zoom and specify" (within institute Quantivision), STW project "Sensor for body hydration monitoring" (within the research program Sport), STW projects "OBAMA: optical bladder anatomy mapping and functional analysis" and "PROSPECT: spectroscopic biopsy of the prostate" which are part of the STW Perspective program iMIT. New projects on the development of novel detection methods for extra-cellular vesicles (exosomes) were started (within STW Perspectief programs MEMPHIS and CANCER-ID).*

*He initiated the Center of Research Excellence within the Innovative Medical Devices Initiative of the Netherlands Science Organization, resulting in the Institute Quantivision. He has been coordinator for the Physics of Life and Health master track within the Amsterdam Master of Physics.*

### **Final information from the Photonics21 secretariat:**

- We recommend limiting the BoS nomination letter to 3-4 pages max.
- Letters of nominations should be either submitted via the Photonics21 website

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<https://www.photonics21.org/bos-election/index.php>

or via e-mail to [secretariat@photonics21.org](mailto: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 the **21<sup>st</sup> September 2018**.*