A close-up of a person smiling

Description automatically generatedProfessor, *SPIE Fellow* **Janis Spigulis**, is founder (1997) and head of the Biophotonics Laboratory at Institute of Atomic Physics and Spectroscopy, University of Latvia (Riga). With background in atomic spectroscopy, optoelectronics and fibre optics, he contributes to development of novel optical methods and devices for non-invasive diagnostics and monitoring of human health condition, mainly focusing on *in-vivo*  human skin. Spectral, temporal and imaging features of emitted and remitted optical signals are used for quantitative assessment of skin malformations, skin blood micro-circulation and overall cardio-vascular state of a person. The developed methods and concepts are implemented in lab-made prototype devices that pass preliminary clinical validation. Author/co-author of > 200 published papers and 27 patents, H = 22 (SCOPUS). More details: [http://home.lu.lv/~spigulis/](about:blank).

Abstract

**Light interaction with human skin**

Human skin is light-sensitive. Several aspects of skin optics will be discussed, including the main photoprocesses in skin structures – light penetration, absorption, scattering, diffuse reflectance, fluorescence. Skin reactions to irradiation by lasers and ultraviolet radiation, photo-therapy, laser tatoo removal, optical diagnostics of skin malformations, remote photoplethysmography monitoring and related issues will be considered, as well.