

Victor Dyomin



Vice-Rector for Academic Affairs at National Research Tomsk State University, Associate Professor at the Chair of opto-electronic systems, and Head of Laboratory of Radiophysical and Optical Methods of Environmental Research

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As a Vice-Rector for Academic Affairs at National Research Tomsk State University Professor Dyomin is responsible for the educational process organization, for comprehensive programs quality, development of international programs and implementation of advanced educational technologies. From 2001 to 2014 he served as the Dean of the Radiophysics (Electrical Engineering) Faculty.

During last 10 years Professor Dyomin has been a PI and co-PI of fifteen successful grants projects with the total funding over three million US dollars. He was awarded as the Honored Worker of Higher Professional Education of the Russian Federation (2003), and Honored Higher Education Employee of the Russian Federation (2011). Professor Dyomin is a Senior Member of the Optical Society of America, Regular Member of IEEE. He authored 50+ papers, 10 patents and 2 text books and made many invited presentation at national and international conferences, the whole list of works includes more than 180 items.

Scientific interests include optics, holography, digital holography, underwater holography of plankton, and methodology of education in optics.

Selected publications:

- Dyomin V.V., Donchenko V.A., Chistyakova L.K. Holographic Studies of Aerosol Microstructure Subject to Nanosecond Optical Pulses// Atmospheric Optics, 1988, V.1, No 4, p. 57 - 63.
- Borovoi A.G, Dyomin V.V., Vagin N.I., Donchenko V.A. Fresnel's Rings on Reconstruction of Scattering Media Holograms// Applied Optics.-1995.-Vol. 34, N 20, P. 4073--4078.
- Dyomin V.V., Polovtsev I.G. Set of instrumentation and methodological instructions for practical work in optics. // SPIE Proceedings.- 1995.- Vol. 2525.- P. 45 - 55.
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- Dyomin V.V., Maksimov V.G., Polovtsev I.G. Filtering features of the measuring base in profilometry problems // Optoelectronics, Instrumentations and Data Processing, N 6, 2000, p. 65-71.
- V.V. Dyomin, A.S. Olshukov, E.Yu. Naumova, N.G. Melnik. Digital Holography of Plankton // Atmospheric and Oceanic Optics.- 2008, Vol. 21, N 12 – P. 951–956.
- V. V. Dyomin, A. S. Olshukov, and E. V. Dzyuba. Digital holographic video for studies of plankton dynamics // Russian Physics Journal, Vol. 53, No. 9, 2011, P. 857-866
- V. V. Dyomin and A. S. Olshukov. Digital holographic video for studying biological particles // J. Opt. Technol., 2012.- Vol. 79.- P. 344-347
- V. V. Dyomin and D. V. Kamenev. Image-quality criteria in the digital holography of particles // J. Opt. Technol., 2012.- Vol. 79.- P. 208-211
- V. V. Dyomin, and D. V. Kamenev. Influence of characteristics of the camera used to record digital in-line holograms of particles, on the quality of the reconstructed images // Russian Physics Journal.- 2013.- Vol. 55, Issue 11.- P. 1307-1313 (doi: 10.1007/s11182-013-9961-3)
- V.V. Dyomin, and D.V. Kamenev. Two-dimensional representation of a digital holographic image of the volume of a medium with particles as a method of depicting and processing information concerning the particles // Journal of Optical Technology.- 2013.- Vol. 80, Issue 7.- P.450-456.
- V. V. Dyomin, and D.V. Kamenev. A Comparison of Methods for Evaluating the Location of the Best Focusing Planes of Particle Images Reconstructed from Digital Holograms // Russian Physics Journal.- 2013.- Vol.56, No.7.- P. 822-830.
- V. V. Dyomin, and D.V. Kamenev. Evaluation of Algorithms for Automatic Data Extraction from Digital Holographic Images of Particles // Russian Physics Journal.- 2016.- Vol.58, No 10, 1467-1474. DOI 10.1007/s11182-016-0669-z

Selected publications (continuation):

- V.V. Dyomin and D.V. Kamenev "Investigation of particles located in the water by digital holography ", *Proc. SPIE* 9771, Practical Holography XXX: Materials and Applications, 97710H (March 7, 2016); doi:10.1117/12.2214228; <http://dx.doi.org/10.1117/12.2214228>
- V. V. Dyomin, and D.V. Kamenev. Methods of processing and retrieval of information from digital particle holograms and their application // Radiophysics and Quantum Electronics.- 2015.- T. 57, № 8-9. P. 533-542.
- V. V. Dyomin, I. G. Polovcev, D. V. Kamenev. The internal defects detection in crystals by digital holographic methods // V International Conference of Photonics and Information Optics.- IOP Publishing.- Journal of Physics: Conference Series 737 (2016) 012072 doi:10.1088/1742-6596/737/1/012072
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- Dyomin V., Mozhaeva G., Babanskaya O., Zakharova U. (2017) MOOC Quality Evaluation System: Tomsk State University Experience. In: C. Delgado Kloos et al. (Eds.) Digital Education: Out to the World and Back to the Campus. EMOOCs 2017. Lecture Notes in Computer Science, vol 10254. Springer. DOI: 10.1007/978-3-319-59044-8_23
- Gribenyukov A.I., Dyomin V.V., Polovtsev I.G., Kutuzov I.Y., Yudin N.N. Physical approaches to the development of a two-stage terahertz laser with generation of radiation of a difference frequency in a nonlinear optical crystal ZnGeP₂ // Russian Physics Journal. - 2017. - Vol. 60. - № 11. - P. 116-121.
- V.V. Dyomin, I.G. Polovtsev, D.V. Kamenev, A.S. Kozlova, A.L. Olenin. Plankton Investigation In The Kara Sea By A Submersible Digital Holocamera // OCEANS '17 Aberdeen. DOI: 10.1109/OCEANSE.2017.8085027.
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- V.V. Dyomin, I.G. Polovtsev, A.Yu.Davydova. Marine particles investigation by underwater digital holography // *Proc. SPIE* 10677, Unconventional Optical Imaging, 1067725 (Presented at SPIE Photonics Europe: April 26, 2018; Published: 24 May 2018); <https://doi.org/10.1117/12.2309871>
- Victor Dyomin; Igor Polovtsev; Alexey Olshukov; Alexandra Davydova. DHC-sensor - a tool for monitoring the plankton biodiversity in a habitat // Proceedings of 2018 OCEANS - MTS/IEEE Kobe Techno-Oceans (OTO) Conference & Exhibition, 2018.