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Ph.D.

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EDUCATION

M.S. degree in Mathematics, Far East State University, Vladivostok, 1997

Ph.D.(Candidate of Sciences in Phys. and Math.), Pacific Oceanological Inst., Vladivostok, 2003

POSITIONS

Doctoral Fellowship, Pacific Oceanological Inst., 1998 - 2002

Junior Research Scientist, the same place, 1999-2003

Research Scientist, the same place, 2003 - present.

HOBBIES

web- and foto- design

ACTIVITY FIELDS

My work in the area of nonlinear oscillations of gas bubbles under external perturbation of different duration.

Attached in a list of representative papers.

SELECTIVE PUBLICATIONS

Maksimov A.O., Sosedko E.V. On the peculiarities of parametric reception of low frequency signals in shallow water. *In: Marine technologies 2000. 3. Institute of Marine Technology Problems FEBRAS: Vladivostok . p. 207-225.*

Maksimov A.O., Sosedko E.V. Transient processes near bi-stable gas bubble oscillations in liquid. *In Transactions of Far East Mathematical School-seminar of acad. E.V. Zolotova. Vladivostok , IACP 2000, pp. 77-78.*

Maksimov A.O., Sosedko E.V. Anomalous bubble response to low frequency modulation of driving pressure. *In Proc. 2nd Intern. Conf. Control of Oscillations and Chaos (eds F.L. Chernousko, A.L. Fradkov) Proc. SPIE V . 3, Washington : 2000. P. 548-551.*

Maksimov A.O., Sosedko E.V. Dynamics of dissolution of ascending gas bubbles in a random flow / . In: *Marine technologies 2001. 4. Institute of Marine Technology Problems FEBRAS: Vladivostok* . p. 193-203.

Maksimov A.O., Sosedko E.V. Evolution of back scattering from rising bubble plume. In: *Ocean Acoustics (dedicated to the 85th anniversary of L.M. Brekhovskikh)* M.: GEOS, 2002. p. 237-241

Maksimov A.O., Leighton T.G. and Sosedko E.V. Nonlinear Transient Bubble Oscillations. In: *Nonlinear Acoustics at the Beginning of the 21st Century* (Proceedings of the 16th International Symposium on Nonlinear Acoustics), edited by O.V. Rudenko and O.A. Sapozhnikov, MSU, Moscow : 2002. V. 2. P. 987-990.

Maksimov A.O., Sosedko E.V. Spectrum of acoustic radiation caused by cavitation. *Proceedings of the XIII Session of the Russian Acoustical Society* , 25-29 August, 2003, Moscow , GEOS, Vol. 1 pp. 17-20.

Maksimov A.O., Sosedko E.V. Spectrum of Acoustic Cavitation. *Proceedings of the 5-th World Congress on Ultrasonics* , Universite 6, Paris : 2003. P. 593-596.

Maksimov A. O., Sosedko E. V. Peculiarities of the nonlinear dynamics of a gas bubble under the action of resonance and noise acoustic field . *Tech. Phys. Letters*. **29** (2), 2003, 102–104

Kon'kov L.E., Makarov D.V., Sosedko E.V., Uleysky M.Yu. Recovery of ordered periodic orbits with increasing wavelength for sound propagation in a range-dependent waveguide. *Physical Review E*. **76**. 056212 (2007).

Maksimov A.O., Sosedko E.V. Acoustic manifestations of gas hydrate shelled bubbles // *Acoustical Physics* 2009 . V. 55, No. 6. P. 776–784.

Makarov D.V., Sosedko E.V., Uleysky M.Yu. Frequency-modulated ratchet with autoresonance. *European Physical Journal B*, V. 73, P. 571-579 (2010). https://www.researchgate.net/publication/41706232_Frequency-modulated_ratchet_with_autoresonance

Uleysky M.Yu., Sosedko E.V., Makarov D.V. Autoresonant cooling of particles in spatially periodic potentials. *Technical Physics Letters*, V. 36, P. 1082-1084 (2010). https://www.researchgate.net/publication/226161476_Autoresonant_cooling_of_particles_in_spatially_periodic_potentials

M.Yu. Uleysky, D.V. Makarov, E.V. Sosedko Hamiltonian ratchets with autoresonance // *Thesises of XXX Dynamic Days Europe*, September 6-10, 2010 "XXX Dynamics Days Europe". Bristol University. Bristol, UK, P. 99.

Alexey V. Bulanov, Ivan G. Nagorny, and Ekaterina V. Sosedko // *Technical Physics*. 2013. V. 83, Iss. 8. PP. 117-120. <http://journals.ioffe.ru/jtf/2013/08/p117-120.pdf>

Alexey V. Bulanov, Ivan G. Nagorny, and Ekaterina V. Sosedko // *Technical Physics Letters*. 2017, V. 43, Iss. 16, PP. 55-60 [DOI:10.21883/PJTF.2017.16.44933.16650](https://doi.org/10.21883/PJTF.2017.16.44933.16650)

E. Sosedko, A. Bulanov. Non-stationary scattering of high-frequency pulses and acoustic spectroscopy of resonant inclusions in liquids // *Electronic Journal "Technical Acoustics"*, <http://www.ejta.org>, 2018, 4. <http://www.ejta.org/en/sosedko1>

Alexey V. Bulanov, Ivan G. Nagorny, and Ekaterina V. Sosedko. A Study of the Optical and Acoustic Spectral Characteristics by Laser Breakdown of Water in an Ultrasonic Field // *Technical Physics Letters*. 2019. Volume 45. Issue 12. PP. 1200–1203 [DOI:10.1134/S1063785019120034](https://doi.org/10.1134/S1063785019120034)

Alexey V. Bulanov, Ivan G. Nagorny, and Ekaterina V. Sosedko "Ultrasound laser-induced breakdown spectroscopy and acoustic spectroscopy of resonance inclusions in liquids ", Proc. SPIE 11026, Nonlinear Optics and Applications XI, 110261H (30 April 2019); [DOI: 10.1117/12.2525003](https://doi.org/10.1117/12.2525003)

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Bulanov A.V., Sosedko E.V. Opto-acoustic effects by laser breakdown of seawater in an ultrasonic field // Dokl. Earth Sc. 2020. 491 (1), P. 183–186. [DOI: 10.1134/S1028334X20030022](https://doi.org/10.1134/S1028334X20030022)

Bulanov, A.V., Nagornyi, I.G. & Sosedko, E.V. A Study of the Spectral Characteristics of Two-Pulse Laser-Induced Breakdown of Aqueous Solutions of MnCl₂ in an Ultrasound Field. Tech. Phys. Lett. (2021). <https://doi.org/10.1134/S1063785021030068>

Bulanov, V.A., Sosedko, E.V. Features of Nonstationary and Nonlinear Sound Scattering by Bubbles and Possibilities of Their Spectroscopy // Acoust. Phys. 2022. Vol. 68. P. 326–336. DOI: [10.1134/S1063771022040017](https://doi.org/10.1134/S1063771022040017) . <https://doi.org/10.1134/S1063771022040017> .