## **CURRICULUM VITAE**

NAME	Alexander Skaliukh		
CONTACTS	Address	Home	Zorge str, 58, build. 4, Ap. 8, Rostov-on-Don, 344103, Russia
		Main Work	Associate Professor (Docent), I.I. Vorovich Institute of Mathematics, Mechanics and Computer Science, Southern Federal University, Miltchakova str. 8a, Rostov-on-Don, 344090, Russia
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## PERSONAL INFORMATION

Place of birth: Taganrog, USSR		Date of birth: 13 November 1953	Citizenship: Russia
Marital status: married	Lan	guages: English (intermediate), Russia	an.

#### **EDUCATION**

1979-1982	Postgraduate student (Division of Elasticity of Rostov State University)
1971-1976	Student of Department of Mechanics and Mathematics of Rostov State University

#### **ACADEMIC DEGREES**

1996	Diploma of Associate Professor (Docent)
1986	Candidate of Science in Physics and Mathematics (= Ph.D.). Thesis: Mixed two-dimensional problem of electroelasticity for the semibounded bodies

#### PROFESSIONAL EXPERIENCE

At Southern Federal University (Rostov State University):

1998-2015	Associate Professor (Docent) of Division of Mathematical Modeling
1995-1998	Associate Professor (Docent) of Division of Theory of Elasticity
1984-1995	Assistant Professor, Senior Lecturer of Division of Theory of Elasticity
1983-1984	Scientific research engineer of the Rostov State University
1982-present	Research Worker

At Don State Technical University

2011 – 2014 Associate Professor (Docent) of Division of Theoretical and Applied Mechanics

At Taganrog Radio Engineering Institute

1977-1983 Engineer scientific research part of the Taganrog Radio Engineering Institute

At Taganrog plant press-forging equipment

1976-1977 Engineer of the plant press-forging equipment

### **RESEARCH INTERESTS FOR LAST YEAR'S**

Ferroelectrics and modeling of irreversible processes, Mathematical and Computing Modeling in Engineering Problems, Numerical Methods and Software for PDE (FEM, BEM etc.), Finite element programs (ANSYS, FlexPDE, ACELAN), Electroelasticity and piezoelectric analysis

# **HEAD OF THE GRANTS FOR LAST YEAR'S (2010-2015)**

- RFBR, No. 13-08-01094-a, Mathematical modeling of the nonlinear behavior of ferroelectrics - relaxors in strong electric and mechanical fields, and computer analysis devices based on them, 2013-2015

- The Ministry of education and science of Russia, project №1334 the base part of state assignment, №2014/174, Development of methods mathematical and computer modeling for research of linked physical and mechanical problems with complicated properties, 2014-2015.
- Federal Agency of Education, Federal Target Program "Scientific and scientific-educational personnel of innovative Russia" on 2009-2013; State contract P 487, 05.08.2009, Investigation of the influence of electrical and mechanical fields on the formation of the internal structure of ferroelectric ceramics and composite materials, 2009-2011

#### **PUBLICATIONS**

More than 140 scientific publications.

#### **LIST OF LAST SIGNIFICANT PUBLICATIONS (2010-2015)**

#### Monographs

**1. A.V. Belokon, A.S. Skaliukh**, Mathematical modeling of irreversible processes of polarization. M.: FIZMATLIT, 2010, 328 p.(Russian edition).

#### Chapters in monographs

- **Skaliukh A.S.**, Modeling of Polarisation of the Polycrystilline Ferroelectrics In: «Piezoceramic Materials and Devices». Edit. Ivan A. Parinov. Chapter 2. NovaSiencePublishers. 2011. p.55-104. ISBN: 978-1-61728-307-9.
- **2** A. N. Soloviev, P. A. Oganesyan and **A. S. Skaliukh,** Modeling of Piezoelectric Elements with Inhomogeneous Polarization by Using ACELAN In «Advanced Materials Studies and Applications», Nova Publisher, N.-Y., 2015. pp.169-192 ISBN: 978-1-63463-749-7.
- Alexander Skaliukh, Guorong Li, The General Theory of Polarization of Ferroelectric Materials //
  Advanced Materials: Manufacturing, Physics, Mechanics and Applications. Springer Proceedings Phys.
  Vol. 175, 2015, chapter 28, pp. 393-411, ISBN 978-3-319-26322-9.

#### **Papers**

- 1. **A Skaliukh** and A Belokon, Modeling strain and dielectric hysteretic type dependences in polycrystalline ferroelectrics by methods of two-level continuum // IOP Publishing, Journal of Physics: Conference Series, № 602 (2015), 012025.
- 2. **Skaliukh A.S.** On a mathematical model for polycrystalline ferroelectrics relaxors // AIP Conference Proceedings, № 1627, 2014. Pp. 1055-110.
- 3. A. V. Nasedkin, **A. S. Skaliukh**, and A. N. Soloviev New models of coupled active materials for finite element package ACELAN // AIP Conference Proceedings, № 1637, 2014. Pp. 714-723
- 4. **Skaliukh A.** About hysteretic operators arising in the modelling of the polarization of ferroelectric materials // Proceedings of the International Conference on Mathematical Sciences, July 17-19, 2014, Chennai, India, Sathyabama university, Published By Elsevier, 2014. Pp. 635-638.
- 5. Наседкин А.В., **Скалиух А.С.**, Соловьев А.Н. Модели активных материалов и устройств в программном комплексе ACELAN V14 // Труды XVII Международной конференции "Современные проблемы механики сплошной среды", 14-17 октября 2014 г., Ростов-на-Дону, 2014, т. 2. С. 141-145
- 6. **A. Skaliukh**, A. Soloviev, A. Nasedkin, P. Oganesian Modeling vibrations of nonuniformly polarized piezoceramic bodies. 11th International Conference on Vibration Problems Z. Dimitrovová et al.(eds.) Lisbon, Portugal, 9-12 September 2013, 9 pages.
- 7. Belokon A.V., Nadolin K.A., Nasedkin A.V., **Skaliuh A.S.**, A.N. Soloviev Symmetric algorithms in finite element analysis of complex piezoelectric devices // Mathematical modeling, 2001. V. 13, № 2. pp 51-60.
- 8. Vernigora G.D., Lupeyko T.G., **Skaliuh A.S.**, A.N. Soloviev About polarization and determining the effective characteristics of the porous piezoelectric ceramics // Herald of DSTU. 2011 V. 11, № 4 (55). Pp. 462-469.
- 9. **Skaliukh A.S.**, Soloviev A.N., Oganesyan P.A. Modeling of piezoelectric elements with inhomogeneous polarization in ACELAN // Ferroelectrics 2015 483 (1), pp. 95-101.

#### **SCIENTIFIC COLLABORATIONS**

- 2005-present Dr. Naprasnikov Vladimir, Belarusian National Technical University. Belarus, 220013, Minsk, Nezavisimosty Ave., 65, e-mail: n\_v\_v@tut.by
- 2009-present, Prof. Li Guorong, Shanghai Institute of Ceramics, Chinese Academy of Sciences, 1295 Dingxi Road, Shanghai, China 200050

# **EDUCATIONAL ACTIVITIES**

Head of bachelor's direction on mechanics (2014-2015)

#### Courses:

"Classical mechanics, numerical methods", "Concepts of modern natural knowledge", "Mathematical models in physics and engineering", "Modeling of systems and processes", "Contemporary active materials"

7.11.2015