

PREFACE

The Seventeenth International Workshop on Nano-Design, Technology and Computer Simulations (NDTCS-2017) took place on October 25-26, 2017 in Minsk, Belarus. The workshop NDTCS-2013 was organized jointly by Belarusian State University of Informatics and Radioelectronics and the St. Petersburg Academy of Sciences on Strength Problems (Russia). More than 149 participants including scientists, teachers, graduate students and undergraduates from Azerbaijan, Belarus, Germany, Kazakhstan, Lithuania, Poland, Russian Federation and Vietnam prepared and delivered more than 60 reports. The Seventeenth Workshop was focused on nanomaterials, computational methods in the field of micro- and nanoelectronics, and mechanics.

Joint Stock Company ‘Integral’, leading company in the design and manufacturing integrated circuits, acted as the partner and supporter of Workshop.

Workshop NDTCS-2017 is a continuation of the previous workshops, which were held in:

- Russia, *St. Petersburg* 1997-2005
- Poland, *Olsztyn* 2006
- Germany, *Bayreuth* 2007
- Belarus, *Minsk* 2008, 2013; *Grodno* 2015
- Lithuania, *Vilnius* 2009
- Finland, *Espoo* 2011

The first nine workshops, which took place in Russia, had the name “Nondestructive Testing and Computer Simulations in Science and Engineering (NDTCS).” In due course, the focus of the meetings gradually moved towards Nanoscience and Computer Aided Design, so the following meetings (2007-2017) had the new name “International Workshop on New Approaches to High-Tech: Nano-Design, Technology and Computer Simulations (NDTCS)” what reflects better their profile.

All the contributions to the Workshops were published in English:

- Modelling and Computer Simulation in Materials Science and Engineering, **6** (4) 1998
- Proceedings of St. Petersburg Academy of Sciences on Strength Problems (SPAS) vols. **2-11**, 1998–2007
- Proceedings of the International Society for Optical Engineering (SPIE), vols. 3345, 3687, 4064, 4348, 4627, 5127, 5400, 5831, 6253, 6597, 7377; 1998–2008
- Proceedings of NDTCS, vols. **12-13**, **15-17**; 2008, 2009, 2013, 2015, 2017
- Reviews on Advanced Materials Science, **20** (1, 2) 2009
- Materials Physics and Mechanics, **9**(1-3) 2010; **13**(1-2) 2012; **20**(1-2) 2014; **34**(1) 2017
- St. Petersburg State Polytechnical Journal: Physics and Mathematics, **2** (242), **3** (248), **4** (253) 2016; **10** (1) 2017

This issue of Materials Physics and Mechanics Journal contains the selected papers presented at the Workshop. All the papers have been peer-reviewed prior to publication. The issue will be of interest to researchers and graduate students in the field of nanotechnology, physics, chemistry, and mechanics.

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