



V International Technological Forum
"Innovations. Technologies. Manufacturing"
 April 16-18, 2018
 Rybinsk, Yaroslavl Region

Subject	Description
Section "Digital Economy of Knowledge"	
Plenary meeting "Digital Economy of Knowledge"	<p>Moderator:</p> <p>Dmitry S. Ivanov, Innovative Development Director, UEC-Saturn PJSC</p> <p>Contact details: +7 (4855) 292-410 dmitry.ivanov@uec-saturn.ru</p>
Section "Digital Factory"	
<p>Artificial Intelligence and Machine Learning</p> <p>Artificial intelligence and machine learning help to optimize diverse complex processes in real time and to improve the decision making process in present-day production due to the automation of analysis of large and complex data sets through adaptive calculation methods with no human involved.</p>	<p>Moderator:</p> <p>Pavel G. Bekher, Manager of the Project "Digital Economy", UEC-Saturn PJSC</p> <p>Contact details: +7 (4855) 323-812 pavel.bekher@uec-saturn.ru</p>
<p>Digital Platform of Engine-Building</p> <p>Goals and objectives of the development of Russian Digital Economy. Conditions of creating a digital platform in engine-building.</p>	
<p>Additive Manufacturing in the Model of Industry 4.0</p> <p>Implementation of additive technologies in production - achievements and problems. Peculiarities of designing parts for additive manufacturing. Development, certification, and industrial production of materials for additive manufacturing. Post-processing.</p>	<p>Moderators:</p> <p>Denis V. Fedoseev, Deputy Chief Engineer, Additive Technologies, Pilot Plant, UEC-Saturn PJSC</p> <p>Contact details: +7 (4855) 326-231 denis.fedoseev@uec-saturn.ru</p> <p>Denis S. Podsobliaev, Chief, Additive Technologies, engineering firm AB Universal</p> <p>Contact details: +7 (495) 380-05-15 rp@abuniversal.ru</p>

<p>Open-Source Design</p> <p>Development with results accessible to the public. Technologies and prospects of Open-Source Design. Barriers and solutions.</p>	
<p>Digital Design, Modeling, and Integration</p> <p>Virtual test bed. Structural design peculiarities in case of additive manufacturing. Discussion of issues related to the numeric modeling of processes in GTE. Acceleration of the modeling of product performance under real operation conditions.</p>	<p>Moderator:</p> <p>Dmitry I. Zemtsov, Development Pro-rector, Far Eastern federal university Contact details: +7 (919) 994-41-32 (Kseniya Makarova) makarova.kan@dvfu.ru</p>
<p>Nondestructive Inspection</p> <p>Industrial digital radiography and X-ray tomography. Equipment and software of industrial digital radiography and X-ray tomography. Scope of application and capability. Problems and factors preventing the introduction of industrial digital radiography technologies in aircraft industry companies. International standards and information storage and processing systems.</p>	<p>Moderator:</p> <p>Maxim V. Vasilchuk, Chief of Design and Engineering Office, NDT, UEC-Saturn PJSC Contact details: +7 (4855) 296-038 +7 915 977-59-68 maksim.vasilchuk@uec-saturn.ru</p>
<p>Predictive Analytics</p> <p>Predictive Analytics applies different statistical and analytical methods for the development of mathematical models. These methods predict future events or behavior based on past data. The complexity of such prediction models varies according to behavior or an event foreseen. Predictive Analytics uses a lot of tools and methods such as data mining, machine learning, and artificial intelligence.</p>	<p>Moderator:</p> <p>Pavel G. Bekher, Manager of the Project “Digital Economy”, UEC-Saturn PJSC Contact details: +7 (4855) 323-812 pavel.bekher@uec-saturn.ru</p>
<p>Digital Twin</p> <p>Digital prototypes of physical objects with all object parameters retained. Potential for the use of digital twins in production.</p>	
<p>Advanced Materials</p> <p>New-generation engineering thermoplastic polymer composites. Primary components and semi-finished products for</p>	<p>Moderator:</p> <p>Pavel A. Khilov, Project Leader, Composite Materials on Polymer Matrix, UEC-Saturn PJSC;</p>

<p>thermoplastic polymer composites. Technologies and equipment for the manufacture and processing of thermoplastic polymer composites. Assembly, permanent joints and repair of parts made of thermoplastic polymer composites.</p>	<p>Contact details: +7 (4855) 296-756 pavel.khilov@uec-saturn.ru</p>
<p>Advanced Analytics – Support of Product Life Cycle Management Management of the full product life cycle.</p>	
Section "Smart Factory"	
<p>Advanced Robotics</p> <p>Automation and robotics of manufacturing. Control, safety, operation programming and visualization systems for robotic systems and industrial robots.</p>	
<p>Electric engine for electric aircraft</p> <p>Main concepts of electric and hybrid power plant systems for aircraft. Problems of building small-sized light electrical units and transmission gearboxes for aircraft. Critical technologies to ensure building an efficient hybrid power plant system for aircraft.</p>	
<p>New Machining Methods</p> <p>Special (electro-physical) machining methods for aircraft engine parts. Surface plastic strain hardening technologies, in particular ultrasonic peening, laser hardening, and shot peening. Special technical solutions in metal-working (special tools and tooling used in milling and turning; multi-axis deep grinding, machining with ceramic tools).</p>	<p>Moderator:</p> <p>Nikolay N. Sokolov, Chief Process Engineer, UEC-Saturn PJSC Contact details: +7 (4855) 323-128 nikolay.sokolov@uec-saturn.ru</p>
<p>New GTE Repair Technologies</p> <p>Need for innovative GTE repair technologies. Development prospects of repair technologies by means of additive technologies. Current high-tech GTE repairs: the level reached, development prospects, new products of development (presentations of repair bases, innovation companies supplying equipment and technologies; research organizations). Technological solutions for on-condition GTE repair.</p>	<p>Moderators:</p> <p>Andrey V. Smirnov, Deputy Chief Process Engineer, Repair, UEC-Saturn PJSC Contact details: +7 (4855) 296-595 +7 (961) 155-04-79 andrey.smirnov@uec-saturn.ru</p> <p>Svetlana N. Bardinova, leading processing engineer, UEC-Saturn PJSC Contact details: +7 910 811-30-84 svetlana.bardinova@uec-saturn.ru</p>

<p>New Technological Solutions in Welding</p> <p>Orbital welding technology for tubes made of aluminum alloys. Life extension for cathodes used for electron-beam welding in ELA power units. Assembly of GTE parts made of heat-resistant alloys by diffusion welding. Diffusion welding of nickel alloys with material properties retained. Welding quality management. Harmonization of Russian and international standards in welding.</p>	<p>Moderator:</p> <p>Aleksey N. Polyakov, Chief Welder, UEC-Saturn PJSC. Contact details: +7 (4855) 296-607 +7 961 155-04-79 aleksey.polyakov@uec-saturn.ru</p>
<p>Intellectual Workspace</p> <p>Main characteristics and domestic practice of creating intellectual workspace. Peculiarities of creating intellectual workspace at a controlled-access enterprise.</p>	
<p>Smart Production System</p> <p>Impact of the forth industrial revolution on the transformation of production systems. New-generation production systems.</p>	
<p>Section "Virtual Factory"</p>	
<p>Information Systems of Enterprise Management (ISEM)</p> <p>Domestic vs foreign systems. Advantages and disadvantages of domestic systems, development tendencies. Problems of introduction/ support/ application. Mobile solutions for ISEM, practice of their use. Use of open-source systems for ISEM.</p>	<p>Moderator:</p> <p>Andrey V. Zhidkov, Head of Competence Center for Information Systems, UEC-Saturn PJSC Contact details: +7 (4855) 296-572 Andrey.Zhidkov@uec-saturn.ru</p>
<p>Integrated Safety and Ubiquitous Digital Trust</p> <p>Safety integrated into network infrastructure. Current solutions of integrated safety advantages and disadvantages.</p>	
<p>Software Defined Anything (SDx)</p> <p>Requirements for improvements in the standards of interaction with data processing centres. SDx introduction standards.</p>	
<p>Augmented and Virtual Reality</p> <p>Use of Augmented and Virtual Reality technologies and devices at a high-tech enterprise. Impact of Augmented</p>	<p>Moderator:</p> <p>Dmitry I. Zemtsov, Development Pro-rector, Far Eastern</p>

<p>Reality devices on product quality improvement.</p>	<p>federal university Contact details: +7 (919) 994-41-32 (Kseniya Makarova) makarova.kan@dvfu.ru</p>
<p>Comfortable Jurisdiction for Advanced Industrial Technologies</p> <p>Digital certification. Improvement of institutional conditions in standardization and certification. Ways of eliminating barriers for the use of advanced technological solutions.</p>	
<p>Virtual Personal Assistants</p> <p>Use of virtual assistants in manufacture. Technological barriers.</p>	
<p>Industrial Internet</p> <p>Conditions stimulating the development of the Internet of Things, regulatory and legal framework. Uniform standards of the Internet of Things. Assurance of the secure interaction of objects within the Industrial Internet. Capabilities of the safe use of cloud technologies for companies of the defense-industrial sector.</p>	<p>Moderator:</p> <p>Pavel G. Bekher, Manager of the Project “Digital Economy”, UEC-Saturn PJSC Contact details: +7 (4855) 323-812 pavel.bekher@uec-saturn.ru</p>
<p>Blockchain and Digital Chains</p> <p>Scope of application of the blockchain technology in industry. Examples of blockchain application in manufacture. Digital supply chains. Solutions for digital logistics: use of tools of the Internet of Things and Big Data, 3D-printing in digital logistics.</p>	
<p>New Technological Solutions in press forging</p> <p>Reverse engineering through the example of manufacturing of external dressing tubes; modern methods of die tooling reinforcement used for isothermal forging and application of progressive materials for the use in die tooling for isothermy.</p>	<p>Moderator:</p> <p>Nikita V. Rassudov, Chief Forger, UEC-Saturn PJSC. Contact details: 8 (961) 155-47-65 nikita.rassudov@uec-saturn.ru</p>
<p>Cognitive Bots with Self-Authorization</p> <p>Capabilities of expert help of cognitive bots. Achievements and problems of existing bots. Use of bots in manufacture.</p>	

Section "Human Factory"	
<p>Management Methods for High-Technology Enterprises</p> <p>Modern management methodologies for high-technology enterprises. Project/Program Management, Supply Chain Management, Value Management, Knowledge Management, Risk Management. Impact of advanced industrial technologies on modern management methods.</p>	
<p>Risk-Oriented Management of an Organization</p> <p>The speakers will come up with information on the up-to-date concept and methodology of risk-oriented management of an organization, share practical experience of using risk management tools when taking management decisions at all levels of organization management.</p>	<p>Moderator:</p> <p>Sergey A. Grishikhin, Project Manager, UEC-Saturn PJSC. Contact details: +7 (4855) 326-165 +7 961 155-81-52 sergey.grishikhin@uec-saturn.ru</p>
<p>Knowledge Management</p> <p>Impact of structural changes in economy, transition to knowledge economy on changes in requirements for an organization and its employees. Knowledge management system within a corporation. Functions, processes, structure. Ways of introducing knowledge management in a corporation.</p>	<p>Moderator:</p> <p>Tatyana V. Tomilina, Assistant General Designer, Scientific Research and Staff Development, UEC-Saturn PJSC</p> <p>Contact details: Phone: +7 (4855) 296-731 Mobile phone: +7 905 138-43-65 E-mail: tatyana.tomilina@uec-saturn.ru</p>
<p>Robot-Human Interaction in the Workspace of a Shop</p> <p>Human safety in the course of interaction with a robot in the workspace of a shop. Robot training. Sensors and pattern recognition systems. Cobots.</p>	
<p>Human Capital Preparation Strategy for Digital Transformation</p> <p>Preparation of requirements for the baseline competencies of digital economy. Human capital preparation strategy within the Russian Digital Economy development program. Comfortable conditions of human capital development so as to counteract labour outflows.</p>	<p>Moderator:</p> <p>Svetlana I. Zhukova, Head of Training Center, NPO Saturn PJSC Contact details: +7 (4855) 292-397 +7 (4855) 210-931 +7 905 635-50-68 svetlana.zhukova@uec-saturn.ru</p>