ПЕРСОНАЛИИ

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TAMARA BALABEKOVNA CHISTYAKOVA (to anniversary since birth)

On June 15, 2019 Chistyakova Tamara Balabekovna, the Honored employee of the Higher school of the Russian Federation, the winner of an award of the Government of Saint Petersburg, the Doctor of Engineering, the Professor, the head of Computer-aided design and control department of the St. Petersburg State Institute of Technology (Technical University), the head of the leading scientific and pedagogical school of St. Petersburg in the field of information and communication systems and technologies celebrates the anniversary. All creative life of T.B. Chistyakova is connected with the St. Petersburg State Institute of Technology (Technical University): the student of engineering and cybernetic faculty (1966 – 1971), the graduate student, the vice rector for education (2010 – 2012), the vice rector for innovations (2013 – 2015), the head of the Computer-aided design and control department (1997 – till present).

T.B. Chistyakova proceeds with research and develops the scientific directions of the department begun by her teachers and heads B.V. Ilyin, V.V. Sotnikov. In 1971 docent B.V. Ilyin – an expert in the field of synthesis of nonlinear systems of the automated regulation – began research in development and deployment of methodology of synthesis of the APCS for the petrochemical and oil processing industries. Professor V.V. Sotnikov continued works on creation of control systems for potentially dangerous chemical and technological production. Since 1997 under the leadership of T.B. Chistyakova with assistance of the academician V.P. Meshalkin (D. Mendeleev UCTR) and the professor V.S. Balakirev (MIChE) began the direction on synthesis of intellectual systems of education and training complexes for administrative personnel of potentially dangerous chemical productions units. Tamara Balabekovna is a corresponding member of the International Academy "Information, Communication, Control in the Equipment, Nature and Society". Professor T.B. Chistyakova is a active organizer and the participant of the Russian and international scientific conferences. Tamara Balabekovna is a member of editorial boards of the scientific journals "Izvestiya SPbGTI(TU)", "Vestnik MEI", a member of program committees of the International scientific conference "Mathematical

Methods in the Equipment and Technologies", the International scientific conference on control in technical systems, the International conference on soft computing and measurements.

Tamara Balabekovna does active social work, since 2004 she heads a public association named the Professorial Assembly of St. Petersburg and since 2016 she is the vice-chairman of regional office of the Professorial Assembly of Russia. Tamara Balabekovna examines scientific works in the field of information technologies for industrial systems, being the expert of VAK, RAS, the UMNIK program. As a member of the Federal EMA on EGDS "Informatics and Computer Facilities", Tamara Balabekovna devotes a lot of time to educational and methodical work. Under her management a multilevel training of bachelors, masters in the "Informatics and Computer Facilities" direction has been started in the St. Petersburg State Institute of Technology (Technical University) since 2000 and in the "Applied Informatics" direction – since 2013. Annually the department provides education for 50–60 specialists of all levels of training (bachelors, masters, graduate students).

Tamara Balabekovna successfully directs the international projects on development and deployment of mathematical models, program complexes, control systems of products quality of hi-tech metallurgical and polymeric productions. Since 2000 Tamara Balabekovna has been directing the program of the international cooperation on the program of the German Academic Exchange Service (DAAD) in the field of software computing for the systems of automation and control of highly effective technology objects with the Ruhr University of Bochum. About 70 students and graduate students of faculty of Information technology and control took part in the scholarship program. Since 2010 Tamara Balabekovna has headed research with the Fund for Infrastructure and Educational Programs of RUSNANO for development and deployment of educational programs for production personnel of productions of nanostructured substances and materials. The scientific activity of T.B. Chistyakova is connected with development and deployment of mathematical models, program complexes, systems of training, control and design for hi-tech industrial productions of: petrochemistry and oil processing, synthetic rubbers, catalysts, metallurgical industry, medicines, polymeric industry, etc.

The main scientific directions of T.B. Chistyakova are connected with the development of:

- intellectual control systems of metallurgical and coke-chemical productions taking into account a life cycle of products [1–4];
- flexible automated productions, control and research systems of substances of medicines and antibiotics [5–8];
- information technologies of synthesis of computer simulators for specialists of an engineering profile [9];
- mathematical methods and technologies of the competence-based focused training [10, 11];
- mathematical models and program complexes for quality control of industrial products [12–18];
- modern methods and technologies of industrial productions design [19–21];

- modern technologies and methods of planning and control of the innovation productions on the basis of the analysis of big industrial data [22–25].

Results of scientific activity of Tamara Balabekovna are having trained of 22 Ph.D. in Technical Sciences, Doctor of Engineering, about 150 articles in scientific journals, 5 monographs, 10 international patents, 80 certificates of Rospatent on program complexes. Now she is a scientific consultant of 3 doctoral dissertations.

A.A. Bolshakov, V.A. Kholodnov, V.P. Meshalkin, A.A. Musaev, I.V. Novozhilova, A.N. Polosin, L.A. Rusinov

Main Publications

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2. Chistyakova T.B., Boykova O.G., Blokhina O.F. [On Decrease in Ecological Hazard of Process of Coking]. *Coke and Chemistry*, 2002, no. 6, pp. 25–28. (in Russian)
3. Chistyakova T.B., Boykova O.G., Babina E.V. [Simulation in a Training System for Coke-Oven Thermal Behavior Control]. *Avtomatizatsiya v promyshlennosti*, 2006, no. 7, pp. 57–62. (in Russian)
4. Chistyakova T.B., Kudlay V.A., Novozhilova I.V., Suvorov S.A., Kozlov V.V. [Decision Support System for Service of Refractory Lining of Steelmaking Converter]. *Bulletin of the Saint Petersburg State Institute of Technology (Technical University)*, 2016, no. 37, pp. 60–66. (in Russian)
5. Ostrovskiy V.A., Get'man M.A., Malin A.A., Shcherbinin M.B., Ostrovskiy Yu.V., Chistyakova T.B. [Experience in Creation of Flexible Computer-Aided Production of Substances of Pharmaceutical Preparations with Correspondence to GMP Standards]. *Industry and Chemistry*, 2003, vol. 80, no. 1, pp. 4–18. (in Russian)
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12. Polosin A.N., Chistyakova T.B. [Mathematical Model of Single-Screw Extrusion for Control of Plastic Material Quality in Multi-Assortment Productions of Polymeric Films]. *Control Systems and Information Technologies*, 2009, no. 2, pp. 87–92. (in Russian)
13. Chistyakova T.B., Polosin A.N. [Methods and Technologies for Synthesis of Mathematical Models for Extrusion in Flexible Productions of Polymeric Materials]. *Vestnik Saratov State Technical University*, 2011, vol. 4, no. 4, pp. 170–180. (in Russian)
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