Foreword Vorwort Предисловие 发刊词

Biokybernetik биокибернетика 生物控制论 – a denotation for the study and development of control structures in the living, and in human body system in particular, that one prefers to translate into the English language as *bioautomation* because of a predominant public interpretation of cybernetics as a digital technology – had its third anniversary on this 20th of November, and BIOKYBERNETIKA 2017 thus marks the beginning of its fourth year of life, a core life in the intersection of systems oriented engineering, mathematics, psychology and medicine, and a wider life that branches into numerous specializations, not to overlook an expanding interface with environmental, economic and social sciences for their vital impact on body system's internal dynamics.

The aim of BIOKYBERNETIKA2017 is then to consolidate the achievements of the past and to contribute to further growth of an emerging field of science that first appears as way of thinking in problem analysis and then leads into manufacturing of technology for problem solution. It does so by taking up the theme and design of BIOKYBERNETIKA2016 with some of the speakers of 1st Russian-German Conference on *MultiScale BioMathematics – Coherent Modeling of Human Body System* held at Lomonosov Moscow State University, Faculty of Computational Mathematics and Cybernetics, but for the Young Talent Workshop on *Mathematical Bio-systems Modeling* that lacks prerequisite conditions in this year's context. And it does break new ground with now branching into clinical medicine to seek explanations of 'puzzling' syndromes or complex diseases of unknown cause in disorders of multi-scale controls that maintain dynamic equilibria in human body system: *Patho-Biokybernetik* is to denote disorders of multi-scale Control in complex diseases патобиокибернетика: расстройства мульти-масштабнего управления в сложных заболеваниях 病生物控制论 – 复杂疾病之多尺度调控紊乱.

The speakers at this conference represent a fine selection from the scientific communities in their countries with merits well recognized in their field of expertise. The novelty with BIOKYBERNETIKA2017 that distinguishes it significantly from previous workshops and other conferences is its resolve to advance a holistic perspective: *from person in society via physiological control to cellular-level feed-back* is not a futile aspiration, but it is realized here with talks on every subject - some of which do remain within their single function level while others span over several scales, and together both expose participants to the whole spectrum of human body system controls under impact from person's surroundings. When such trans-disciplinary discourse would perpetuate in expanding circles, BIOKYBERNETIKA2017 would have fulfilled its ambition to advance a task-splitting cooperation on modeling body system dynamics holistically within a coherent framework.

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