



# International

*Innovation in Knowledge Based and Intelligent  
Engineering Systems*



## INVITED SESSION SUMMARY

**Title of Session:**

**Mathematical Modeling of Education and Economics of Smart University**

**Name Title and Affiliation of Chair:**

**Prof. Natalia A. Serdyukova, Plekhanov Russian University of Economics (Moscow, Russia)**

**Details of Session (including aim and scope):**

The concepts of smart university, smart education, smart school, smart campus, smart learning environment, smart engineering, smart medicine, smart business, smart city, smart systems and smart technology were just recently introduced to scientific methodology and practice in modern society. All these entities are part of a new mega-system - smart society system. Those areas should be equipped with a system of mathematical methods, corresponding models of system's entities and inter-connections between them to provide systems' integrity, reliability, and effectiveness; in other words, system's infrastructure and reliability. The common well-known methods of substantiation in humanities (education, economics, etc.) are primarily empirical methods that are based on math statistics. However, these days a process of mathematization of science is taking place due to various smart processes, smart systems and smart technologies that occur in modern society.

The goal of this special session is to propose, classify, develop and test various mathematical models to be effectively used to simulate and optimize education and economics of smart university. These mathematical methods should with high quality and accuracy substantiate the obtained research data and practical outcomes in education and economics of smart university.

**Invited Session Chair:** Natalia A. Serdyukova is a professor of Plekhanov Russian University of Economics (Moscow, Russia). She received her Ph.D. in Mathematics in 1986 at Moscow State Pedagogical University and Doctor of Sciences degree in Economics at the Academy of Budget and Treasury of the Ministry of Finance, Russian Federation. She also has been recognized as Honored Worker of the Higher School of Russian Federation.

Prof. Serdyukova has a number of publications in mathematics, abelian group theory, finance and theory of e – learning. She participated in various international conferences on theoretical and applied mathematics, economics and finance, and online education and e-learning. She is a member of the Editorial Advisory Group of Cambridge Scholars Publishing (Computer Science books) .

**Website URL (if any):** <http://www.cambridgescholars.com/t/ComputerScienceAdvisory>

**Email & Contact Details:**

[nsns25@yandex.ru](mailto:nsns25@yandex.ru)

Plekhanov Russian University of Economics,  
Stremyanny Pereulok, 36, Moscow, 117997, Russia