Appendix 2

**The main research projects in priority areas of StrAU (2012-2015)**

– Designing a theoretical basis and modelling cognitive systems for monitoring and forecasting socio-economic, scientific and technological development of state facilities and territories. The project is led by Professor Vladimir Syriamkin (born 1947), Head ofthe TSU Department of Quality Management. The project has included designing the probablescenario ofchanges in the Russianeconomy throughmeasures focused on the advancing development of basicindustriesof the sixthtechnological order and designing cognitive monitoring systems for long-term forecastsof socio-economic and technological development of thecities in Siberiaand the Far East.

– Synthesis of long-term scientific, technological and socio-economic forecasting. The project is led by Professor Natalia Skrylnikova (born 1957). As a result of work on the project, the research team has developed principles for the synthesis of forecasts based on bio-pharmaceutical and medical industries, energy sector, predictionof local and globalsocio-economic impacts as a result ofchanges in naturalecosystemsin climateand inpermafrostgradient of borealand arcticzones.

– Comparative institutional analysis of innovative activities of corporations in BRICS countries. The project is headed by Associate Professor Natalia Redchikova (born 1979) in the TSU Department of Economics and Agribusiness. As part of this project the research team has discovered national features of interaction between states and corporation in BRICS countries in the framework of increasing theirinnovation activities. Also the team has identified the scale of impact of transnational corporations on indicatorsof innovation development ofthe hosteconomy.

– Modern adaptive robust statistic and methods of quantitative finance and its application. The project is headed by Professor Sergey Pergamenshchikov (born 1958), Head of the Office of Statistics (Universityof Rouen, France). The TSU research team jointly with colleagues from the Universityof Rouen, University of Strasbourg, University ofFranche-Comté, and University of Connecticut has analyzed and modeled the financial marketas a complexstochastic system.

– Research of mathematical models of information flows, computer networks, and data processing and transmission algorithms. The project is headed by Anatoly Nazarov (born 1947) Head of TSU Department of Probability Theory and MathematicalStatistics. The research team has developed mathematical models of information and communicationsystems, networks and incoming traffic. These models can describe the behavior of the electronic exchange. Also the team has designed and researched mathematical models of queue management systems in bank offices.