Tuesday, 4 April 2017 at 11.00

LIT Conference Hall

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1. ASTRA-NOVA is a software package for structural strength calculations of branched pipeline systems and components in accordance with regulatory requirements

Automated computations of static and cyclical strength, of seismic, vibration and dynamic effects, cryo-, low- and high-temperature pipeline systems and systems "foundation-construction-equipment-pipelines" of various industries in accordance with Russian regulatory requirements (NPP, TEU, petrochemicals, gas main, heating system, of high pressure).

Development opportunities for new industries and classes of problems.

2.Experience gained in the Scientific-Research Centre StaDiO in the field of integrated calculations of spatial systems and structures and verification of engineering software;

a. Computational justification of VAT, the strength and stability of spatial systems and structures, unique buildings, constructions and complexes.

b. Reasonable choice of a calculation tool for specific tasks and objects: packages that implement numerical methods of calculating the engineering structures, buildings an constructions ("heavy" - ANSYS, Abaqus, Nastran, and specialized ones - Lira, SCAD, Stadio, MicroFE...);

c. Aerodynamics and aeroelasticity: numerical simulation as a real alternative to the wind-tunnel testing.

d. Calculation of viability: calculations of structures, buildings and constructions for their resistance to progressive collapse.

e. Express analysis of the projects proposed by the audience.

f. Verification-certification of software tools for the numerical simulation of the mechanics problems. Examination of finished computations.