

Day 1 – Monday, July 1

ROOM A

08.30–09.45 **REGISTRATION**

09.45–10.00 **OPENING CEREMONY**

10.00–11.30 **PLENARY LECTURES – I**

Chair: A.M. Krivtsov

10.00–10.45 **D.A. Indeitsev.** Temperature models in solid mechanics. Problems of interaction between laser radiation and crystal lattices.

10.45–11.30 **E.V. Lomakin, A.M. Melnikov, Y.R. Jeng.** Plastic deformation of solids with stress state dependent properties under plane stress condition.

11.30–11.50 **COFFEE BREAK**

11.50–13.20 **PLENARY LECTURES – II**

Chair: D.A. Indeitsev

11.50–12.35 **H. Duan, M. Lanza.** Graphene-coated atomic force microscope tips for reliable nanoscale electrical characterization.

12.35–13.20 **A.B. Freidin, E. Vilchevskaya, I. Korolev, L. Sharipova.** Chemical affinity tensor in mechanochemistry of deformable solids.

LUNCH BREAK

15.30–16.50 **ADVANCES IN NUMERICAL SIMULATION OF HYDRAULIC FRACTURE – I**

Chair: S. Cox

15.30–15.40 **Introduction**

15.40–16.10 **A. Savitski.** Key-note Lecture. “Unconventional” challenges of hydraulic fracturing modeling.

16.10–16.30 **A.M. Linkov.** Using modified formulation for hydraulic fractures driven by thinning fluids.

16.30–16.50 **G.S. Mishuris, M. Wrobel.** On various strategies of numerical simulation of hydraulic fracturing.

16.50–17.10 **COFFEE BREAK**

17.10–19.00 **ADVANCES IN NUMERICAL SIMULATION OF HYDRAULIC FRACTURE – II**

Chair: A. Savitski

17.10–17.40 **V. Kuzkin, A.M. Krivtsov, A. Linkov.** Key-note Lecture. Proppant transport in hydraulic fractures: computer simulation of effective properties and movement of the suspension.

17.40–18.00 **A. Linkov, L. Rybarska-Rusinek, E. Rejwer, D. Jaworski.** On modelling hydraulic fractures in inhomogeneous media.

18.00–18.20 **G. Mishuris, M. Wrobel, P. Kuśmierczyk.** PKN model of hydrofracturing under various fluid flow regimes. numerical implementations in different dependent variables.

18.20–18.40 **S. Golovin, V. Isaev, S. Kalinin, D. Kuznetsov.** Motion of binary fluid in a crack in elastic porous media.

18.40–19.00 **Discussion**

20.00 Welcome Party

Day 1 – Monday, July 1

ROOM B

15.30–16.50 SOLIDS AND STRUCTURES – I

Chair: S.A. Lychev

15.30–15.50 **S.M. Aizikovich, A.S. Vasiliev, S.S. Volkov.** Distribution of contact stresses under circular flexible plate lying on a two-layer foundation, with soft interlayer thickness and substrate stiffness taken into account.

15.50–16.10 **N.V. Banichuk, S.Y. Ivanova.** On optimal anisotropic bodies in the heat conduction problems.

16.10–16.30 **A.M. Kolesnikov, A.V. Popov.** Pure bending of pressurized curved tube.

16.30–16.50 **O. Bocharov, V. Rudyak, A. Seryakov.** Model hierarchy and peculiarities of the deformation of porous media saturated with fluids.

16.50–17.10 COFFEE BREAK

17.10–18.30 SOLIDS AND STRUCTURES – II

Chair: N.V. Banichuk

17.10–17.30 **R.A. Arutyunyan.** Reliability of complex mechanical systems under the action of cyclic loading and corrosive media.

17.30–17.50 **S.G. Semenov, A.S. Semenov, L.B. Getsov, B.E. Melnikov.** Application of linear and nonlinear fracture mechanics criteria for crack propagation analysis in single crystal bodies.

17.50–18.10 **S.A. Lychev, A.V. Manzhurov, I. Fedotov.** Nonstationary vibrations of a growing thermoelastic parallelepiped.

18.10–18.30 **N.P. Lazarev.** An Equilibrium Problem for the Timoshenko-type Plate Containing a Crack on the Boundary of a Rigid Inclusion.

ROOM C

15.20–16.50 WAVE MOTION – I

Chair: S.N. Gavrilov, M.G. Zhuchkova

15.20–15.40 **S.N. Gavrilov, E.V. Shishkina.** A strain-softening bar revisited.

15.40–16.00 **D.A. Indeitsev, D.P. Kouzov, M.G. Zhuchkova.** Vibrations of an elastic plate floating atop a two-layered fluid at low frequencies.

16.00–16.20 **Z. Yang, Z. Jianwei, S. Zhaoqun.** The scattering of inclusions by elastic wave in two-phase media.

16.20–16.35 **M. Babenkov, E. Ivanova.** Propagation processes of the heat waves in a layer with regard to the heat flux relaxation.

16.35–16.50 **A.V. Yakovenko.** Nonlinear effects in the vibrating cavity filled with a perfect gas.

16.50–17.10 COFFEE BREAK

17.10–18.50 WAVE MOTION – II

Chair: M.G. Zhuchkova

17.10–17.30 **M.V. Silnikov, M.V. Chernyshov.** Formation of the shock-wave pattern in a closed cluttered volume at non-ideal blast wave propagation

17.30–17.50 **I. Fedotov, J. Marais, M. Shatalov.** Classification of Hyperbolic Equations arising in the theory of longitudinal vibrations.

17.50–18.10 **I.N. Soldatov, N.V. Klyueva, M.E. Tkach.** The effect of viscosity on waves and stability of the Rankine vortex with axial flow.

18.10–18.30 **V.M. Kolykhalin.** Wave estimation of volume of the liquid, granular and mixed compositions in cylindrical tanks.

20.00 Welcome Party

Day 2 – Tuesday, July 2

ROOM A

10.00–11.30 **PLENARY LECTURES – III**

Chair: E.V. Lomakin

10.00–10.45 **V.A. Babeshko, O.V. Evdokimova, O.M. Babeshko, M.N. Kolesnikov, V.L. Shestopalov.** Bodies with cracked coatings.

10.45–11.30 **A. Castellanos.** The role of triboelectricity in powder behavior.

11.30–11.50 **COFFEE BREAK**

11.50–13.20 **MODELLING AND NUMERICAL METHODS IN BIOMECHANICS – I**

Chair: J. Schröder

11.50–12.20 **U. Nackenhorst, G. von Lewinski.** Computational biomechanics of bones.

12.20–12.50 **A.S. Semenov, A.S. Avrunin, A.I. Grishchenko, B.E. Melnikov, A.A. Doktorov.** Influence of nanoscale morphological characteristics on the mechanical properties of bone tissue.

12.50–13.20 **N. Kizilova.** Mathematical modeling of cell growth in active biodegradable scaffolds for tissue engineering.

LUNCH BREAK

15.30–16.50 **RELATED PROBLEMS OF GEOMECHANICS – I**

Chair: G. Mishuris

15.30–15.50 **I. Sevostianov, A. Giraud.** Elastic properties of oolitic limestone: micromechanical modeling and verification.

15.50–16.10 **V.I. Kushch, I. Sevostianov.** Effect of crack density, orientation and clustering on SIF statistics and anisotropy of randomly cracked solid.

16.10–16.30 **V. Koshelev.** Semi-analytical method for solving boundary value problems for multi-wedge body containing a domain with internal structure.

16.30–16.50 **T.P. Miroshnichenko.** The gas outflow from underground storage under high pressure gradient.

16.50–17.10 **COFFEE BREAK**

17.10–18.50 **RELATED PROBLEMS OF GEOMECHANICS – II**

Chair: A. Krivtsov

17.10–17.30 **A.K. Belyaev, V.A. Polyanskiy, Y.A. Yakovlev.** The conditions of parametric instability in materials containing the hydrogen.

17.30–17.50 **M.I. Samoilov, V. Dreiman.** Samotlor field: multiframe integrated design for horizontal well.

17.50–18.10 **D. Ferguson.** Foams in porous media.

18.10–18.30 **A.V. Bekker, M. Pervukhina, V. Shulakova, S. Mayo, M.B. Clennell.** Unconsolidated sandstone under compaction stress: numerical modelling of 3-D multibody contact interaction of particles with irregular shapes.

18.30–18.50 **Discussion**

Day 2 – Tuesday, July 2

ROOM B

11.50–13.50 MECHANICS OF MEDIA WITH MICROSTRUCTURE – I

Chair: A.B. Freidin

- 11.50–12.10 **E. Grekova.** A theoretical way to construct materials with resonant frequencies, forbidden bands, and apparent history dependence.
- 12.10–12.30 **V.I. Kushch.** Micromechanical model of interface damage accumulation in fibrous composite.
- 12.30–12.50 **I.A. Morozov, L.A. Komar, S.N. Lebedev.** The model of elastomeric composite based on the filler cluster network and special interfacial polymer layers.
- 12.50–13.10 **E.N. Vilchevskaya, E.A. Ivanova.** Description of liquid-gas phase transition in the frame of continuum mechanics.
- 13.10–13.30 **R.A. Filippov, A.B. Freidin, E.N. Vilchevskaya, I. Hussainova.** Critical radius of metastable zirconia inclusions in the effect of transformation toughening of ceramics.
- 13.30–13.50 **A. Farmanyant.** Mathematical model of micropolar elastic orthotropic multilayered thin bars.

LUNCH BREAK

15.30–16.50 MECHANICS OF MEDIA WITH MICROSTRUCTURE – II

Chair: E. Grekova

- 15.30–15.50 **E.E. Mukhin, A.M. Polyanskiy, V.A. Polyanskiy, Y.A. Yakovlev.** The destruction of interface of silicon's heterogeneous structures as a result the hydrogen diffusion.
- 15.50–16.10 **O.V. Sadovskaya.** Numerical simulation of deformation of a metal foam.
- 16.10–16.30 **V.M. Sadovskii.** On the acoustic approximation of thermomechanical model of a liquid crystal.
- 16.30–16.50 **V. Somsikov.** Why it is necessary to construct the mechanics of structured particles and how to do it.

16.50–17.10 COFFEE BREAK

17.10–18.50 MECHANICAL AND CIVIL ENGINEERING APPLICATIONS

Chair: V.A. Eremeyev

- 17.10–17.30 **S.V. Petinov, R.V. Guchinsky.** Fatigue design of expansion joint in ship superstructure.
- 17.30–17.50 **N.V. Makarova, A.S. Lipovoy.** Properties investigation of the cement composites containing nanostructured mineral fibers.
- 17.50–18.10 **A.V. Zaitsev, A.A. Fukalov, A.V. Kutergin.** Exact analytical solutions to problems on equilibrium state of elastic orthotropic heavy bodies with axial symmetry and their geomechanical applications.
- 18.10–18.30 **L.A. Nazarov, L.A. Nazarova, A.V. Panov.** Using of space and underground geodetic data for evaluation of natural stress field components and properties of mining technology bearing elements.
- 18.30–18.50 **L.A. Nazarova, L.A. Nazarov, R.I. Rodin.** Direct and inverse problems of mass transfer in coal-rock massive: a new approach to gas content determination.

Day 2 – Tuesday, July 2

ROOM C

11.50–13.50 **NONLINEAR DYNAMICS, CHAOS AND VIBRATION – I**

Chair: A.G. Knyazeva

- 11.50–12.10 **I.I. Blekhan**. Complex (“chaotic”) behaviour of dynamical systems as a consequence of its multimode character.
- 12.10–12.30 **A.K. Abramian**, **S.A. Vakulenko**. Nonlinear oscillations of a beam made from dynamic material.
- 12.30–12.50 **G.Y. Panovko**, **A.M. Gouskov**. Bifurcation analysis of vibrations mechanical system with an electric drive with limited capacity.
- 12.50–13.10 **D.G. Arseniev**, **V.V. Kotov**, **V.A. Polyanskiy**, **N.A. Smirnova**. Biomorphic control of the stochastic vibrations.
- 13.10–13.30 **A.D. Sergeyev**. Torsional oscillations of a curved drillstring at sloping directional drilling.
- 13.30–13.50 **O.O. Onoprienko**, **S.N. Sorokova**, **A.G. Knyazeva**. Mathematical modeling of powders sintering taking into account conversion staging and volume change.

LUNCH BREAK

15.30–16.50 **DIAMONDS AND RELATED MATERIALS**

Chair: N.F. Morozov, A.M. Krivtsov

- 15.30–15.50 **A.K. Rebrov**. Gas dynamic deposition of nano-size films.
- 15.50–16.10 **S.A. Kukushkin**, **A.V. Osipov**. A new method for the synthesis of epitaxial layers of silicon carbide on silicon owing to formation of dilatation dipoles.
- 16.10–16.30 **S.A. Voropaev**. The methods of synthesis and different crystal forms of nanodiamond.
- 16.30–16.50 **Discussion**
- 16.50–17.10 **COFFEE BREAK**

17.10–18.50 **DYNAMICS OF A RIGID BODY CONTACTING WITH A SURFACE: VARIOUS ASPECTS – I**

Chair: A.S. Kuleshov, A.V. Karapetyan

- 17.10–17.30 **A. Aleksandrova**, **T. Salnikova**. Some aspects of the thermodynamics of the dissipative system.
- 17.30–17.50 **A.S. Kuleshov**, **G.A. Chernyakov**. Investigation of the problem of motion of a heavy dynamically symmetric body on a perfectly rough plane by the Kovacic algorithm.
- 17.50–18.10 **A.S. Kuleshov**, **S.V. Iffraimov**. Motion of a rigid rod on a convex surface.
- 18.10–18.30 **A.V. Karapetyan**, **M.A. Munitsyna**. Dynamics of an ellipsoid on the horizontal plane with friction.
- 18.30–18.50 **A.S. Kuleshov**, **M.O. Itskovich**. Motion of a rigid body consisting of two symmetric laminae on a horizontal plane.

Day 3 – Wednesday, July 3

ROOM A

10.00–11.30 **PLENARY LECTURES – IV**

Chair: E. Vilchevskaya

10.00–10.45 **A.M. Krivtsov.** Analytical and computer modelling in mechanics of discrete media

10.45–11.30 **A.V. Manzhurov, S.A. Lychev.** Geometrical methods in mechanics of growing solids.

11.30–11.50 **COFFEE BREAK**

11.50–13.50 **MODELLING AND NUMERICAL METHODS IN BIOMECHANICS – II**

Chair: L. Sharipova

11.50–12.20 **I.G. Goryacheva, G.M. Anferov.** Analysis of stresses in thumb carpometacarpal joint based on the tomography data

12.20–12.50 **M. Roland, T. Tjardes, R. Otchwemah, S. Diebels.** Numerical simulation of a tibia with implant using the finite-element method.

12.50–13.20 **S.M. Bosiakov, A. Vinokurova, A. Dosta.** On the FEM modeling of craniofacial displacements during rapid maxillary expansion.

13.20–13.50 **A.A. Koroleva, S.M. Bosiakov.** The prediction of the fracture risk of the long bones after sectoral resection.

LUNCH BREAK

15.20–16.50 **MODELLING AND NUMERICAL METHODS IN BIOMECHANICS – III**

Chair: N. Kizilova

15.20–15.50 **M. Shehadeh, B. Zhou, M. Stoffel, D. Weichert.** Modeling of cellular articular cartilage replacement tissues in modern biomechanics.

15.50–16.20 **A. Sapotnick, U. Nackenhorst.** A finite element approach to a mechanically stimulated biochemical fracture healing model.

16.20–16.50 **M. Chapwanya, J. Lubuma, R. Mickens.** Positivity-preserving numerical schemes for cross-diffusion models in biosciences.

16.50–17.10 **COFFEE BREAK**

17.10–19.10 **MODELLING AND NUMERICAL METHODS IN BIOMECHANICS – IV**

Chair: U. Nackenhorst

17.10–17.40 **D. Balzani, T. Schmidt, A. Schriefl, G.A. Holzapfel.** Constitutive modeling of damage mechanisms in arterial walls and related experimental studies.

17.40–18.10 **J. Schröder, S. Brinkhues.** A new approach for the incorporation of eigenstresses in arterial wall simulations.

18.10–18.30 **S.F. Pravdin, A.V. Panfilov, V.I. Berdyshev, L.B. Katsnelson, O.E. Solovyova, V.S. Markhasin.** A model of the anatomy and electrophysiological and mechanical activity of the left ventricle of the heart.

18.30–18.50 **V.S. Yushutin.** Non-Newtonian flow in a collapsible tube: does rheology of blood affect stability of a vessel?

18.50–19.10 **A.K. Skvorchevskiy.** Fundamentals for a laser biomechanics of live systems.

21.00 Conference Dinner

Day 3 – Wednesday, July 3

ROOM B

11.50–14.10 NANOMECHANICS

Chair: V.A. Kuzkin

- 11.50–12.10 **W.H. Mueller, C. Liebold.** FE-implementation of higher gradient theories and its use for experimental analysis.
- 12.10–12.30 **I. E. Berinskii, A. M. Krivtsov.** On the bending rigidity of graphene membranes.
- 12.30–12.50 **A.L. Kolesnikova, M.Y. Gutkin, S.A. Krasnitckii, A.E. Romanov.** Circular prismatic dislocation loops in spherically symmetric elastic solids with free surfaces.
- 12.50–13.10 **R. Yang, Q. Zhang, F. Ke, Y. Bai.** Approaches to probe the free-surface-induced size effect of material by indentation.
- 13.10–13.30 **W. Shan, U. Nackendorst.** Transition from MD to continuum based on statistical mechanics.
- 13.30–13.50 **K.B. Ustinov.** On problem of interface crack parallel to free boundary; equivalent elastic clamping conditions.
- 13.50–14.10 **I. Zubko, V. Kochurov, M. Simonov, R. Gorodilov.** Energy-based approach to computation of thermo-elastic properties for crystals with hexagonal symmetry.

LUNCH BREAK

15.30–16.50 NONLINEAR DYNAMICS OF MEDIA WITH MICRO – AND NANOSTRUCTURES AND RELATED NONLINEAR WAVE PROBLEMS – I

Chair: E.L. Aero, A.V. Porubov

- 15.30–15.50 **E.L. Aero, A.N. Bulygin, Yu.V. Pavlov.** Especial effects of reconstruction of structure of superthin crystal layers at intensive loading.
- 15.50–16.10 **E.L. Aero, A.N. Bulygin, Y.V. Pavlov.** Propagation of waves in thin crystal layers at different potentials of interaction of sublattices.
- 16.10–16.30 **V.I. Erofeev, I.S. Pavlov, V.V. Kazhaev.** Interaction of solitons propagating in a granular medium.
- 16.30–16.50 **G.S. Hayrapetyan, N.S. Aslanyan, S.H. Sargsyan.** Mathematical models of elastic deformation and temperature stresses of micropolar orthotropic thin plates.

16.50–17.10 COFFEE BREAK

17.10–19.10 NONLINEAR DYNAMICS OF MEDIA WITH MICRO – AND NANOSTRUCTURES AND RELATED NONLINEAR WAVE PROBLEMS – II

Chair: E.L. Aero, A.V. Porubov

- 17.10–17.30 **A.V. Porubov.** Nonlinear dynamics of diatomic lattices.
- 17.30–17.50 **S. Lurie, A. Gusev, N. Tuchkova.** The principle of symmetry and simple gradient theory.
- 17.50–18.10 **D. Shepelev, V.V. Smirnov, L.I. Manevitch.** Energy exchange and localization in carbon nanotubes.
- 18.10–18.30 **L.V. Mirantsev.** Squeezing out of matter between crystalline substrates.
- 18.30–18.50 **E.L. Aero, A.L. Korzhenevskii.** The theory of squeeze-out of a crystal layer with formation of defects of structure.
- 18.50–19.10 **A.L. Korzhenevskii.** Diffusion-induced oscillations of extended defects.

21.00 Conference Dinner

Day 3 – Wednesday, July 3

ROOM C

11.50–13.30 **SOLIDS AND STRUCTURES – III**

Chair: A.V. Zaitsev

- 11.50–12.10 **B.E. Melnikov**, *I.N. Izotov, A.S. Semenov, S.G. Semenov, S.V. Petinov*. Experimental foundation and constitutive equations of multi-surface theory of plasticity with one active surface.
- 12.10–12.30 **A.K. Belyaev**, *N.F. Morozov, P.E. Tovstik*. Dynamics of rod under longitudinal impact.
- 12.30–12.50 *A.P. Kiselev, A.M. Tagirdzhanov*. Time-dependent Green tensor for a homogeneous, isotropic, elastic medium. A paradox.
- 12.50–13.10 **T.B. Lavrova**. The threshold extent of softening and the incipiency of fracture in the Tresca-type materials.
- 13.10–13.30 **R.D. Nedin**, *A.O. Vatulyan*. On modeling heterogeneous residual stress.

LUNCH BREAK

15.30–16.50 **AEROSPACE MECHANICS**

Chair: P.Yu. Georgievsky

- 15.30–15.50 *S.V. Bobashev, A.S. Chernyshev, Yu.A. Kurakin, S.A. Ponyaev, A.A. Schmidt*. Arrangement of MHD interaction for efficient impact on supersonic weakly ionized gas flow around conical body.
- 15.50–16.10 **A.A. Tikhonov**, *A.Yu. Aleksandrov*. On the satellite's electrodynamic attitude stabilization.
- 16.10–16.30 **L.Y.M. Kabeya**. Numerical modeling of extend and compression interface aircraft-runway by martingale for prediction accidents.
- 16.30–16.50 **V. Vinnikov**, *M. Gritsevich*. Statistical distributions in empirical study of meteorite fragments.
- 16.50–17.10 **COFFEE BREAK**
- 17.10–19.30 **IN COMMEMORATION OF YA.G. PANOVKO**

21.00 Conference Dinner

Day 4 – Thursday, July 4

ROOM A

09.15–11.30 **PLENARY LECTURES – V**

Chair: E. Vilchevskaya

09.15–10.00 *P. Hansson, M. Jansson, S.T. Petersson.* Elastic properties on the atomic scale.

10.00–10.45 *Y. V. Petrov.* Strain rate effects on rock materials

10.45–11.30 *R.Z. Valiev.* Physics and mechanics of bulk nanostructured metals

11.30–11.50 **COFFEE BREAK**

EXCURSION

Day 5 – Friday, July 5

ROOM A

09.45–10.00 OPENING OF MWM

10.00–11.30 **PLENARY LECTURES – VI**

Chair: I. Asonov

10.00–10.45 **S. Cox.** The mechanics of liquid foams.

10.45–11.30 **V.A. Eremeyev.** Introduction to micropolar mechanics.

11.30–11.50 **COFFEE BREAK**

11.50–13.30 **MWM PRESENTATIONS**

13.30–14.15 **M.V. Zakrzhevsky.** New chapters of the bifurcation theory of nonlinear dynamical systems, chaos and rare attractors.

LUNCH BREAK

ROOM B

15.30–17.00 **MWM POSTERS**

17.00–17.20 **COFFEE BREAK**

17.20–18.50 **POSTERS**

ROOM C

17.20–19.20 MWM activities

Night excursion

Day 6 – Saturday, July 6

ROOM A

10.00–11.30 **PLENARY LECTURES – VII**

Chair: O.S. Loboda

10.00–10.45 **R.R. Mulyukov.** Properties and applications of bulk nanostructured materials.

10.45–11.30 **N.F. Morozov, I.A. Ovid'ko, A.G. Sheinerman, N.V. Skiba.** Micromechanics of fracture toughness enhancement in nanomaterials.

11.30–11.50 **COFFEE BREAK**

11.50–13.50 **FLUID AND GAS**

Chair: V.A. Kuzkin

11.50–12.10 **N.N. Smirnov, V.F. Nikitin, Yu.G. Phylippov.** Hydrogen engines numerical modeling.

12.10–12.30 **M.N. Smirnova, A.V. Zvyaguin.** High velocity gliding of a plate with final length cavity formation.

12.30–12.50 **I.F. Melikhov, A.S. Amosov, S.A. Chivilikhin.** Response of a stratified viscous half-space to a perturbation of the free surface.

12.50–13.10 **S.F. Urmancheev.** Pattern formation in the layer of anomalous thermoviscous liquids.

13.10–13.30 **N.A. Lutsenko.** On mathematical modeling of gas cooling of axisymmetric porous heat-evolutional objects with partial closure of the object's outlet.

13.30–13.50 **I.K. Marchevsky.** On fast multipole algorithms of velocity computation in vortex element method for 2D and 3D flows.

13.50–14.10 **V.I. Zapryagaev, V.M. Boiko, A.A. Pivovarov.** Experimental investigation of a high-speed jet velocity field by using optical methods.

LUNCH BREAK

15.30–16.50 **DYNAMICS OF A RIGID BODY CONTACTING WITH A SURFACE: VARIOUS ASPECTS – II**

Chair: A.S. Kuleshov, A.V. Karapetyan

15.30–15.50 **E.V. Filatkina.** Control problem of wheeled mobile platform with slipping.

15.50–16.10 **A. Rusinova.** On the dynamics of a homogeneous puck on an inclined plane with friction.

16.10–16.30 **M.V. Shamolin.** Review of integrable cases in dynamics of small- and multidimensional rigid body in a nonconservative field.

16.30–16.50 **A.A. Zobova, M.V. Ishhanyan.** Dynamical stress distribution in the motion of a ball on a rough plane.

16.50–17.10 **CLOSING CEREMONY**

Day 6 – Saturday, July 6

ROOM B

11.50–13.50 **NONLINEAR DYNAMICS, CHAOS AND VIBRATION – II**

Chair: A.S. Kuleshov

- 11.50–12.10 **M.Ya. Panovko**. The point elastohydrodynamic contact under non-steady state loading.
- 12.10–12.30 **D. Skubov, D. Vavilov**. Dynamics of conductive solid bodies in high-frequency alternating magnetic field.
- 12.30–12.50 **V.S. Sorokin**. Motion of a pendulum with vibrating suspension axis at unconventional values of parameters.
- 12.30–12.50 **N.P. Yaroshevich, A.V. Sylyvonyuk**. About some features of dynamic acceleration of vibration machines with self-synchronisation inertion vibroexciters.
- 13.10–13.30 **A.N. Fedorova, M.G. Zeitlin**. Spin-orbital motion: symmetry, dynamics, multiresolution.
- 13.30–13.50 **A.N. Fedorova, M.G. Zeitlin**. Multiscale representation for space-charge dominated beam transport.

LUNCH BREAK

15.30–16.50 **COMPUTATIONAL MECHANICS**

Chair: I.E. Berinskii, V. Bratov

- 15.30–15.50 **A.G. Knyazeva, S.A. Shanin, M.V. Kripakova**. Modeling of phases and chemical compounds formation.
- 15.50–16.10 **V. Bratov, Y. Petrov**. Erosion-type fracture of asphalt concrete as a result of automobile studs impacts.
- 16.10–16.30 **M.Yu. Filimonov, N.A. Vaganova**. Long-term forecasting of changes in the permafrost of the wells and the different technical system.
- 16.30–16.50 **M. Varygina**. High-performance computations in numerical modeling of wave propagation in block media with thin interlayers.