

CURRICULUM VITAE

INFORMAZIONI PERSONALI

Nome e cognome Inna A. EREMEEVA ZHURBA

Stato civile: Sposata, con un figlio (nato nel 2007) e una figlia (nata nel 2010)

Lingue:

- Russa (madre lingua);
- Inglese (scritto e parlato);
- Polacco (parlato); Tedesco (scritto e parlato).

ISTRUZIONE E FORMAZIONE

26 dicembre 2005 Conseguimento del PhD in Ingegneria Meccanica (Candidate of Technical Sciences in Mechanical Engineering - Tribology and Mathematical Modelling) alla Università Statale delle Vie di Comunicazione della città di Rostov (Titolo della tesi: *Modello matematico non stazionario per la previsione delle condizioni di funzionamento stabile di cuscinetti a strisciamento con composto lubrificante viscoelastico*)

2000-2004 Dottorato di ricerca in **Ingegneria Meccanica** (Fellowship for Candidate of Science in Mechanical Engineering) alla Università Statale delle Vie di Comunicazione della città di Rostov

27 giugno 2000 Laurea in **Ingegneria Meccanica**, specializzazione **Impianti per l'edilizia, macchine stradali, attrezzature di movimentazione e trasporto** (summa cum laude, Università Statale delle Vie di Comunicazione della città di Rostov, Russia)

ESPERIENZE LAVORATIVE

2017 Assegnista di ricerca presso l'Università degli studi dell'Aquila

Oltre 10 anni di esperienza lavorativa.

Alla *Università Statale delle Vie di Comunicazione della città di Rostov*, Russia

2004-2010 Ricercatore (Assistant Professor)

2000-2004 studente di PhD

Assistente in Matematica Applicata e Meccanica dei Fluidi. L'esperienza comprende istruzione, insegnamento, programmazione.

BORSE DI STUDIO

Ha partecipato a sovvenzioni interne della Southern Federal University (2005-2006).

CAMPI DI INTERESSE SCIENTIFICO

- Meccanica e mezzi microstrutturati.
- Tribologia.
- Meccanica dei fenomeni di contatto.
- Flussi di fluidi complessi in canali sottili.

CORSI DI LEZIONE UNIVERSITARIA TENUTI

Informatica (laurea di primo livello),
Matematica (laurea di primo livello).

PUBBLICAZIONI INDICIZZATE SU SCOPUS

1. Akhverdiev, K.S., Yakovlev, M.V., Zhurba, I.A. Hydrodynamic design of sliding bearings with the account of inertia of the lubricating fluid with viscoelastic properties (2003) *Trenie i Iznos (Friction and Wear)*, 24 (2), pp. 121-125.
Abstract: A method has been developed to design sliding bearings with the account of forces of inertia of a lubricating fluid (LF) with viscoelastic properties. A precise automodel solution has been found when the lubricating fluid reaches the bearing in the state of full relaxation when viscosity depends on pressure exponentially. Basic working characteristics are determined; the results of numerical analysis of the obtained analytical dependencies for the ultimate loading and the force of friction are presented at different values of the parameter $\beta-1$ characterizing the relation between the time of passage and the time of relaxation. The found solutions lead to conclusions that the elasticity of the lubricating fluid affects negatively the working characteristics because forces of friction increase while the ultimate loading reduces compared with these parameters for the Newtonian fluid. The advanced method permits to take into consideration the elasticity of the lubricating fluid together with its viscosity.

2. Akhverdiev, K.S., Zhurba, I.A. Steady-state motion of a viscoelastic liquid between a tilt slider and a guide consistent with the lubricant inertia forces (2004) *Trenie i Iznos (Friction and Wear)*, 25 (6), pp. 567-576.
Abstract: The authors present an asymptotic solution of the problem on a steady state motion of a viscoelastic lubricating fluid between a slider and a guide with account of its nonlinear effects. The chief service characteristics of the system are defined based on the proposed calculation method. The numerical results of obtained analytic dependencies are presented for the limiting loads at different b values that characterize viscoelastic properties of the lubricant, and the slope angle tangent of the tilt slider relative to the guide.

3. Scerrato, D., Zhurba Eremeeva, I.A., Lekszycki, T. and Rizzi, N.L. On the effect of shear stiffness on the plane deformation of linear second gradient pantographic sheets. (2016) *ZAMM*, 96(11), 1268-1279 DOI: 10.1002/zamm.201600066.
Abstract: Recently it has been proposed the study of a new class of bidimensional metamaterials, which have been called extensible pantographic sheets. Such bidimensional continua are the generalization of the continua introduced in (dell'Isola et al. 2015) as they take simultaneously into account the elastic energy in the extensional deformation and geodesic bending of constituting fibers. In the present paper, we consider in the deformation energy a term accounting for the effect of shear deformation. The phenomena which we highlight can be of relevance to model the mechanical behavior of composite fiber reinforcements and of some lattices of beams constrained by internal pivots. We compare the effect of different linear or cubic shear stiffnesses i) on the deformation of pairs of pantographic sheets suitably interconnected and ii) on the deformation of pantographic sheets deformed under the action of forces concentrated on points.

4. Scerrato, D., Zhurba Eremeeva, I.A., Lekszycki, T. and Rizzi, N.L. On the shear stiffness influence for modelling of deformations of pantographic sheets. In: *Shell Structures: Theory and Applications Volume 4: Proceedings of the 11th International Conference" Shell Structures: Theory and Applications, (SSTA 2017), October 11-13, 2017, Gdansk, Poland* (p. 161-168). CRC Press, 2018, Boca Raton.
Abstract: In the paper we analyze the influence of the shear stiffness in the deformation

of a new recently introduced thin structure called pantographic sheet or pantographic beam lattice. The structure consists of two families of long elastic fibers connected by pivots. Here we compare the effect of different models of shear stiffness on the deformation of pantographic sheets suitably interconnected and on the deformation of pantographic sheets deformed under the action of forces concentrated on points.

Autorizzo il trattamento dei miei dati personali ai sensi del Decreto Legislativo 30 giugno 2003, n. 196 “Codice in materia di protezione dei dati personali” per gli adempimenti connessi alla presente procedura.