Marat Z. Dosaev, Curriculum vitae

Education and Degrees:

1992, Faculty of Mechanics & Mathematics of Lomonosov Moscow State University, Master Degree in Mechanics & Applied Mathematics.

1992-1995, Post-graduate study at the Faculty of Mechanics & Mathematics of Lomonosov Moscow State University.

2002, PhD in Theoretical Mechanics, the thesis title is "Phenomenological model of motion of solid body with viscous filling", in the Institute of Mechanics of Lomonosov Moscow State University, supervised by Professor Samsonov V.A.

2009, Associate professor in Lomonosov Moscow State University.

2012, Leading Researcher, Institute of Mechanics of Lomonosov Moscow State University

Working and Teaching Activity:

1996-2003	Research assistant, Institute of Mechanics of Lomonosov Moscow State University
2003-2006	Senior scientist, Institute of Mechanics of Lomonosov Moscow State University
2006-2009	Lecturer, Center for International Education of Lomonosov Moscow State University
2006-2012	Senior researcher, Institute of Mechanics of Lomonosov Moscow State University
2008-2015	Assistant professor in mechanics, Peter the Great Military Academy for Strategic Rocket Forces
2009-	Associate professor in mechanics, Faculty of Materials Science of Lomonosov Moscow State University
2009-	Associate Director for International Cooperation, Institute of Mechanics of Lomonosov Moscow State University
2014-	Deputy Director, Institute of Mechanics of Lomonosov Moscow State University
2014-	Expert, Foundation for Perspective Research
2015-	Member of Scientific Council, Institute of Mechanics of Lomonosov Moscow State University
2016-2019	Associate professor, Institute of Russian Language and Culture, Lomonosov Moscow State University
2016-	Associate professor, Higher School of Management and Innovation, Lomonosov Moscow State University
2017-	Member of Scientific Council, Faculty of Space Study of Lomonosov Moscow State University
2018-	Associate Editor, Mechanics Based Design of Structures and Machines, An International Journal

2018- Associate Editor of Journal of Mechanics in Medicine and Biology
2019 Visiting Professor, National Taiwan University of Science and Technology
2019- Editorial Advisory Board Member of the International Journal of Non-Linear Mechanics

Main projects:

- Mathematical modeling of mechanical and engineering systems
- Study of motion of a body interacting with media
- Study of stability of body motion in flow
- Study of wind turbine dynamics
- Study of unguided rocket flight
- Study in biomechanics engineering

Publications:

Has published about 100 papers, some of them are:

- C.-H. Yeh, F.-C. Su, Y.-S. Shan, M. Dosaev et al. Application of piezoelectric actuator to simplified haptic feedback system // Sensors and Actuators A: Physical. 2020. 303. 111820. doi:10.1016/j.sna.2019.111820.
- M. Dosaev, V. Samsonov, V. Bekmemetev Comparison between 2D and 3D simulation of contact of two deformable axisymmetric bodies. *Int. J. of Nonlinear Sciences and Numerical Simulation.* 2019
- Marat Dosaev Interaction between internal and external friction in rotation of vane with viscous filling. *Applied Mathematical Modelling.* (2019) 68, 21-28 DOI: 10.1016/j.apm.2018.11.002
- M. Dosaev, Yu. Selyutskiy, Ch.-H.Yeh, F.-Ch. Su. Modeling tactile feedback implemented using a piezoelectric actuator. Mechatronics, Automation, Control (2018) 19 (7), 480-485
- M. M. Gubenko, A. V. Morozov, A. N. Lyubicheva, I. G. Goryacheva, M. Z. Dosaev, M.-Sh. Ju, Ch.-H. Yeh and F.-Ch. Su Video-tactile pneumatic sensor for soft tissue elastic modulus estimation *BioMedical Engineering OnLine* (2017), 16:94, https://doi.org/10.1186/s12938-017-0390-3
- Lyubicheva A.N., Goryacheva I.G., Dosaev M.Z., Fong-Chin Su Modeling of indentation into inhomogeneous soft tissues. *AIP Conference Proceedings* (2017), 1798 (1), 020092-1-5
- Liubov Klimina, Marat Dosaev, Yury Selyutskiy Asymptotic analysis of the mathematical model of a wind-powered vehicle. *Applied Mathematical Modelling*, Elsevier BV (Netherlands), (2016) DOI
- Marat Dosaev, Irina Goryacheva, Yuri Martynenko, Alexey Morozov, Fyodor Antonov, Fong-Chin Su, Chien-Hsien Yeh, Ming-Shaung Ju, Application of Video-Assisted Tactile Sensor and Finite Element Simulation for Estimating Young's Modulus of Porcine Liver. *Journal of Medical and Biological Engineering* (2015), 35 (4), pp 510-516. doi: 10.1007/s40846-015-0064-1
- *M. Dosaev, A. Holub, L. Klimina* Preferable Operation Modes of a Wind Turbine with a Differential Planetary Gearbox // New Trends in Mechanism and Machine. Science Mechanisms and Machine Science Volume 24 (2015), pp 545-552
- *Chien-Hsien Yeh, Fong-Chin Su, Irina Goryacheva, Yuri Martynenko, Marat Z. Dosaev, Ming-Shaung Ju* Image-assisted method for estimating local stiffness of soft tissues and calibration of bias due to aqueous humor effect. *Sensors and Actuators A: Physical* (2014), 212(1), P. 42–51. http://dx.doi.org/10.1016/j.sna.2014.03.013
- *Li-Chieh Kuo, Chien-Ju Lin, Guan-Po Chen, I-Ming Jou, Chien-Kuo Wang, Irina G. Goryacheva, Marat Z. Dosaev, and Fong-Chin Su,* "In Vivo Analysis of

Trapeziometacarpal Joint Kinematics during Pinch Tasks", *BioMed Research International*, (2014), Article ID 157295. doi:10.1155/2014/157295

- M.Z. Dosaev, L.A. Klimina, B.Ya. Lokshin, Yu.D. Selyutskiy, S.-S. Hwang On Optimization of Power Coefficient of HAWT. *Journal of Power and Energy Engineering*, Vol.2, N.4. 2014. P. 198-202
- *Marat Dosaev* Solid cylinder with viscous filling on rough plane. PHYSCON 2013, CD. San Luis Potosi, México, 26-29th August, 2013. 5 p. http://lib.physcon.ru/doc?id=f4f22022cd3b
- *M. Z. Dosaev, L. A. Klimina, Y. D. Selyutskiy, Mi-Ching Tsai* On unstable periodic regime of small hawt. *AIP Conf. Proc.* 1493. United States: 2012. P. 317-321. DOI: 10.1063/1.4765507
- *Dosaev M.Z.,Klimina L.A.* Finite-dymensional closed models of small wind power generators. Theory and experiment. // *Vestnik SSTU.* 2012. №.1(64), V. 2, 2012. P. 102-109 (in Russian).
- *Vitaly A. Samsonov, Marat Z. Dosaev and Yury D. Selyutskiy.* Methods of qualitative analysis in the problem of rigid body motion in medium. *International Journal of Bifurcation and Chaos*. 2011. Vol. 21, No. 10, P. 2955-2961.
- *M. Z. Dosaev, V. A. Samsonov, Yu. D. Selyutskii, Wen-Lung Lu, Ching-Huei Lin.* Bifurcation of operation modes of small wind power stations and optimization of their characteristics. *Mechanics of Solids*, Allerton Press, Inc. (2009), vol. 44, no. 2, pp. 214-221.
- *M.Z. Dosaev, Ching-Huei Lin, Wen-Lung Lu, V.A. Samsonov, Yu. D. Selyutskii.* A qualitative analysis of the steady modes of operation of small wind power generators. *Journal of Applied Mathematics and Mechanics* (2009) Vol. 73, Issue 3. P. 259-263.
- *Dosaev M.Z., Kobrin A.I., Seliutski Yu.D., Wen-Lung Lu, Ching-Huei Lin.* On one feature of operation of small-scale wind power generators. *Vestnik of MPEI* N. 1, Moscow, 2007. P.147-151. (in Russian).
- *Dosaev M.Z., Samsonov V.A., Seliutski Yu.D.* On the Dynamics of a Small-Scale Wind Power Generator. *Doklady Physics* (2007) V.52. No.9. Pleiades Publishing. Ltd., 2007, p. 493-495.
- *Dosaev M.Z., Samsonov V.A.* On stability of rotation of solid body with viscous. *Prikl. Math. Mech.* Vol. 66. N3, Moscow (2002) P. 427-433.

1. Yeh, C.-H., Su, F.-C., Shan, Y.-S., Dosaev, M., Selyutskiy, Y., Goryacheva, I., Ju, M.-S. Application of piezoelectric actuator to simplified haptic feedback system(2020) 303, art. no. 111820, .

2. Selyutskiy, Y.D., Holub, A.P., Dosaev, M.Z. Elastically Mounted Double Aerodynamic Pendulum(2019) 19 (5), art. no. 1941007, .

3. Dosaev, M. Interaction between internal and external friction in rotation of vane with viscous filling(2019) 68, pp. 21-28.

4. Dosaev, M., Samsonov, V., Bekmemetev, V. Comparison between 2D and 3D Simulation of Contact of Two Deformable Axisymmetric Bodies(2019) .

5. Dosaev, M., Samsonov, V., Holub, A. Plane-Parallel Motion of a Friction-Powered Robot Moving Along a Rough Horizontal Plane (2019) 73, pp. 2559-2565.

6. Yakovenko, A., Goryacheva, I., Dosaev, M. Contact characteristics of medical forceps indentation to soft tissue(2019) 59, pp. 3-10.

7. Holub, A., Klimina, L., Dosaev, M., Selyutskiy, Y. Modelling of Motion of the Slider-Crank Wind Car Taking into Account Viscous Friction in a Slider(2019) 73, pp. 2059-2066.

8. Klimina, L., Shalimova, E., Dosaev, M., Lokshin, B., Samsonov, V. Two-frequency averaging in the problem of motion of a counter-rotating vertical axis wind turbine(2018) 248, pp. 183-192.

9. Gubenko, M.M., Morozov, A.V., Lyubicheva, A.N., Goryacheva, I.G., Dosaev, M.Z., Ju, M.-S., Yeh, C.H., Su, F.-C. Video-tactile pneumatic sensor for soft tissue elastic modulus estimation(2017) 16 (1), art. no. 94, .

10. Klimina, L., Dosaev, M., Selyutskiy, Y. Asymptotic analysis of the mathematical model of a wind-powered vehicle(2017) 46, pp. 691-697.

11. Yakovenko, A., Goryacheva, I., Dosaev, M. Estimating characteristics of a contact between sensing element of medical robot and soft tissue(2017) 43, pp. 561-569.