

Prof. László Kollár

Full Professor

Savaria Institute of Technology
Faculty of Informatics, Eötvös Loránd University
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ACADEMIC DEGREES

- 06/2016** **Habilitation in Engineering**
Szent István University, Gödöllő, Hungary
- 06/2002** **M.Sc. in Mathematics**
Title of thesis: *Numerical Stability Analysis of a Respiratory Control System Model*
The University of Texas at Dallas, Richardson, Texas, USA
- 02/2002** **Ph.D. in Mechanical Engineering**
Title of dissertation: *Dynamics of Digitally Controlled Unstable Mechanical Systems*
Budapest University of Technology and Economics, Budapest, Hungary
- 06/1997** **M.Sc. in Mechanical Engineering**
Title of thesis: *Az egyensúlyozás dinamikája (Dynamics of Balancing; in Hungarian)*
Budapest University of Technology and Economics, Budapest, Hungary

WORKPLACES

- 2019 –** **Full Professor**
Savaria Institute of Technology, Faculty of Informatics, Eötvös Loránd University, Szombathely, Hungary
- 2017 – 2019** **Associate Professor**
Savaria Institute of Technology, Faculty of Informatics, Eötvös Loránd University, Szombathely, Hungary
- 2014 – 2017** **Associate Professor**
Department of Mechanical Engineering, Savaria Institute of Technology, Faculty of Natural and Technical Sciences, University of West Hungary, Szombathely, Hungary
- 2012 – 2014** **Research Fellow**
School of Computing and Engineering, University of Huddersfield, Huddersfield, UK
- 2002 – 2012** **Research Professor on grant / Postdoctoral Fellow (until 2005)**
Industrial Chair on Atmospheric Icing of Power Network Equipment (CIGELE) and
Canada Research Chair on Atmospheric Icing Engineering of Power Network (INGIVRE)
University of Quebec at Chicoutimi, Chicoutimi, Quebec, Canada
- 2001 – 2002** **Teaching Assistant**
Department of Mathematical Sciences, The University of Texas at Dallas, Richardson, Texas, USA
- 1997 – 2001** **Ph.D. student**
Department of Applied Mechanics, Budapest University of Technology and Economics, Budapest, Hungary

RESEARCH INTERESTS

- **Dynamical Systems, Vibrations:** Numerical modelling and small-scale experiments of cable vibration (due to sudden or propagating load shedding; induced by wind; due to shock load). Numerical stability analysis of retarded differential equations; application for a model of the human respiratory control system. Dynamics of controlled piecewise linear and nonlinear systems considering sampling and processing delays; application for a model of human balancing.
- **Fluid Mechanics, Thermal Sciences:** Reconstruction of velocity profiles using electromagnetic flow measurement. Inverse design of aerofoils (wind turbine blades, aircraft wings) considering extreme weather conditions. Modelling two-phase flows considering collision, evaporation and turbulent dispersion of particles. Simulation of icing processes numerically and in wind tunnel.

TEACHING ACTIVITY

Lecturer

- Course (BSc): Dynamics, Vibrations, Fundamentals of Finite Element Method, Heat Transfer, Thermofluids, Aerodynamics, Fluid Dynamics
- Course (MSc/PhD): Vehicle Aerodynamics and Air Management, Complements in Heat Transfer, Continuum Mechanics, Mechanical Vibrations
- Special subject (MSc/PhD): Advanced Modeling, Ice – Material Interface, Atmospheric Icing of Structures

Teaching Assistant

- Course (BSc), practical: Dynamics, Vibrations, Fundamentals of Finite Element Method, Statics, Strength of Materials, Heat Transfer, Thermofluids, Aerodynamics, Differential Equations
- Course (MSc), practical: Mechanical Vibrations
- Course (BSc), teacher assistant: Algebra, Calculus, Kinematics and Dynamics, Strength of Materials, Vibrations

Supervisor / reviewer

- Director / co-director (present): 1 PhD student (director), 3 PhD students (co-director)
- Director / co-director (degrees obtained): 2 PhD and 3 MSc students
- Supervisor of final projects: completed 19 BSc students (Mechanical Engineer) and 2 BSc students (Industrial Manager), presently 1 BSc student (Mechanical Engineer)
- Scientific Students' Association conference projects: national 1 student (2nd prize), institutional 12 students (1st prize – 1, 2nd prize – 2, 3rd prize – 2)
- Thesis reviewer, 9 PhD and 2 MSc theses, 3 PhD theses (departmental version), 10 BSc final projects
- Doctoral exams: Dynamics, Fluid Mechanics, Heat Transfer, Strength of Materials, Thermodynamics of Atmospheric Ice

LANGUAGES

- English: writing, reading, speaking (fluent)
- French: writing, reading, speaking (fluent)
- Russian: writing, reading, speaking (basic)
- Hungarian: writing, reading, speaking (native)

SOFTWARES

- Programming language: Fortran
- Mathematics and simulations: Matlab, Mathematica, Maple
- Finite element software: Adina, Ansys
- CAD software: AutoCad (alapok)

ACTIVITIES IN SCIENTIFIC AND PROFESSIONAL ORGANIZATIONS

Head of Institute

- Savaria Institute of Technology, Eötvös Loránd University, 2020-

Program Director

- Savaria Institute of Technology, Eötvös Loránd University
BSc Mechanical Engineering, 2018-2020

Doctoral School

- István Sályi Doctoral School of Mechanical Engineering Sciences, University of Miskolc
Supervisor (2020-)
- Doctoral School of Environmental Sciences, Eötvös Loránd University
Supervisor (2017-)
- Pál Kitaibel Doctoral School of Environmental Science, University of West Hungary
Academic staff member (2016), supervisor (2015-2017)

Committees

- Faculty of Informatics, Eötvös Loránd University, Teaching Committee, member 2017-2020
- Faculty of Informatics, Eötvös Loránd University, Learning Committee, member 2017-2020
- Habilitation reviewer: 1 candidate (University of West Hungary, 2016)

Professional Institutions

- Scientific Association for Mechanical Engineering, Szombathely Department, member 2021-
- Hungarian Academy of Sciences, VI. Section of Engineering Sciences, Committee on Theoretical and Applied Mechanics, Member of Scientific Committee, 2021-
- Hungarian Academy of Sciences, VI. Section of Engineering Sciences, Committee on Theoretical and Applied Mechanics, Member of public body, 2015-
- Order of Quebec Engineers, Junior member, 2009-2012

Journals – review work

- AIAA Journal of Thermophysics and Heat Transfer
- Cold Regions Science and Technology
- Electrical Engineering
- Energies
- Energy Engineering
- Engineering Failure Analysis
- Engineering Review
- Engineering Structures
- European Transactions on Electrical Power
- Gép (Machine) – Hungarian with English title and abstract
- IEEE Sensors Journal
- IEEE Transactions on Power Delivery
- IET Generation, Transmission & Distribution
- IET Science, Measurement & Technology
- International Journal of Heat and Fluid Flow
- International Journal of Multiphase Flow
- International Journal of Pressure Vessels and Piping
- Journal of Aerospace Engineering
- Journal of Flow Measurement and Instrumentation
- Journal of Mechanical Science and Technology
- Journal of Vibration and Control
- Journal of Wind Engineering and Industrial Aerodynamics
- Mathematics and Computers in Simulation
- Mathematical Problems in Engineering
- Mechanics & Industry
- Mesterséges Intelligencia (Artificial Intelligence) - Hungarian with English title and abstract

- Pollack Periodica
- Shock and Vibration
- The European Physical Journal Plus
- The Open Civil Engineering Journal
- The Open Electrical & Electronic Engineering Journal

Conferences

- Session moderator, 19th International Workshop on Atmospheric Icing of Structures, Montreal, QC, Canada, 2022 (Session 9: De-icing Techniques)
- Member of Advisory Committee and Keynote Speaker, International Conference on Robotics, Control and Computer Vision, National Institute of Technology, Uttarakhand, India in association with ELTE Eötvös Loránd University, Budapest, Hungary, 2022.
- Review work, 14th Conference on Sustainable Development of Energy, Water and Environment Systems, Dubrovnik, Croatia, 2019
- Review work, 3rd South East European Conference on Sustainable Development of Energy, Water and Environment Systems, Novi Sad, Serbia, 2018 (2 papers)
- Review work, 1st Latin American Conference on Sustainable Development of Energy, Water and Environment Systems, Rio de Janeiro, Brazil, 2018 (1 paper)
- Review work, 6th International and 43rd National Conference on Fluid Mechanics and Fluid Power, Allahabad, India, 2016 (3 papers)
- Review work, 8th International Symposium on Cable Dynamics, Paris, France, 2009
- Review work, ASME Design Engineering Technical Conferences, Las Vegas, NV, USA, 2007
- Member of Reviewing Committee, 11th International Workshop on Atmospheric Icing of Structures, Montreal, QC, Canada, 2005 (reviewer of 3 papers)
- Section co-chairman, 11th World Congress in Mechanism and Machine Science, Tianjin, China, 2004 (Section: Nonlinear Oscillations 2)
- Review work, ASME Design Engineering Technical Conferences, Pittsburgh, PA, USA, 2001 (2 papers)

Scientific activities for students

- Organization of scientific competitions for students (annually or biannually between 2008 and 2012) University of Quebec at Chicoutimi
- Judge for Scientific Conference of Students Canada-Wide Science Fair, Saguenay, QC, Canada, 2006

GRANTS, AWARDS, PRIZES

Research grants

- 2022** Principal investigator (extended till 2023)
Subject: Vibration control of transmission lines (participation in international scientific conference)
Source: *Mecenatúra (Mec_R_21) project no. 141334* from the National Research, Development and Innovation Fund
- 2022 – 2025** Pillar leader (Pillar 3)
Title of project: Protection of high integrity national services and industrial infrastructures using cybersecurity, technological and legislative instruments (principal investigator: Tamás Kozsik)
Pillar 3: Security and data protection in the fields of material technology, industry 4.0 and energy engineering
Source: *Project no. TKP2021-NVA-29* with the support provided by the Ministry of Innovation and Technology of Hungary from the National Research, Development and Innovation Fund
- 2017 – 2020** Workgroup coordinator (Workgroup 5), extended till 2021
Title of project: EFOP-3.6.1-16-2016-00018 – Improving the role of research + development + innovation in the higher education through institutional developments assisting intelligent specialization in Sopron and Szombathely (principal investigator: Tibor Polgár)
Workgroup 5: Innovative processing technologies, applications in energy engineering, and wide-range microstructure investigation techniques (workgroup leader: Jurij Sidor)

Source: *EFOP-3.6.1-16 within Széchenyi 2020 program*

2007 – 2009 Principal investigator
Title of project: Ice and snow shedding from conductors
Source: *Institutional Research Support Program*, University of Quebec at Chicoutimi

2006 – 2007 Principal investigator
Title of project: Ice shedding from bundled conductors
Source: *Institutional Research Support Program*, University of Quebec at Chicoutimi

Awards, prizes

2018 – 2019 **Bolyai** + Higher Education Research Scholarship (within New National Excellence Program)

2016 – 2019 János **Bolyai** Research Scholarship

2002 **Rubik** Foundation (scholarship for foreign study)

1999 – 2000 **Gruber-Fűzy** study scholarship (2 semesters)

1997 2nd prize
Scientific Conference of Students
Faculty of Mechanical Engineering, Budapest University of Technology and Economics
Title: *Computation and Measurement of One Dimensional Gas Oscillations (in Hungarian)*

1997 **Scientific Society of Mechanical Engineering** award for M.Sc. thesis

1997 **Faculty of Mechanical Engineering** study scholarship
Budapest University of Technology and Economics

1997 2nd prize
National Scientific Conference of Students, Engineering Sciences section
Title: *Dynamics of Balancing (in Hungarian)*

1996 – 1997 **Hungarian Republic** distinguished scholarship (2 semesters)

1996 1st prize
Scientific Conference of Students
Faculty of Mechanical Engineering, Budapest University of Technology and Economics
Title: *Dynamics of Balancing (in Hungarian)*

PUBLICATIONS

Book, book chapter

1. Andó, M., Bak, Á. Biroszné Mórítz Zs., Horváth B., Jánosi E., Kollár L. E., Sidor J., Duális gépészmérnöki képzés Szombathelyen, az ELTE Informatikai Karán, in: Kováts G., Derényi A., *A magyar felsőoktatási duális képzés első évtizede. Eredmények, kockázatok, lehetőségek*, NFKK Kötetek 6., Budapesti Corvinus Egyetem, pp. 75-92, 2023. <http://unipub.lib.uni-corvinus.hu/8268/>
2. Kollar, L. E., Farzaneh, M., Modeling and Experimental Study of Variation of Droplet Cloud Characteristics in a Low-Speed Horizontal Icing Wind Tunnel, Chapter 3 in: *Wind Tunnels: Aerodynamics, Models and Experiments*, Nova Science Publishers, inc., Hauppauge, NY, pp. 93-127, 2011.
Available (open access item): https://www.novapublishers.com/catalog/product_info.php?products_id=25802

Reviewed journal papers

1. Dorogi, D., Konstantinidis, E., Kollár, L. E., Baranyi, L., Aspects of vortex-induced in-line vibration at low Reynolds numbers: simulation and prediction by a reduced-order model, *Journal of Fluids and Structures*, accepted in 2023. IF (2022): 3.6
2. Moawad, A., Kollár, L. E., Bognár, A., Borbély, T., Lajber, K., Buckling of interphase spacers during vibration following ice shedding, *Cold Regions Science and Technology* 213 (2023) 103904. <https://doi.org/10.1016/j.coldregions.2023.103904>, IF (2022): 4.1
3. Al-Najjar, I. F., Jálics, K., Kollár, L. E., Modelling Beam Vibration under Non-Uniform and Non-Stationary Transverse Load, *Multidisciplinary Sciences*, Vol. 13, No. 1, pp. 42-51, 2023. <https://doi.org/10.35925/j.multi.2023.1.5>
4. Kollár, L. E., Dynamics of digitally controlled forced vibration of suspended cables, *Meccanica* 58, pp. 25-42, 2023. <https://doi.org/10.1007/s11012-022-01627-0>, IF (2022): 2.7
5. Rotich, I. K., Kollár, L. E., Numerical Simulation of the Performance of an Asymmetrical Airfoil under Extreme Weather Conditions, *Mérnöki és Informatikai Megoldások / Engineering and IT Solutions* 2022.2, pp. 19-29, 2022.
6. Al-Najjar, I. F., Kollár, L. E., Jálics, K., Analytical and Experimental Study of Beam Bending Vibration, *Design of Machines and Structures*, Vol. 12, No. 1, pp. 14-24, 2022. <https://doi.org/10.32972/dms.2022.009>
7. Csöre, B., Kollár, L. E., Fenyvesi, D., Jeges szárnyalak aerodinamikai vizsgálata (Aerodynamic Study of Iced Airfoils, in Hungarian), *Mérnöki és Informatikai Megoldások / Engineering and IT Solutions* 2022.1, pp. 19-27, 2022.
8. Horváth, T., Borbély, T., Lajber, K., Kollár, L. E., Lapátprofil rezgéseinek vizsgálata mérésrel és végeselem szimulációval (Experimental Study and Finite Element Modelling of Blade Vibrations, in Hungarian), *Mérnöki és Informatikai Megoldások / Engineering and IT Solutions* 2022.1, pp. 28-36, 2022.
9. Kollár, L. E., Ice-shedding-induced vibration of conductors with active vibration control, *Cold Regions Science and Technology* 196 (2022) 103504. <https://doi.org/10.1016/j.coldregions.2022.103504>, IF (2022): 4.1
10. Jánoki, A., Safranyik, F., Kollár, L. E., Sodronykötél anyagmodelljének kidolgozása (Elaboration of the Material Model of Conductors, in Hungarian), *Mérnöki és Informatikai Megoldások / Engineering and IT Solutions* 2021.1, pp. 22-28, 2021.
11. Lajber, K., Borbély, T., Kollár, L. E., Szilvágyi, M., Tesztberendezés távvezetékéről leszakadó jég keltette lengések modellezésére (Equipment for Experimental Modelling of Vibrations Following Ice Shedding from Transmission Lines, in Hungarian), *Mérnöki és Informatikai Megoldások / Engineering and IT Solutions* 2021.1, pp. 55-61, 2021.
12. Meng, Y., Kollár, L. E., Dynamic analysis of electrical vibration absorbers for suspended cables, *Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science*, Vol. 235(24), pp. 7445-7455, 2021. <https://doi.org/10.1177/09544062211005801>, IF (2021): 1.758

13. Kollár, L. E., Digital Control of Cable Vibration with Time Delay, *International Journal of Dynamics and Control*, Vol. 9, pp. 1223-1235, 2021. <https://doi.org/10.1007/s40435-020-00711-1>
14. Rubio, L., Ibeas, A., Kollár, L. E., On the sliding mode control for precision machining, *Mérnöki és Informatikai Megoldások / Engineering and IT Solutions* 2020.2, pp. 32-41, 2020.
15. Rubio, L. Kollár, L. E., Investigating wind-turbine structural behavior under icing conditions, *EnginSoft Newsletter* 17(1), pp. 30-33, 2020.
16. Kollár, L. E., Mishra, R., Inverse Design of Wind Turbine Blade Sections for Operation under Icing Conditions, *Energy Conversion and Management*, Vol. 180, pp. 844-858, 2019. IF (2019): 8.208
17. Kollar, L. E., Lucas, G. P., Meng, Y., Reconstruction of Velocity Profiles in Axisymmetric and Asymmetric Flows using an Electromagnetic Flow Meter, *Measurement Science and Technology*, Vol. 26, No. 5, 12pp, 2015. IF (2015): 1.492
18. Alghadhi, M., Ball, A., Kollar, L. E., Mishra, R., Asim, T., Fuel Consumption Tabulation in Laboratory Conditions, *International Research Journal of Electronics & Computer Engineering*, Vol. 1(2), pp. 10-14, 2015. (presented at the *International Research Conference on Engineering, Science and Management (IRCESM 2014)*, pp. 176-180, Dubai, United Arab Emirates)
19. Al-Ghadhi, M., Ball, A., Kollar, L. E., Mishra, R., Asim, T., Drive Cycle Optimisation for Pollution Reduction, *International Journal of Environmental Science and Development*, Vol. 6, No. 10, pp. 727-731, 2015. (presented at the *2nd International Conference on Petroleum and Petrochemical Engineering (ICPPE 2015)*, Dubai, United Arab Emirates)
20. Alghadhi, M., Ball, A., Kollar, L. E., Mishra, R., Asim, T., Fuel Consumption Tabulation in Laboratory Conditions, *International Journal of Recent Development in Engineering and Technology*, Vol. 2, No. 4, pp. 29-38, 2014. (extended version of the paper presented at the *International Research Conference on Engineering, Science and Management (IRCESM 2014)*, pp. 176-180, Dubai, United Arab Emirates)
21. Kollar, L. E., Lucas, G. P., Zhang, Z., Proposed Method for Reconstructing Velocity Profiles Using a Multi-Electrode Electromagnetic Flow Meter, *Measurement Science and Technology*, Vol. 25, No. 7, 14pp, 2014. IF (2014): 1.433
22. Hefny, R. M. H., Kollar, L. E., Farzaneh, M., Modelling the Influence of Periodic Loads on Snow Detachment from Suspended Cables, *Cold Regions Science and Technology*, Vol. 101, pp. 31-39, 2014. IF (2014): 1.367
23. Asim, T., Mishra, R., Kollar, L. E., Pradhan, S. R., Optimal Sizing and Life-Cycle Cost Modelling of Pipelines Transporting Multi-Sized Solid-Liquid Mixtures, *International Journal of Pressure Vessels and Piping*, Vol. 113, pp. 40-48, 2014. IF (2014): 1.283
24. Kollar, L. E., Mishra, R., Asim, T., Particle size effects on optimal sizing and lifetime of pipelines transporting multi-sized solid-liquid mixtures, *Procedia CIRP* 11, pp. 317-322, 2013. (presented at the *Proc. of 2nd International Through-life Engineering Services Conference*, Cranfield, UK)
25. Banitalebi Dehkordi, H., Farzaneh, M., Van Dyke, P., Kollar, L. E., The effect of droplet size and liquid water content on ice accretion and aerodynamic coefficients of tower legs, *Atmospheric Research*, Vol. 132-133, pp. 362-374, 2013. IF (2013): 2.421
26. Kollar, L. E., Farzaneh, M., Modeling Sudden Ice Shedding from Conductor Bundles, *IEEE Transactions on Power Delivery*, Vol. 28, No. 2, pp. 604-611, 2013. IF (2013): 1.657
27. Kermani, M., Farzaneh, M., Kollar, L. E., The Effects of Wind Induced Conductor Motion on Accreted Atmospheric Ice, *IEEE Transactions on Power Delivery*, Vol. 28, No. 2, pp. 540-548, 2013. IF (2013): 1.657
28. Kollar, L. E., Farzaneh, M., Van Dyke, P., Modeling Ice Shedding Propagation on Transmission Lines with or without Interphase Spacers, *IEEE Transactions on Power Delivery*, Vol. 28, No. 1, pp. 261-267, 2013. IF (2013): 1.657
29. Asim, T., Mishra, R., Kollar, L. E., Ubbi, K., Optimisation of a Horizontal Capsule Transporting Pipeline carrying Cylindrical Capsules, *Journal of Physics: Conference Series* 364, 2012. (presented at the *25th International Congress on Condition Monitoring and Diagnostic Engineering*, Huddersfield, UK)

30. Hefny, R. M. H., Kollar, L. E., Farzaneh, M., Simulation of Snow Adhesion on Real Scale Lines, *International Journal of Mechanical Engineering and Mechatronics*, Vol. 1, No. 1, pp. 102-108, 2012.
31. Hefny, R. M. H., Kollar, L. E., Farzaneh, M., Experimental Investigation of Dynamic Force on the Performance of Wet Snow Shedding, *International Journal of Mechanical Engineering and Mechatronics*, Vol. 1, No. 1, pp. 72-79, 2012.
32. Kermani, M., Farzaneh, M., Kollar, L. E., Estimation of stresses in atmospheric ice during aeolian vibration of power transmission lines, *Journal of Wind Engineering and Industrial Aerodynamics*, Vol. 98, No. 10-11, pp. 592-599, 2010. IF (2010): 1.213
33. Kollar, L. E., Farzaneh, M., Wind-Tunnel Investigation of Icing of an Inclined Cylinder, *Int. J. of Heat and Mass Transfer*, Vol. 53, No. 5-6, pp. 849-861, 2010. IF (2010): 1.899
34. Kollar, L. E., Olqma, O., Farzaneh, M., Natural Wet-Snow Shedding from Overhead Cables, *Cold Regions Science and Technology*, Vol. 60, No. 1, pp. 40-50, 2010. IF (2010): 1.488
35. Kollar, L. E., Farzaneh, M., Modeling the Dynamic Effects of Ice Shedding on Spacer Dampers, *Cold Regions Science and Technology*, Vol. 57, No. 2-3, pp. 91-98, 2009. IF (2009): 1.416
36. Kollar, L. E., Farzaneh, M., Spray Characteristics of Artificial Aerosol Clouds in a Low-Speed Icing Wind Tunnel, *Atomization and Sprays*, Vol. 19, No. 4, pp. 389-407, 2009. IF (2009): 0.754
37. Kollar, L. E., Farzaneh, M., Vibration of Bundled Conductors Following Ice Shedding, *IEEE Transactions on Power Delivery*, Vol. 23, No. 2, pp. 1097-1104, 2008. IF (2008): 1.289
38. Kollar, L. E., Farzaneh, M., Modeling the Evolution of Droplet Size Distribution in Two-Phase Flows, *Int. J. of Multiphase Flow*, Vol. 33, No. 11, pp. 1255-1270, 2007. IF (2007): 1.137
39. Karev, A. R., Farzaneh, M., Kollar, L. E., Measuring Temperature of the Ice Surface during Formation by Using Infrared Instrumentation, *Int. J. of Heat and Mass Transfer*, Vol. 50, No. 3-4, pp. 566-579, 2007. IF (2007): 1.500
40. Kollar, L. E., Farzaneh, M., Karev A. R., Modeling Droplet Size Distribution near a Nozzle Outlet in an Icing Wind Tunnel, *Atomization and Sprays*, Vol. 16, No. 6, pp. 673-686, 2006. IF (2006): 0.415
41. Kollar, L. E., Turi, J., Numerical Stability Analysis in Respiratory Control System Models, *Electronic Journal of Differential Equations*, Conference 12, pp. 65-78, 2005. (presented at the 2004 Conference on Differential Equations and Applications in Mathematical Biology, Nanaimo, BC, Canada, 2004) (<http://ejde.math.txstate.edu> or <http://ejde.math.unt.edu>) IF (2005): 0.404
42. Kollar, L. E., Farzaneh, M., Karev A. R., Modeling Droplet Collision and Coalescence in an Icing Wind Tunnel and the Influence of these Processes on Droplet Size Distribution, *Int. J. of Multiphase Flow*, Vol. 31, No. 1, pp. 69-92, 2005. IF (2005): 1.306
43. Kollar, L. E., Stepan, G., Turi, J., Dynamics of Piecewise Linear Discontinuous Maps, *Int. J. of Bifurcation and Chaos*, Vol. 14, No. 7, pp. 2341-2351, 2004. IF (2004): 1.019
44. Kollar, L. E., Stepan, G., Turi, J., Dynamics of Delayed Piecewise Linear Systems, *Electronic Journal of Differential Equations*, Conference 10, pp. 163-185, 2003. (presented at the Fifth Mississippi State Conference on Differential Equations and Computational Simulations, Starkville, MS, USA, 2001) (<http://ejde.math.swt.edu> or <http://ejde.math.unt.edu>) IF (2003): 0.300
45. Kollar, L. E., Somlo, J., Stepan, G., Szabályozott egyensúlyozási rendszer periodikus megoldásai, *Gépgyártástechnológia*, No. 10, pp. 23-27, 2000. (presented in English: Periodic Responses of a Controlled Balancing System, *Proc. of VIIIth International Conference on the Theory of Machines and Mechanisms*, pp. 309-314, Liberec, Czech Republic, 2000.)
46. Kollar, L. E., Stepan, G., Hogan, S. J., Sampling Delay and Backlash in Balancing Systems, *Periodica Polytechnica Ser. Mech. Eng.*, Vol. 44, No. 1, pp. 77-84, 2000.
47. Stepan, G., Kollar, L. E., Balancing with Reflex Delay, *Mathematical and Computer Modelling*, Vol. 31, pp. 199-205, 2000. IF (2000): 0.387

Conference papers in proceedings

1. Ammar, M., Kollár, L. E., Modelling Cable Vibration Following Load Removal, *Proc. of the 16th World Congress of the International Federation for the Promotion of Mechanism and Machine Science*, accepted in 2023.
2. Moawad, A., Kollár, L. E., Bognár, A., Dynamic Load on Interphase Spacers Due to Ice Shedding, *Proc. of 19th International Workshop on Atmospheric Icing of Structures*, Montreal, Canada, Paper No. 037, 2022.
3. Rubio, L. Kollár, L. E., Multi-phase Fluid Structure Interaction for 3D Wind Turbine Blades, *Proc. of 35th International CAE Conference*, Vicenza, Italy, 2019.
4. Kollár, L. E., Digital Control of Cable Vibration Due to Periodic Excitation, *Proc. of 7th International Scientific Conference on Advances in Mechanical Engineering*, Debrecen, Hungary, 2019.
5. Rubio, L., Kollár, L. E., Analysis of fluid structure interaction for 3D model of wind turbine, *Proc. of 2nd Workshop on Innovative Materials Processing, Applications in Energy Engineering and System Control*, Szombathely, Hungary, 2019.
6. Costa, H. E. A., Kollár, L. E., Motion of Wind Turbine Blades Exposed to Non-Uniform Wind Velocity Distribution, *Proc. of 2nd Workshop on Innovative Materials Processing, Applications in Energy Engineering and System Control*, Szombathely, Hungary, 2019.
7. Santos, F. O. S., Kollár, L. E., Influence of blade shape on icing of wind turbine blades, *Proc. of 2nd Workshop on Innovative Materials Processing, Applications in Energy Engineering and System Control*, Szombathely, Hungary, 2019.
8. Carvalho, C. M., Kollár, L. E., Modelling of Transmission Line Insulators and Towers Exposed to Dynamic Effects, *Proc. of 2nd Workshop on Innovative Materials Processing, Applications in Energy Engineering and System Control*, Szombathely, Hungary, 2019.
9. Kollár, L. E., Santos, F. O. S., Consideration of Icing in the Design of Wind Turbine Blade Sections, *Proc. of 18th International Workshop on Atmospheric Icing of Structures*, Reykjavik, Iceland, Paper No. 36, 2019.
10. Meng, Y., Kollár, L. E., Proposed active control methodologies for aeolian vibration of suspended cables under icing conditions, *Proc. of 18th International Workshop on Atmospheric Icing of Structures*, Reykjavik, Iceland, Paper No. 30, 2019.
11. Kollár, L. E., Aerodynamic Performance Degradation of Wind Turbine Blades due to Ice Accretion, *Proc. of Workshop on Innovative Materials Processing, Applications in Energy Engineering and System Control*, Szombathely, Hungary, 2019.
12. Meng, Y., Kollár, L. E., Active vibration absorber for aeolian vibration control on suspended cables, *Proc. of Workshop on Innovative Materials Processing, Applications in Energy Engineering and System Control*, Szombathely, Hungary, 2019.
13. Kollár, L. E., Mishra, R., Icing of Wind Turbine Blades Obtained by an Inverse Design Process, *Digital Proc. 12th Conference on Sustainable Development of Energy, Water and Environment Systems*, SDEWES2017.0806, 1-8, Dubrovnik, Croatia, 2017.
14. Kollár, L. E., Mishra, R., Anuj, J., Inverse Design of Blade Shapes for Vertical Axis Wind Turbines, *Proc. 6th Int. and 43rd National Conf. on Fluid Mechanics and Fluid Power*, Paper No. 26, Allahabad, India, 2016.
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