

Publications of Johannes Gerstmayr

Dissertation:

J. Gerstmayr, A solution strategy for elasto-plastic multibody systems and related problems, Ph.D. thesis, University of Linz, May 2001, 124 pages.

1. A.K. Belyaev, E. Blumenschein, S. Blumenschein, J. Gerstmayr, Vibrational conductivity approach to vibration in a power plant subjected to aircraft impact, Transactions of the 14th Int. Conf. On Struct. Mech. In Reactor Techn. (SmiRT 14), Lyon, France, pp. 331-338, 1997.
2. H.J. Holl, H. Irschik, U. Pichler, J. Gerstmayr, Maysel's formula in nonlinear structural mechanics. In Thermal Stresses 99, J.J. Skrzypek and R.B. Hetnarski, eds., pp. 119-122, Society of Thermal Stresses, 1999.
3. J. Gerstmayr, H. Irschik, Dynamic Analysis of Machine Elements Exposed to Plasticity and Damage, in P.E. O'Donoghue, J.N. Flavin, eds., Proceedings of the Symposium on Trends and Applications of Mathematics to Mechanics (STAMM 2000), Elsevier Paris (2000), pp. 86-92.
4. J. Gerstmayr, H. Irschik, The Elasto-Plastic Pendulum with Geometric Stiffening, Zeitschrift für Angewandte Mathematik und Mechanik (ZAMM), Vol 81, Supplement 2, 2001.
5. H. Irschik, U. Pichler, J. Gerstmayr, H.J. Holl, Maysel's formula of thermoelasticity extended to anisotropic materials at finite strain, Int. J. of Sol. And Struct., Vol. 38, pp. 9479-9492, 2001.
6. J. Gerstmayr, H.J. Holl, and H. Irschik, Development of plasticity and damage in vibrating structural elements performing guided rigid-body motions, Arch. Appl. Mech. vol. 71 (2001), pp. 135-145.
7. J. Gerstmayr. Computational methods for control of elasto-plastic structures with rigid-body degrees of freedom. In Proceedings of the summerschool on actual problems in mechanics (APM'2000), St. Petersburg, Russia, 2001, pp. 164-176.
8. J. Gerstmayr, H. Irschik, Control of an elasto-plastic pendulum, Proceedings of DETC'01, ASME 2001, VIB-21600, Pittsburg, Pennsylvania, 2001.
9. J. Gerstmayr, H. Irschik, Vibrations of the elasto-plastic pendulum, Int. J. Nonlin. Mech., Vol. 38, pp.111-122, 2003.
10. J. Gerstmayr, An adaptive method for the dynamics of elasto-plastic multibody systems, J. Struct. & Mach., accepted for publication.
11. J. Gerstmayr, Selected Topics in Structronic and Mechatronic Systems, Computational Methods for Elasto-Plastic Multibody Systems, ed A. Belyaev and A. Guran, Series on Stability, Vibration and Control of Systems, Series B - Vol. 3, World Scientific, accepted for publication.

12. Irschik, H.; Gerstmayr, J.: Computational Methods for Elasto-Plastic Multibody Dynamic Systems, Proceedings of the Fifth World Congress on Computational Mechanics (WCCM V), July 7-12, 2002, Vienna, Austria, Editors: Mang, H.A.; Rammerstorfer, F.G.; Eberhardsteiner, J., Publisher: Vienna University of Technology, Austria, ISBN 3-9501554-0-6, <http://wccm.tuwien.ac.at>
13. Gerstmayr, J.; Schöberl, J.: A 3D Finite Element Approach to Flexible Multibody Systems, Proceedings of the Fifth World Congress on Computational Mechanics (WCCM V), July 7-12, 2002, Vienna, Austria, Editors: Mang, H.A.; Rammerstorfer, F.G.; Eberhardsteiner, J., Publisher: Vienna University of Technology, Austria, ISBN 3-9501554-0-6, <http://wccm.tuwien.ac.at>