



## Professor Jacek Chróscielewski

See:

[https://www.researchgate.net/profile/Jacek\\_Chroscielewski](https://www.researchgate.net/profile/Jacek_Chroscielewski)

<https://scholar.google.com/citations?user=J693yPQAAAAJ&hl=en>

Faculty of Civil and Environmental Engineering, Department of Mechanics of Materials and Structures Gdansk University of Technology

### Selected Publications:

L.-P. Nolte and J. Chróscielewski, Large rotation elastic-plastic analysis of flexible shells, in: C. Taylor et al. (eds.), Numerical Methods for Non-Linear Problems, Vol. 3, (Pineridge Press, Swansea, UK, 1986), pp. 391-404.

J. Chróscielewski and Cz. Branicki, MINIMOD – Pakiet podprogramów wspomagający badanie zagadnień nieliniowych, w: Mater. IX Konf. „Metody Komputerowe w Mechanice”, tom 1, Kraków-Rybro, 1989), str. 131-138.

Chróscielewski J, Makowski J, Stumpf H. Genuinely resultant shell finite elements accounting for geometric and material non-linearity. International Journal for Numerical Methods in Engineering 1992; 35:63-94.

J. Chróscielewski, J. Makowski and W.M. Smolenowski, On the interpolation in the SO(3) group, in Proc. XI Polish Conf. on Computer Methods in Mechanics, Kielce 1993, Vol. I, 187-194.

Chróscielewski J, Makowski J, Stumpf H. Finite elements for irregular nonlinear shells. Bochum: Ruhr-Universität, Mitt. Inst. f. Mech. Nr 96; 1994.

J. Chróscielewski, (1996), Family of C0 finite elements in six-parameter non-linear theory of shells (in Polish), Habilitation Thesis, Politechnika Gdanska, Zeszyty Naukowe Politechniki Gdanskiej, 540

J. Chróscielewski, J. Makowski and H. Stumpf, Finite element analysis of smooth, folded and multi-shell structures. Comput. Methods Appl. Mech. Engrg. 141(1997) 1–46.

Chrósćcielewski J, Klosowski P, Schmidt R (1997) Modelling and FE-analysis of large deflection shape and vibration control of structures via piezoelectric layers. In: Gabbert U, Fortschritt-Berichte VDI (eds) Smart mechanical systems—adaptronics, Serie 11, Nr. 244. VDI-Verlag, Düsseldorf, pp 53–62

J. Chrośćcielewski, P. Klosowski, and R. Schmidt. Numerical simulation of geometrically nonlinear flexible beam control via piezoelectric layers. ZAMM · Z. Angew. Math. Mech., 77 (Supplement 1):S69–S70, 1997

J. Chrośćcielewski, P. Klosowski, and R. Schmidt. Theory and numerical simulation of nonlinear vibration control of arches with piezoelectric distributed actuators. Machine Dynamics Problems, 20:73–90, 1998

Chrósćcielewski J, Schmidt R (1999) Nonlinear static and transient response of smart beams and shells with piezoelectric layers. In: Anderson GL, Garg D, Wang KW (eds) Proceedings of the fourth ARO workshop on smart structures, Penn State, State College, Pennsylvania, Session 8: modeling and characterisation issues. U.S. Army Research Office, USA

Jacek Chrośćcielewski, Jerzy Makowski and Wojciech Pietraszkiewicz, “Large overall motion of flexible branched shell structures”, publisher and date not given in the pdf file. Most recent reference is dated 1999.

J. Chrósćcielewski, J. Makowski and W. Pietraszkiewicz, Nonlinear dynamics of flexible shell structures. Comput. Assisted Mech. Engrg. Sci. 9(2002) 341–357.

Izabela Lubowiecka and Jacek Chrósćcielewski, On dynamics of flexible branched shell structures undergoing large overall motion using finite elements. Computers Structures 80(2002) 891–898.

J. Chrósćcielewski, J. Makowski, and W. Pietraszkiewicz, Statics and Dynamics of Multifold Shells: Non-linear Theory and Finite Element Method (in Polish) (Inst. Fundam. Technol. Prob. PAsci., Warsaw, 2004), Section 3.6.

W. Pietraszkiewicz, J. Chrósćcielewski, J. Makowski, “On dynamically and kinematically exact theory of shells”, W. Pietraszkiewicz, C. Szymczak (Eds.), Shell Structures: Theory and Applications, Taylor & Francis, London (2006), pp. 163-167

Chrośćcielewski, J. and Witkowski, W., “Four-node semi-EAS element in six-field nonlinear theory of shells.”, International Journal for Numerical Methods in Engineering, Vol. 68, No. 11, December 2006, pp. 1137-1179

Jacek Chrośćcielewski, Izabela Lubowiecka, Czesław Szymczaka and Wojciech Witkowski, “On some aspects of torsional buckling of thin-walled I-beam columns”, Computers & Structures, Vol. 84, Nos. 29-30, November 2006, pp.1946-1957

Jacek Chrósćcielewski, Violetta Konopinska, and Wojciech Pietraszkiewicz, “On modeling and non-linear elasto-plastic analysis of thin shells with deformable junctions”, (publisher and date not given in the “pdf” file. The most recent reference is dated 2006.)

Jacek Chrośćcielewski, Wojciech Pietraszkiewicz and Wojciech Witkowski, “On shear correction factors in the non-linear theory of elastic shells”, International Journal of Solids and Structures, Vol. 47, Nos. 25-26, December 2010, pp. 3537-3545

Chrósćcielewski, J., Kreja, I., Sabik, A., Witkowski, W.: Modeling of composite shells in 6-parameter nonlinear theory with drilling degree of freedom. Mech. Adv. Mater. Struct. 18, 403–419 (2011)

Chrósćcielewski J, Witkowski W (2011) FEM analysis of Cosserat plates and shells based on some constitutive relations. Z Angew Math Mech 91(5):400–410

Chrósćcielewski J, Konopinśka V, Pietraszkiewicz W. On modelling and non-linear elasto-plastic analysis of thin shells with deformable junctions. Z angew Math Mech 2011;91(6):477-484.

Karol Daszkiewicz, Jacek Chrośćcielewski and Wojciech Witkowski, “Geometrically nonlinear analysis of functionally graded shells based on 2-D Cosserat constitutive model”, Engineering Transactions, Vol. 62, No. 2, pp 109-130, 2014

Burzynśki S., Chrósćcielewski J., Witkowski W., Elastoplastic material law in 6-parameter nonlinear shell theory, [in:] Shell Structures: Theory and Applications, Vol. 3, 377–380, W. Pietraszkiewicz and J. Górski [Eds.], CRC Press, London, 2014.

Burzynśki S., Chrósćcielewski J., Witkowski W., Elastoplastic law of Cosserat type in shell theory with drilling rotation, Mathematics and Mechanics of Solids, DOI: 10.1177/1081286514554351

P. Iwicki, J. Tejchman and J. Chrośćcielewski, “Dynamic FE simulations of buckling process in thin-walled cylindrical metal silos”, Thin-Walled Structures, Vol. 84, pp. 344-359, November 2014

Stanisław Burzynski, Jacek Chrośćcielewski, Karol Daszkiewicz and Wojciech Witkowski, “Geometrically nonlinear FEM analysis of FGM shells based on neutral physical surface approach in 6-parameter shell theory”,

Composites Part B: Engineering, Vol. 107, pp 203-213, December 2015

J. Chroscielewski, A. Sabik, B. Sobczyk and W. Witkowski, "Nonlinear FEM 2D failure onset prediction of composite shells based on 6-parameter shell theory", Thin-Walled Structures, Vol. 105, pp 207-219, August 2016

J. Chroscielewski, M. Miskiewicz, L. Pyrzowski, B. Sobczyk, K. Wilde, A novel sandwich footbridge – practical application of laminated composites in bridge design and in situ measurements of static response, Compos Part B Eng, 126 (2017), pp. 153-161

Stanislaw Burzynski, Jacek Chroscielewski, Karol Daszkiewicz and Wojciech Witkowski, "Elastoplastic nonlinear FEM analysis of FGM shells of Cosserat type", Composites Part B: Engineering, Vol. 154, pp 478-491, 1 December 2018

Jacek Chroscielewski, Agnieszka Sabik, Bartosz Sobczyk and Wojciech Witkowski, "2-D constitutive equations for orthotropic Cosserat type laminated shells in finite element analysis", Composites Part B: Engineering, Vol. 165, pp 335-353, 15 May 2019

Jacek Chróscielewski, Francesco dell'Isola, Victor A. Eremeyev and Agnieszka Sabik, "On rotational instability within the nonlinear six-parameter shell theory", International Journal of Solids and Structures, Vol. 196-197, pp 179-189, July 2020