

# Dr eng. arch. Janek Kozicki

## List of publications and conference proceedings

### Publications in journals from ISI Master Journal List<sup>1</sup> (high impact factor)

- [1] J. KOZICKI, J. KOZICKA, Human Friendly Architectural Design for a small Martian Base. *Advances in Space Research*, (accepted, in print), **2011**. 27 KBN points
- [2] Ł. WIDULIŃSKI, J. KOZICKI, J. TEJCHMAN, D. LEŚNIEWSKA, Discrete simulations of shear zone patterning in sand in earth pressure problems of a retaining wall. *International Journal of Solids and Structures*, Vol 48, pages 1191–1209, **2011**. 32 KBN points
- [3] J. KOZICKI, J. TEJCHMAN, Effect of steel fibres on concrete behavior in 2D and 3D simulations using lattice model. *Archives of Mechanics*, Vol. 62, pages 465–492, **2010**. 27 KBN points
- [4] J. KOZICKI, F. V. DONZÉ, Yade–open DEM: an open–source software using a discrete element method to simulate granular material *Engineering Computations*, Vol. 26 Issue 7, pages 786–805, **2009**. 27 KBN points
- [5] J. KOZICKI, F. V. DONZÉ, A new open-source software developed for numerical simulations using discrete modeling methods. *Computer Methods in Applied Mechanics and Engineering*, Vol. 197, pages 4429–4443, <http://dx.doi.org/10.1016/j.cma.2008.05.023>, **2008**. 32 KBN points
- [6] J. KOZICKI, J. TEJCHMAN, Modelling of fracture process in concrete using a novel lattice model. *Granular Matter*, Vol. 10, pages 377–388, **2008**. 32 KBN points
- [7] J. KOZICKI, J. TEJCHMAN, Effect of aggregate structure on fracture process in concrete using 2D lattice model. *Archives of Mechanics*, Vol. 59, No 4–5, pages 365–384, **2007**. 27 KBN points
- [8] J. KOZICKI, J. TEJCHMAN, Application of a cellular automaton to simulations of granular flow in silos. *Granular Matter*, Vol. 7, No 1, pages 45–54, **2005**. 32 KBN points

### Books

- [9] J. TEJCHMAN, J. KOZICKI, Experimental and Theoretical Investigations of Steel-Fibrous Concrete. *Springer Series in geomechanics & geoengineering*, **2010**. 24 KBN points
- [10] J. TEJCHMAN, J. KOZICKI, Steel-fibrous concrete, experiments and a numerical model. *Gdansk University of Technology Publishers*, **2009**. 24 KBN points
- [11] J. KOZICKI, Application of Discrete Models to Describe the Fracture Process in Brittle Materials. *Gdansk University of Technology*, PhD thesis, **2007**.

### Publications in peer-reviewed journals

- [12] Ł. WIDULIŃSKI, J. KOZICKI, J. TEJCHMAN, Numerical simulations of triaxial test with sand using DEM *Archives of Hydro–Engineering and Environmental Mechanics*, Vol. 56, No 3–4, pages 149–172, **2009**. 6 KBN points
- [13] J. KOZICKI, J. TEJCHMAN, Experimental investigations of strain localization in concrete using Digital Image Correlation (DIC) technique. *Archives of Hydro–Engineering and Environmental Mechanics*, Vol. 54, No 1, pages 3–24, **2007**. 6 KBN points
- [14] J. KOZICKI, J. TEJCHMAN, 2D Lattice Model for Fracture in Brittle Materials. *Archives of Hydro–Engineering and Environmental Mechanics*, Vol. 53, No 2, pages 71–88, **2006**. 6 KBN points
- [15] J. KOZICKI, J. TEJCHMAN, Simulations of Behavior of Granular Bodies using a Lattice Gas Automaton. *Archives of Hydro–Engineering and Environmental Mechanics*, Vol. 52, No 1, pages 21–37, **2005**. 6 KBN points

---

<sup>1</sup>Institute for Scientific Information Master Journal List also known as „Philadelphian List”, see <http://scientific.thomson.com/mjl/>

- [16] J. KOZICKI, J. TEJCHMAN, Simulations of flow pattern in silos with a cellular automaton, part I. *Task Quarterly, Gdansk University of Technology*, No 1, **2005**. <sup>9</sup> KBN points
- [17] J. KOZICKI, J. TEJCHMAN, Simulations of flow pattern in silos with a cellular automaton, part II. *Task Quarterly, Gdansk University of Technology*, No 2, **2005**. <sup>9</sup> KBN points
- [18] J. KOZICKI, Discrete lattice model used to describe the fracture process of concrete. *Discrete Element Group for Risk Mitigation Annual Report 1, Grenoble University of Joseph Fourier, France*, pages 95–101, **2005**.
- [19] J. KOZICKI, J. TEJCHMAN, Application of a cellular automata model to granular flow. *Task Quarterly, Gdansk University of Technology*, Vol. 6, No 3, pages 429–436, **2002**. <sup>9</sup> KBN points
- [20] J. KOZICKI, J. TEJCHMAN, Simulations of granular flow in silos with a cellular automata model. *International Journal of Storing, Handling and Processing Powder*, pages 267–275, **2001**.

### Conference materials

- [21] J. KOZICKI, Building a prototype of a Martian base in Poland, an architectural design overview and progress report 38<sup>th</sup> *Committee on Space Research Scientific Assembly (COSPAR 2010)*, Bremen, Germany, 18-25 July, **2010**.
- [22] J. KOZICKI, J. KOZICKA, Architectural concepts of Martian bases built: of domes, around greenhouses and into slopes - the human aspect and the technology 38<sup>th</sup> *Committee on Space Research Scientific Assembly (COSPAR 2010)*, Bremen, Germany, 18-25 July, **2010**.
- [23] J. MEYSSONNIER, C. BRUTEL-VUILMET, B. CHAREYRE, F. DARVE, F. FLIN, L. GILLIBERT, A-S. HASAN, J. KOZICKI, B. LESAFFRE, W. LÜDWIG, F. NICOT, A. PHILLIP, S. ROLLAND, Experimental micromechanics of dry snow 4<sup>th</sup> *International Center for Applied Computational Mechanics, Scale transition for plastic crystalline and microstructured materials: from experiment to numerical modeling (ICACM 2010)*, Paris, France, 2-4 June, **2010**.
- [24] L. GILLIBERT, F. FLIN, J. KOZICKI, S. ROLLAND, W. LUDWIG, D. COEURJOLLY, B. CHAREYRE, A. PHILIP, B. LESAFFRE, J. MEYSSONNIER, Curvature-driven grain segmentation of snow 3<sup>rd</sup> *International Workshop on 3D Imaging, Analysis, Modeling and Simulation of Macroscopic Properties (W3D 2010)*, Fontainebleau, France, 20-21 April, **2010**.
- [25] Ł. WIDULIŃSKI, J. TEJCHMAN, J. KOZICKI, Discrete Simulations of Shear Zones in Sand in Earth Pressure Problems of a Retaining Wall 37<sup>th</sup> *Solid Mechanics Conference (SOLMECH 2010)*, Warsaw, Poland, 6-10 September, **2010**.
- [26] Ł. WIDULIŃSKI, J. KOZICKI, J. TEJCHMAN, Modeling of the Behaviour of Granular Bodies using DEM with Contact Moments 6<sup>th</sup> *International Conference on Micromechanics of Granular Media, Powders and Grains (P&G 2009)*, Golden, Colorado, USA, 13-17 July, **2009**.
- [27] J. KOZICKI, J. TEJCHMAN, Numerical simulations of the behavior of granular bodies using DEM *International Symposium on Computational Geomechanics, (ComGeo 2009)*, Juan-les-Pins, France, 29 April 1 May, **2009**.
- [28] J. KOZICKI, J. TEJCHMAN, Modeling of Fracture Process in Fibrous Concrete Using a Lattice Model X *International Conference on Computational Plasticity, (ECCOMAS, COMPLAS X 2009)*, Barcelona, Spain, 2-4 September, **2009**.
- [29] Ł. WIDULIŃSKI, J. KOZICKI, J. TEJCHMAN, Numerical simulations of a triaxial test in granular bodies using discrete particle simulations with contact moments *Proc. Conf. Computer Methods in Mechanics (CMM 2009)*, Zielona Góra, Poland, 18-21 May, **2009**.
- [30] J. KOZICKI, J. TEJCHMAN, Simulation of fracture process in fibrous concrete *Proc. Conf. Computer Methods in Mechanics (CMM 2009)*, Zielona Góra, Poland, 18-21 May, **2009**.
- [31] J. KOZICKI, Architectural design proposal for a Martian base to continue NASA Mars Design Reference Mission 37<sup>th</sup> *Committee on Space Research Scientific Assembly (COSPAR 2008)*, Montreal, Canada, 13-20 July, **2008**.

- [32] J. KOZICKI, Gravity in the gamma ray spectrum 37<sup>th</sup> *Committee on Space Research Scientific Assembly (COSPAR 2008)*, Montreal, Canada, 13-20 July, **2008**.
- [33] J. KOZICKI, J. TEJCHMAN, Simulation of fracture process in concrete with steel fibres. 6<sup>th</sup> *International Conference on Analytical Models and New Concepts in Concrete and Masonry Structures (AMCM 2008)*, Lodz, Poland, 9–11 June, **2008**.
- [34] J. KOZICKI, J. TEJCHMAN, Application of DEM to describe concrete behaviour under compression and tension. 6<sup>th</sup> *International Conference on Analytical Models and New Concepts in Concrete and Masonry Structures (AMCM 2008)*, Lodz, Poland, 9–11 June, **2008**.
- [35] J. KOZICKI, J. TEJCHMAN, Modeling of fracture process in concrete elements including steel fibres using a novel lattice model. 5<sup>th</sup> *European Congress on Computational Methods in Applied Sciences and Engineering (ECCOMAS 2008)*, Venice, Italy, 30 June – 4 July **2008**.
- [36] J. KOZICKI, J. TEJCHMAN, Simulation of fracture process in concrete elements with steel fibres using discrete lattice model. 36<sup>th</sup> *Solid Mechanics Conference (SOLMECH 2008)*, Gdansk, Poland September 9–12 **2008**.
- [37] J. KOZICKI, J. TEJCHMAN, B. CHAREYRE, Comparative modeling of shear localization in granular bodies using a discrete and continuum approach. 36<sup>th</sup> *Solid Mechanics Conference (SOLMECH 2008)*, Gdansk, Poland September 9–12 **2008**.
- [38] J. BOBINSKI, J. KOZICKI, J. TEJCHMAN, Investigations of size effects in concrete under bending. *Int. Conf. on Computational Fracture and Failure of Materials and Structures (CFRAC 2007)*, page 107, Nantes, 11–13 June **2007**.
- [39] J. KOZICKI, J. TEJCHMAN, Simulations of fracture processes in concrete using a 3D lattice model. *Int. Conf. on Computational Fracture and Failure of Materials and Structures (CFRAC 2007)*, pages 62–63, Nantes, 11–13 June **2007**.
- [40] J. KOZICKI, J. TEJCHMAN, Investigations of size effect in tensile fracture of concrete using a lattice model. *Proc. Conf. Modelling of Heterogeneous Materials with Applications in Construction and Biomedical Engineering (MHM 2007)*, pages 246–249, Prague, 24–27 June **2007**.
- [41] J. KOZICKI, J. TEJCHMAN, Effect of aggregate density on fracture process in concrete using 2D discrete lattice model. *Proc. Conf. Computer Methods in Mechanics (CMM 2007)*, Lodz-Spala, 19-22 June **2007**.
- [42] J. KOZICKI, J. TEJCHMAN, Modelling of a direct shear test in granular bodies with a continuum and a discrete approach. *Proc. Conf. Computer Methods in Mechanics (CMM 2007)*, Lodz-Spala, 19-22 June **2007**.
- [43] J. KOZICKI, J. TEJCHMAN, Modelling of fracture process in brittle materials using a lattice model. *Computational Modelling of Concrete Structures, EURO-C (eds.: G. Meschke, R. de Borst, H. Mang and N. Bicanic), Taylor and Francis*, pages 139–145, **2006**.
- [44] J. KOZICKI, J. TEJCHMAN, Lattice type fracture model for brittle materials. 35<sup>th</sup> *Solid Mechanics Conference (SOLMECH 2006)*, pages 215–216, Krakow, 4–8 September **2006**.
- [45] M. NIEDOSTATKIEWICZ, J. KOZICKI, J. TEJCHMAN, Measurements of strain localization in granular and brittle specimens using a digital image correlation technique. 35<sup>th</sup> *Solid Mechanics Conference (SOLMECH 2006)*, pages 93–94, Krakow, 4–8 September **2006**.
- [46] J. KOZICKI, J. TEJCHMAN, Simulations of granular flow with a lattice-gas automaton. *Proc. Conf. Computer Methods in Mechanics (CMM 2005)*, Czestochowa, Poland, June 21–24 **2005**.
- [47] J. KOZICKI, J. TEJCHMAN, Simulations of fracture in concrete elements using a discrete lattice model. *Proc. Conf. Computer Methods in Mechanics (CMM 2005)*, Czestochowa, Poland, June 21–24 **2005**.
- [48] J. KOZICKI, J. TEJCHMAN, Simulation of the crack propagation in concrete with a discrete lattice model. *Proc. Conf. Analytical Models and New Concepts in Concrete and Masonry Structures (AMCM 2005)*, Gliwice, Poland, June 12–14 **2005**.
- [49] J. KOZICKI, J. TEJCHMAN, Study of Fracture Process in Concrete using a Discrete Lattice Model. *CURE Workshop, Simulations in Urban Engineering*, Gdańsk, September 20–22 **2004**.

- [50] J. KOZICKI, J. TEJCHMAN, Application of an Improved Cellular Automaton for Granular Flow. *CURE Workshop, Simulations in Urban Engineering*, Gdańsk, September 20–22 **2004**.
- [51] J. KOZICKI, J. TEJCHMAN, Discrete methods to describe the behaviour of quasi-brittle and granular materials. *Proc. Conf. Computer Methods in Mechanics (CMM 2003)*, pages 195–197, Gliwice 6 July **2003**.
- [52] J. KOZICKI, J. TEJCHMAN, Cellular automata model to describe granular flow in silos. *PTSK Symulacja w Badaniach i Rozwoju*, pages 214–219, 30 August – 1 September **2003**.
- [53] J. KOZICKI, J. TEJCHMAN, Discrete methods to describe the behaviour of quasi-brittle and granular materials. *16th Engineering Mechanics Conference, University of Washington, Seattle*, CD-ROM, July 16–18 **2003**.
- [54] J. KOZICKI, J. TEJCHMAN, Lattice method to describe the behaviour of quasi-brittle materials. *CURE Workshop, Effective use of building materials*, pages 131–134, Sopot, October 8-9 **2003**.

### **Conference materials in polish language**

- [55] J. KOZICKI, J. KOZICKA, Stacja na Marsie. *VIII Symposium Polskiego Towarzystwa Transplantacyjnego*, Opera Nova Bydgoszcz, Poland, 11-13 September **2008**.
- [56] J. KOZICKI, J. TEJCHMAN, Modelowanie przepływu silosowego przy zastosowaniu nowego modelu automatu komorkowego. *XIII Konferencja Naukowo-Techniczna, Zelbetowe i sprężone zbiorniki na materiały sypkie i ciecze*, CD-ROM, Wrocław, 26–29 September **2007**.
- [57] J. KOZICKI, M. NIEDOSTATKIEWICZ, Zastosowanie automatu komorkowego do opisu przepływu materiałów sypkich w silosach. *XII Konferencja Naukowo-Techniczna, Zelbetowe i sprężone zbiorniki na materiały sypkie i ciecze*, pages 115–122, Krakow, 19–21 November **2003**.
- [58] J. KOZICKI, J. TEJCHMAN, Zastosowanie automatów komorkowych do opisu przepływów materiałów sypkich w silosach. *Materiały XXXVII Zjazdu Fizyków Polskich*, pages 1116–1120, Gdansk, 15–18 September **2003**.