## Jacek Tejchman

## List of Publications by Year

 in descending orderSource: https:/|exaly.com/author-pdf/1563351/publications.pdf
Version: 2024-02-01

| $\begin{gathered} 180 \\ \text { papers } \end{gathered}$ | $\begin{aligned} & \text { 4,805 } \\ & \text { citations } \end{aligned}$ | 87888 <br> 38 <br> h-index | $\begin{gathered} 128289 \\ 60 \\ \text { g-index } \end{gathered}$ |
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| $\begin{gathered} 186 \\ \text { all docs } \end{gathered}$ | $\begin{gathered} 186 \\ \text { docs citations } \end{gathered}$ | $\begin{gathered} 186 \\ \text { times ranked } \end{gathered}$ | $2172$ <br> citing authors |

Experimental and numerical investigations on RC beams with stirrups scaled along height or length.

3D DEM simulations of monotonic interface behaviour between cohesionless sand and rigid wall of

Effect of gas content in macropores on hydraulic fracturing in rocks using a fully coupled DEM/CFD
4 approach. International Journal for Numerical and Analytical Methods in Geomechanics, 2021, 45,
$5 \quad$ Finite element analysis on failure of reinforced concrete corner in sewage tank under opening

8 Comparative 3D DEM simulations of sandâ "structure interfaces with similarly shaped clumps versus spheres with contact moments. Acta Geotechnica, 2021, 16, 3533-3554.

9 Micro-modelling of shear localization during quasi-static confined granular flow in silos using DEM.
$9 \quad$ Computers and Geotechnics, 2021, 134, 104108.

Modelling of full-scale silo experiments with flow correcting inserts using material point method
(MPM) based on hypoplasticity. Powder Technology, 2021, 392, 375-392.
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| 11 | Numerical analyses of novel prefabricated structural wall panels in residential buildings based on laboratory tests in scale 1:1. European Journal of Environmental and Civil Engineering, 2020, 24, 1450-1482. | 2.1 | 5 |
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| 12 | Simulations of hydro-fracking in rock mass at meso-scale using fully coupled DEM/CFD approach. Acta Geotechnica, 2020, 15, 297-324. | 5.7 | 39 |
| 13 | Early prediction of macrocrack location in concrete, rocks and other granular composite materials. Scientific Reports, 2020, 10, 20268. | 3.3 | 7 |

14 Contact force network evolution in active earth pressure state of granular materials: photo-elastic tests and DEM. Granular Matter, 2020, 22, 1.
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Comparative DEM calculations of fracture process in concrete considering real angular and
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35 artificial spherical aggregates. Engineering Fracture Mechanics, 2020, 239, 107309.

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Numerical modelling of shear localization in granular bodies using MPM and non-local
hypoplasticity. AIP Conference Proceedings, 2020, , .
and Heterogeneous, Quasi-Brittle Granular Materials. Frontiers in Materials, 2020, 7, .
Improved energy management technique in pipe-embedded wall heating/cooling system in residential
buildings. Applied Energy, 2019, 254, 113711.
Experimental investigations of damage evolution in concrete during bending by cont
scanning. Materials Characterization, $2019,154,40-52$.
Numerical analysis of size effect in RC beams scaled along height or length using
Experimental study of shear strength and failure mechanisms in RC beams scaled along height or
length. Engineering Structures, 2018, 157, 203-223.

## 26 A three-dimensional meso-scale approach to concrete fracture based on combined DEM with X-ray $11 / 4 \mathrm{CT}$

 images. Cement and Concrete Research, 2018, 107, 11-29.$$
\begin{aligned}
& 29 \text { Experimental and numerical investigations of concrete behaviour at meso-level during quasi-static } \\
& \text { splitting tension. Theoretical and Applied Fracture Mechanics, 2018, } 96,720-739 \text {. }
\end{aligned}
$$

Investigation of micro-structural phenomena at aggregate level in concretes using DEM. EPJ Web of

| 41 | DEM investigations of two-dimensional granular vortex- and anti-vortex-structures during plane strain compression. Granular Matter, 2016, 18, 1. | 2.2 | 6 |
| :---: | :---: | :---: | :---: |
| 42 | Experimental Investigations of Fracture Process in Concrete by Means of Xâ€ $\mathrm{F}_{\text {ay }}$ Microâ€ $€$ omputed Tomography. Strain, 2016, 52, 26-45. | 2.4 | 97 |
| 43 | Application of linear buckling sensitivity analysis to economic design of cylindrical steel silos composed of corrugated sheets and columns. Engineering Failure Analysis, 2016, 70, 105-121. | 4.0 | 16 |
| 44 | Two-dimensional simulations of concrete fracture at aggregate level with cohesive elements based on X-ray $11 / 4$ CT images. Engineering Fracture Mechanics, 2016, 168, 204-226. | 4.3 | 88 |
| 45 | Buckling analyses of metal cylindrical silos containing bulk solids during filling. Particulate Science and Technology, 2016, 34, 461-469. | 2.1 | 2 |
| 46 | Comparison of continuous and discontinuous constitutive models to simulate concrete behaviour under mixedâ€mode failure conditions. International Journal for Numerical and Analytical Methods in Geomechanics, 2016, 40, 406-435. | 3.3 | 26 |
| 47 | A coupled constitutive model for fracture in plain concrete based on continuum theory with non-local softening and eXtended Finite Element Method. Finite Elements in Analysis and Design, 2016, 114, 1-21. | 3.2 | 26 |
| 48 | Stability analyses of a cylindrical steel silo with corrugated sheets and columns. Steel and Composite Structures, 2016, 20, 147-166. | 1.3 | 11 |
| 49 |  | 2.2 | 132 |



DEM analysis of micro-structural events within granular shear zones under passive earth pressure

Simulation of buckling process of cylindrical metal silos with flat sheets containing bulk solids.
Thin-Walled Structures, 2015, 93, 122-136.

| 55 | Modelling of concrete fracture at aggregate level using FEM and DEM based on X-ray $11 / 4$ CT images of internal structure. Engineering Fracture Mechanics, 2015, 147, 13-35. | 4.3 | 145 |
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| 56 | Stability of cylindrical steel silos composed of corrugated sheets and columns based on FE analyses versus Eurocode 3 approach. Engineering Failure Analysis, 2015, 57, 444-469. | 4.0 | 20 |
| 57 | Effect of bulk solid on strength of cylindrical corrugated silos during filling. Journal of Constructional Steel Research, 2015, 115, 1-17. | 3.9 | 17 |
| 58 | Computational simulations of concrete behaviour under dynamic conditions using elasto-visco-plastic model with non-local softening. Computers and Concrete, 2015, 15, 515-545. | 0.7 | 15 |
| 59 | Discrete Modelling of Micro-structural Phenomena in Granular Shear Zones. Springer Series in Geomechanics and Geoengineering, 2015, , 7-12. | 0.1 | 1 |
| 60 | Experimental investigations of size effect in reinforced concrete beams failing by shear. Engineering Structures, 2014, 58, 63-78. | 5.3 | 77 |
| 61 | Application of inserts for suppression of coupled dynamicâ $€$ "acoustic effects during confined granular flow in silos. Advanced Powder Technology, 2014, 25, 398-407. | 4.1 | 5 |
| 62 | Dynamic FE simulations of buckling process in thin-walled cylindrical metal silos. Thin-Walled Structures, 2014, 84, 344-359. | 5.3 | 32 |
| 63 | Discrete simulations of a triaxial compression test for sand by DEM. International Journal for Numerical and Analytical Methods in Geomechanics, 2014, 38, 1923-1952. | 3.3 | 82 |
| 64 | FE analysis of size effects in reinforced concrete beams without shear reinforcement based on stochastic elasto-plasticity with non-local softening. Finite Elements in Analysis and Design, 2014, 88, 25-41. | 3.2 | 31 |
| 65 | Evaluation of strength, deformability and failure mode of composite structural insulated panels. Materials \& Design, 2014, 54, 1068-1082. | 5.1 | 39 |

66 An elasto-plastic constitutive model with non-local softening and viscosity to describe dynamic concrete behaviour. , 2014, , 127-137.

69 Application of DIC Technique to Concreteâ€"Study on Objectivity of Measured Surface Displacements. Experimental Mechanics, 2013, 53, 1545-1559.

Mesoscopic Modelling of Strain Localization in Plain Concrete. Springer Series in Ceomechanics and
81 Continuous and Discontinuous Modelling of Fracture in Concrete Using FEM. Springer Series in
Geomechanics and Geoengineering, 2013, , .$0.1 \quad 24$
Experimental Study on Shear Localisation in Granular Materials Within Combined Strain and Stress
Field. Strain, 2012, 48, 430-444.

Effect of grain roughness on strength, volume changes, elastic and dissipated energies during quasi-static homogeneous triaxial compression using DEM. Granular Matter, 2012, 14, 457-468.
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Confined granular flow in silos with inserts â€" Full-scale experiments. Powder Technology, 2012, 222,
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94 Effect of grain crushing on shear localization in granular bodies during plane strain compression.
International Journal for Numerical and Analytical Methods in Geomechanics, 2012, 36, 1909-1931.
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95 Determination of representative volume element in concrete under tensile deformation. Computers
and Concrete, $2012,9,35-50$.
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96 A Two-Scale Numerical Approach to Granular Systems / Wybrane Problemy Szacowania
Prawdopodobienstwa Zawodu W Sytuacji Pozaru. Archives of Civil Engineering, 2011, 57, 313-330.
Measurements and Calculations of the Width of the Fracture Process Zones on the Surface of
Notched Concrete Beams. Strain, 2011, 47, e319.

$98 \quad$| Experimental Analysis of Shear Zone Patterns in Cohesionless for Earth Pressure Problems Using |
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| Particle Image Velocimetry. Strain, 2011, 47, 218-231. |


$99 \quad$| Failure of cylindrical steel silos composed of corrugated sheets and columns and repair methods |
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| using a sensitivity analysis. Engineering Failure Analysis, 2011, 18, 2064-2083. |

FE analysis of reinforced concrete corbels with enhanced continuum models. Finite Elements in
Analysis and Design, 2011, 47, 1066-1078.
101 Modeling of bearing capacity of footings on sand within stochastic microâ€polar hypoplasticity.
International Journal for Numerical and Analytical Methods in Geomechanics, 2011, 35, 226-243.

Discrete simulations of shear zone patterning in sand in earth pressure problems of a retaining wall.
102 International Journal of Solids and Structures, 2011, 48, 1191-1209.
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Quantitative estimation of volume changes of granular materials during silo flow using X-ray
103 tomography. Chemical Engineering and Processing: Process Intensification, 2011, 50, 59-67.
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3D buckling analysis of a cylindrical metal bin composed of corrugated sheets strengthened by vertical stiffeners. Thin-Walled Structures, 2011, 49, 947-963.
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Finite element study of patterns of shear zones in granular bodies during plane strain compression.

Acta Geotechnica, 2010, 5, 95-112. $\quad$\begin{tabular}{l}
Boundary effects on behaviour of granular material during plane strain compression. European <br>
Journal of Mechanics, A/Solids, 2010, 29, 18-27.

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three-point bending. European Journal of Mechanics, A/Solids, 2010, 29, 746-760.
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116 hypoplasticity. International Journal for Numerical and Analytical Methods in Geomechanics, 2009, 33, 117-142.

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FE analysis of failure behaviour of reinforced concrete columns under eccentric compression.
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135 Effect of a characteristic length on crack spacing in a reinforced concrete bar under tension.Mechanics Research Communications, 2007, 34, 460-465.
Investigations of Porosity Changes during Granular Silo Flow Using Electrical Capacitance
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Tomography (ECT) and Particle Image Velocimetry (PIV). Particle and Particle Systems Characterization,
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139 FE-investigations of a deterministic and statistical size effect in granular bodies within a micro-polar
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| 145 | Effect of fluctuation of current void ratio on the shear zone formation in granular bodies within micro-polar hypoplasticity. Computers and Geotechnics, 2006, 33, 29-46. | 4.7 | 31 |
| 146 | FE-studies on Shear Localization in an Anistropic Micro-polar Hypoplastic Granular Material. Granular Matter, 2006, 8, 205-220. | 2.2 | 38 |
| 147 | FE Analysis of Contractant Shear Zones in Loose Granular Materials. Granular Matter, 2006, 9, 49-67. | 2.2 | 9 |
| 148 | Micro-Polar Effects under Monotonic and Cyclic Shearing. Springer Proceedings in Physics, 2006, , 193-207. | 0.2 | 4 |
| 149 | Fe-simulations of a direct and a true simple shear test within a polar hypoplasticity. Computers and Geotechnics, 2005, 32, 1-16. | 4.7 | 36 |
| 150 | Application of a cellular automaton to simulations of granular flow in silos. Granular Matter, 2005, 7, 45-54. | 2.2 | 43 |
| 151 | Modeling of a cyclic plane strain compression-extension test in granular bodies within a polar hypoplasticity. Granular Matter, 2005, 7, 227-242. | 2.2 | 9 |
| 152 | FE Analysis of Shearing of Granular Bodies in a Direct Shear Box. Particulate Science and Technology, 2005, 23, 229-248. | 2.1 | 6 |
| 153 | FE-Simulations of a Direct Wall Shear Box Test. Soils and Foundations, 2004, 44, 67-81. | 3.1 | 15 |
| 154 | Effect of cyclic shearing on shear localisation in granular bodies. Granular Matter, 2004, 5, 201-212. | 2.2 | 23 |
| 155 | Influence of a characteristic length on shear zone formation in hypoplasticity with different enhancements. Computers and Geotechnics, 2004, 31, 595-611. | 4.7 | 67 |
| 156 | Comparative FE-studies of shear localizations in granular bodies within a polar and non-local hypoplasticity. Mechanics Research Communications, 2004, 31, 341-354. | 1.8 | 16 |
| 157 | Numerical simulations of localization of deformation in quasi-brittle materials within non-local softening plasticity. Computers and Concrete, 2004, 1, 433-455. | 0.7 | 32 |
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165 Bedding effects in bulk solids in silos: experiments and a polar hypoplastic approach. Thin-Walled ..... 5.3 ..... 12
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173 Numerical simulation of shear band formation with a polar hypoplastic constitutive model.Computers and Geotechnics, 1996, 19, 221-244.Experimental and numerical study of sand-steel interfaces. International Journal for Numerical and
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Analytical Methods in Geomechanics, 1995, 19, 513-536. 174
175 Numerical Study on sand and steel interfaces. Mechanics Research Communications, 1994, 21, 109-119. ..... 1.8 ..... 7Numerical simulation of shear band patterning in biaxial compression tests. Mechanics Research1.82Communications, 1993, 20, 15-24.2.112976, 201-212.```

