

About theory, measurements and simulations of short fiber reinforced concrete

Herrmann, Heiko General Assembly of the Marie Curie Alumni Association : 4 to 5 March 2016, Venice, Italy : book of abstracts 2016 / p. 30 : ill https://www.mariecuriealumni.eu/sites/default/files/mcaa_book_of_abstracts_april_2016.pdf

An orthotropic material model for steel fibre reinforced concrete based on the orientation distribution of fibres

Eik, Marika; Puttonen, Jari; **Herrmann, Heiko** Composite structures 2015 / p. 324-336 : ill
<https://doi.org/10.1016/j.compstruct.2014.11.018> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Analysis and 3D visualisation of microstructured materials on custom-built virtual reality environment =

Virtuaalkeskonna arendamine mikrostruktuursete materjalide analüüsiks ja kolmemõõtmeliseks visualiseerimiseks
Pastorelli, Emiliano 2015 <https://digi.lib.ttu.ee/i/22533> https://www.ester.ee/record=b4483740*est

Analysis of ship wake transformation in the coastal zone using time-frequency methods

Torsvik, Tomas; **Herrmann, Heiko**; **Didenkulova, Irina**; **Rodin, Artem** Proceedings of the Estonian Academy of Sciences 2015 / p. 379-388 : ill https://artiklid.elnet.ee/record=b2740572*est <https://doi.org/10.3176/proc.2015.3S.08> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Analysis of short fibres orientation in steel fibre-reinforced concrete (SFRC) by X-ray tomography

Suuronen, Jussi-Petteri; **Eik, Marika**; **Herrmann, Heiko** Journal of materials science 2013 / p. 1358-1367 : ill
<https://doi.org/10.1007/s10853-012-6882-4> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

A case study on the spatial variability of strength in a SFRSCC slab and its correlation with fibre orientation

Kartofelev, Dmitri; **Goidyk, Oksana**; **Herrmann, Heiko** Proceedings of the Estonian Academy of Sciences 2020 / p. 298-310 : ill
<https://doi.org/10.3176/proc.2020.4.03> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

CFD comparison of the influence of casting of samples on the fiber orientation distribution

Goidyk, Oksana; **Heinštein, Mark**; **Herrmann, Heiko** Fibers 2023 / art. 6 <https://doi.org/10.3390/fib11010006> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Colloquium 582 : Short Fibre Reinforced Cementitious Composites and Ceramics : book of abstracts, March 20-22, 2017

2017 http://www.ester.ee/record=b4658990*est

Comments on mesoscopic continuum physics : evolution equation for the distribution function and open questions

Herrmann, Heiko; **Engelbrecht, Jüri** Proceedings of the Estonian Academy of Sciences 2012 / p. 71-74 : ill
https://artiklid.elnet.ee/record=b2479921*est

Comparison of 3D model generation using Structure-from-Motion by open-source software and validation with LiDAR for revealing changes in eroding coastal cliffs

Zaitseva-Pärnaste, Inga; **Herrmann, Heiko** Journal of coastal research 2024 / p. 1054-1058 <https://doi.org/10.2112/JCR-SI113-206.1>

Comparison of measured fiber orientation in fiber concrete with predictions by CFD simulations

Herrmann, Heiko; **Goidyk, Oksana**; **Braunbrück, Andres**; **Marjapuu, Rasmus-Richard**; **Tuisk, Tanel** M2D2017 : proceedings of the 7th International Conference on Mechanics and Materials in Design : (Albufeira/Portugal, 11-15 June 2017) 2017 / p. 1245-1246 : ill https://paginas.fe.up.pt/~m2d/Proceedings_M2D2017/data/papers/Book.pdf

Complex materials analysis and visualization through virtual reality environments

Pastorelli, Emiliano; **Herrmann, Heiko** Proceedings of the 8th Annual Conference of the Estonian National Doctoral School in Information and Communication Technologies : December 5-6, 2014, Rakvere 2014 / p. 99-102 : ill

A constitutive function for the heat flux in short-fiber-reinforced composites

Herrmann, Heiko Journal of non-equilibrium thermodynamics 2015 / p. 257-263 <https://doi.org/10.1515/jnet-2015-0005> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

A constitutive model for linear hyperelastic materials with orthotropic inclusions by use of quaternions

Herrmann, Heiko Continuum mechanics and thermodynamics 2021 / p. 1375-1384 <https://doi.org/10.1007/s00161-021-00979-4> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

DC-conductivity testing combined with photometry for measuring fibre orientations in SFRC

Eik, Marika; **Löhmus, Karl**; **Tigasson, Martin**; **Listak, Madis**; **Puttonen, Jari**; **Herrmann, Heiko** Journal of materials science 2013 / p. 3745-3759 : ill <https://doi.org/10.1007/s10853-013-7174-3> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Diffusion of oriented particles in porous media

Haber, René; **Prehl, Janett**; **Herrmann, Heiko**; **Hoffmann, Karl Heinz** Physics letters A 2013 / p. 2840-2845 : ill
<https://doi.org/10.1016/j.physleta.2013.08.036> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Fiber orientation in the bottom layer of a small fiber concrete plate

Herrmann, Heiko; Tuisk, Tanel; Braunbrück, Andres Colloquium 582 : Short Fibre Reinforced Cementitious Composites and Ceramics : book of abstracts, March 20-22, 2017 2017 / p. [14-15] : ill http://www.ester.ee/record=b4658990*est

An improved constitutive model for short fibre reinforced cementitious composites (SFRC) based on the orientation tensor

Herrmann, Heiko Generalized continua as models for classical and advanced materials 2016 / p. 213-227 https://doi.org/10.1007/978-3-319-31721-2_10 [Article collection metrics at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

The influence of fibre orientation in self-compacting concrete on 4-point bending strength

Herrmann, Heiko; Goidyk, Oksana; Naar, Hendrik; Tuisk, Tanel; Braunbrück, Andres Proceedings of the Estonian Academy of Sciences 2019 / p. 337-346 : ill http://www.kirj.ee/32397/?tpl=1061&c_tpl=1064 <https://doi.org/10.3176/proc.2019.3.12> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Influence of the fiber orientations on the fracture of fiber concrete

Herrmann, Heiko; Braunbrück, Andres; Marjapuu, Rasmus-Richard; Tuisk, Tanel M2D2017 : proceedings of the 7th International Conference on Mechanics and Materials in Design : (Albufeira/Portugal, 11-15 June 2017) 2017 / p. 631-632 : ill https://paginas.fe.up.pt/~m2d/Proceedings_M2D2017/data/papers/Book.pdf

Influence of the flow of fresh fiber concrete on the fiber orientations = Vedela kiudbetooni voolamise mõju kiudude orientatsioonile

Goidyk, Oksana 2025 https://www.ester.ee/record=b5735473*est <https://digikogu.taltech.ee/et/Item/4386e968-45ab-475a-940d-05f08b0c5268> <https://doi.org/10.23658/taltech.12/2025>

Influence of the flow of self-compacting steel fiber reinforced concrete on the fiber orientations, a report on work in progress

Herrmann, Heiko; Goidyk, Oksana; Braunbrück, Andres Short fibre reinforced cementitious composites and ceramics 2019 / p. 97-110 https://doi.org/10.1007/978-3-030-00868-0_7 [Article collection metrics at Scopus](#) [Article at Scopus](#)

An Initial report on the effect of the fiber orientation on the fracture behavior of steel fiber reinforced self-compacting concrete

Herrmann, Heiko; Braunbrück, Andres; Tuisk, Tanel; Goidyk, Oksana; Naar, Hendrik Short fibre reinforced cementitious composites and ceramics 2019 / p. 33-50 https://doi.org/10.1007/978-3-030-00868-0_3 [Article collection metrics at Scopus](#) [Article at Scopus](#)

Initial results of local strength analysis of a fiber concrete plate by 4-point bending tests

Goidyk, Oksana; Herrmann, Heiko 13th International Conference : Modern Building Materials, Structures and Techniques, May 16–17, 2019, Lithuania 2019 / p. 306-310 : ill <https://doi.org/10.3846/mbmst.2019.116>

Methods for fibre orientation analysis of X-ray tomography images of steel fibre reinforced concrete (SFRC)

Herrmann, Heiko; Pastorelli, Emiliano; Kallonen, Aki; Suuronen, Jussi-Petteri Journal of materials science 2016 / p. 3772-3783 : ill <https://doi.org/10.1007/s10853-015-9695-4> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

On the influence of the rheological boundary conditions on the fibre orientations in the production of steel fibre reinforced concrete elements

Herrmann, Heiko; Lees, Aarne Proceedings of the Estonian Academy of Sciences 2016 / p. 408-413 : ill <https://doi.org/10.3176/proc.2016.4.08> https://artiklid.elnet.ee/record=b2808646*est [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

OpenFOAM simulation of fiber concrete flow

Herrmann, Heiko 82nd International Scientific Conference of the University of Latvia : Use of High Performance Computing in Numerical Simulations : Book of Abstracts 2024 / p. 10 <https://doi.org/10.22364/luszk.82.hpc.ab>

Orientation of short steel fibres in concrete : measuring and modelling = Metallist lühikiudude orientatsioon betoonis : mõõtmine ja modelleerimine

Eik, Marika 2014 <https://digi.lib.ttu.ee/i/2965> https://www.ester.ee/record=b3079293*est

Phenomenological and numerical modelling of short fibre reinforced cementitious composites

Herrmann, Heiko; Eik, Marika; Berg, Viktoria; Puttonen, Jari Meccanica 2014 / p. 1985-2000 : ill <https://doi.org/10.1007/s11012-014-0001-3> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Preface

Engelbrecht, Jüri; Herrmann, Heiko; Van, Peter Proceedings of the Estonian Academy of Sciences 2008 / 3, p. 117

Preface

Herrmann, Heiko; Schnell, Jürgen Short fibre reinforced cementitious composites and ceramics 2019 / p. v-vi

Preparation of SFRC testing specimen simulated by CFD

Goidyk, Oksana; Heinštein, Mark; Herrmann, Heiko Proceedings of Cement Based Composites Congress 2022 / p. 56-63

Random walks of oriented particles on fractals

Haber, René; Prehl, Janett; Hoffmann, Karl Heinz; Herrmann, Heiko Journal of physics A : mathematical and theoretical 2014 / p. 1-14 : ill <https://doi.org/10.1088/1751-8113/47/15/155001> Journal metrics at Scopus Article at Scopus Journal metrics at WOS Article at WOS

Raytraced images for testing the reconstruction of fibre orientation distributions

Eik, Marika; Herrmann, Heiko Proceedings of the Estonian Academy of Sciences 2012 / p. 128-136 : ill

Scalable medical viewer for virtual reality environments

Ricciardi, Francesco; Pastorelli, Emiliano; De Paolis, Lucio Tommaso; Herrmann, Heiko Augmented and Virtual Reality : second International Conference, AVR 2015, Lecce, Italy, August 31 - September 3, 2015 : proceedings 2015 / p. 233-243 : ill https://doi.org/10.1007/978-3-319-22888-4_17 Conference Proceedings at Scopus Article at Scopus Conference Proceedings at WOS Article at WOS

Short fibre reinforced cementitious composites and ceramics

2019 <https://doi.org/10.1007/978-3-030-00868-0>

A small-scale, low-budget semi-immersive virtual environment for scientific visualization and research

Pastorelli, Emiliano; Herrmann, Heiko 2013 International Conference on Virtual and Augmented Reality in Education 2013 / p. 14-22 <https://doi.org/10.1016/j.procs.2013.11.003> Conference Proceedings at Scopus Article at Scopus Article at WOS

Some comments on the theory of short fibre reinforced materials

Herrmann, Heiko; Eik, Marika Proceedings of the Estonian Academy of Sciences 2011 / 3, p. 179-183 : ill

Stress-strain relations for steel fiber reinforced concrete based on the orientation tensor of the fibers

Herrmann, Heiko European Mechanics of Materials Conference (EMMC15) : September 7th-9th, 2016, Brussels 2016 / [1] p

Tensor series expansion of a spherical function for the use in constitutive theory of materials containing orientable particles

Herrmann, Heiko; Beddig, Miriam Proceedings of the Estonian Academy of Sciences 2018 / p. 73-92 : ill <https://doi.org/10.3176/proc.2018.1.04> http://www.eester.ee/record=b2355998*est Journal metrics at Scopus Article at Scopus Journal metrics at WOS Article at WOS

The effect of approximation accuracy of the orientation distribution function on the elastic properties of short fibre reinforced composites

Eik, Marika; Puttonen, Jari; Herrmann, Heiko Composite structures 2016 / p. 12-18 : ill <https://doi.org/10.1016/j.compstruct.2016.03.046> Journal metrics at Scopus Article at Scopus Journal metrics at WOS Article at WOS

The importance of superspreaders on the spread of the global COVID-19 pandemic

Kalda, Jaan; Ratas, Mart; Kalda, Taavet; Ramazanli, Azer; Herrmann, Heiko; Belikov, Juri 2021 <https://doi.org/10.21203/rs.3.rs-1167477/v1>

Time-efficient automated analysis for fibre orientations in steel fibre reinforced concrete

Pastorelli, Emiliano; Herrmann, Heiko Proceedings of the Estonian Academy of Sciences 2016 / p. 28-36 : ill <https://doi.org/10.3176/proc.2016.1.02> https://artiklid.elnet.ee/record=b2760711*est Journal metrics at Scopus Article at Scopus Journal metrics at WOS Article at WOS

Towards a description of twist waves in liquid crystals using mesoscopic continuum physics

Herrmann, Heiko International Conference on Complexity of Nonlinear Waves : October 5-7, 2009 : book of abstracts 2009 / p. 18

Towards benchmark cases for computational fluid dynamics for casting of fiber concrete

Goidyk, Oksana; Braunbrück, Andres; Marjapuu, Rasmus-Richard; Tuisk, Tanel; Herrmann, Heiko M2D2017 : proceedings of the 7th International Conference on Mechanics and Materials in Design : (Albufeira/Portugal, 11-15 June 2017) 2017 / p. 229-230 : ill https://paginas.fe.up.pt/~m2d/Proceedings_M2D2017/data/papers/Book.pdf

Variation of bending strength of fiber reinforced concrete beams due to fiber distribution and orientation and analysis of microstructure

Herrmann, Heiko; Boris, Renata; Goidyk, Oksana; Braunbrück, Andres 4th International Conference Innovative Materials, Structures and Technologies : IMST2019 : Organised by the Faculty of Civil Engineering, Riga, Latvia, 25-27 September 2019 : book of abstracts 2019 / p. 26 <https://dom.lndb.lv/data/obj/770639.html> <https://dom.lndb.lv/data/obj/file/27451559.pdf?attach=true>

Variation of bending strength of fiber reinforced concrete beams due to fiber distribution and orientation and analysis of microstructure

Herrmann, Heiko; Boris, R.; **Goidyk, Oksana**; **Braunbrück, Andres** IOP conference series : materials science and engineering 2019 / art. 012059, 11 p. : ill <https://doi.org/10.1088/1757-899X/660/1/012059> [Conference proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

Varjatud maailma nähtavaks tegemine. Visualiseerimine. KYB3. Raudbetooni sisu

Herrmann, Heiko Keeruka maailma võlu 2015 / lk. 31-34 : ill https://www.ester.ee/record=b4488344*est

Wave regime differences along the eastern coast of the Baltic Proper

Kelpšaitė, Loreta; **Herrmann, Heiko**; **Soomere, Tarmo** Proceedings of the Estonian Academy of Sciences 2008 / 4, p. 225-231 : ill

Virtual reality visualization for photogrammetric 3d reconstructions of cultural heritage

Herrmann, Heiko; **Pastorelli, Emiliano** Augmented and Virtual Reality First International Conference, AVR 2014, Lecce, Italy, September 17–20, 2014 : Revised Selected Papers 2014 / p. 283-295 : ill https://doi.org/10.1007/978-3-319-13969-2_21 [Conference proceeding at Scopus](#) [Article at Scopus](#) [Conference proceeding at WOS](#) [Article at WOS](#)

Virtual reality visualization for short fibre orientation analysis

Pastorelli, Emiliano; **Herrmann, Heiko** BEC 2014 : 2014 14th Biennial Baltic Electronics Conference : proceedings of the 14th Biennial Baltic Electronics Conference : Tallinn University of Technology, October 6-8, 2014, Tallinn, Estonia 2014 / p. 201-204 : ill