Publication list DIANA Users Association 2021

Ane de Boer Consultancy, Universidad San Francisco de Quito and Delft University of Technology

Ane de Boer (Ane de Boer Consultancy), Eva Lantsoght (Universidad San Francisco de Quito, Equador); Yuguang Yang (Delft University of Technology): Reliability of a damaged RC slab structure using Model Code 2010 Safety Formats for NLFEA. Bridge Maintenance, Safety, Management, Life-Cycle Sustainability and Innovations (pp.510-511)

Arcadis

C. (Coen) van der Vliet, R.R. (René) Kuiper, R.W.M.G. (Ronald) Heijmans, A.J.T. (Arjan) Luttikholt, Golden Horn Unkapanı Highway Tube Tunnel - Istanbul: Underwater bridge design in seismic environment, Tunnelling and Underground Space Technology, Volume 120, 2022, 104273, ISSN 0886-7798, https://doi.org/10.1016/j.tust.2021.104273. (https://www.sciencedirect.com/science/article/pii/S0886779821004648)

Chalmers University of Technology

Yang, J., Haghani Dogaheh, R., Blanksvärd, T., Lundgren, K. (2021): Experimental study of FRP-strengthened concrete beams with corroded reinforcement. Construction and Building Materials. Vol. 301, 27 September 2021, 124076, https://doi.org/10.1016/j.conbuildmat.2021.124076

Chen, E, Gil Berrocal, C., Löfgren, I., Lundgren, K. (2021): Comparison of the service life, life-cycle costs and assessment of hybrid and traditional reinforced concrete through a case study of bridge edge beams in Sweden. Structure and Infrastructure Engineering . Published online https://doi.org/10.1080/15732479.2021.1919720

Yu, X., Robuschi, S., Fernandez, I., Lundgren, K. (2021): Numerical assessment of bond-slip relationships for naturally corroded plain reinforcement bars in concrete beams. Engineering Structures, Volume 239, 15 July 2021, https://doi.org/10.1016/j.engstruct.2021.112309

Blomfors, M., G. Berrocal, C., Lundgren, K., Zandi, K. (2021): Incorporation of pre-existing cracks in finite element analyses of reinforced concrete beams without transverse reinforcement. Engineering Structures, 2021, Volume 229, 15 February 2021, Article number 111601. https://doi.org/10.1016/j.engstruct.2020.111601

Delft University of Technology

Master Thesis - Yotrisno Lang - Influence of Numerical Size Effect in Non-Linear Finite Element Analysis - Investigation of Different Configurations of Iterative-Incremental Method for Shear Failure Mode of Reinforced Concrete without Shear Reinforcement - July 2021

Yuguang Yang Dr.ir., Ane de Boer Dr.ir. & Joop den Uijl Ir. (2021) Postdiction of the Flexural Shear Capacity of a Deep Beam Without Stirrups Using NLFEM, Structural Engineering International, 31:2, 208-215, DOI: 10.1080/10168664.2021.1894631

A contest on modelling shear behaviour of deep concrete slab strips using nonlinear FEM
Yuguang YANG[1], Ane DE BOER[2], Max A.N. HENDRIKS[3]
[1]. Dr.ir. Y. Yang, Department of Engineering Structures, Delft University of Technology, Delft, the Netherlands, [2]. Dr.ir.A. de Boer, Ane de Boer Consultancy, Arnhem, the Netherlands, [3]. Prof.dr.ir. M. Hendrikx, Department of Materials, Mechanics, Management & Design, Delft University of Technology, Delft, the Netherlands & Department of Structural Engineering, Norwegian University of Science and Technology, Trondheim, Norway. *fib* Lisbon Symposium 2021

Ane de Boer, Eva O.L. Lantsoght, Yuguang Yang - Reliability of a Damaged RC Slab Structure using Model Code 2010 Safety Formats for NLFEA - 10th International Conference on Bridge Maintenance, Safety and Management, 2021-04-11 → 2021-04-18, Online due to COVID-19, Japan

Z. Xie, M. Sousamli, F. Messali, J. G. Rots (Delft University of Technology): A Sub-Stepping Iterative Constitutive Model for Cyclic Cracking-Crushing-Shearing in Masonry Interface Elements. Computers & Structures, Volume 257, December 2021.

Lang-Zi Chang, Jan G Rots, Rita Esposito (Faculty of Civil Engineering and Geosciences, Delft University of Technology): Influence of aspect ratio and pre-compression on force capacity of unreinforced masonry walls in out-of-plane two-way bending. Engineering Structures, 2021, Volume 249.

Michel Longo, Marianthi Sousamli, Paul A Korswagen, Piet van Staalduinen, Jan G. Rots (Delft University of Technology): Sub-Structure-Based 'three-tiered' finite element approach to soil-masonry-wall interaction for light seismic motion. Engineering Structures. Volume 245, 15 October 2021.

Morton Engen, Max A.N. Hendriks, Giorgio Monti, Diego L. Allaix, Treatment of modelling uncertainty of NLFEA in fib Model Code 2010, Structural Concrete 2021;22:pg 3202-3212

Delft University of Technology, NTNU, Witteveen+Bos and DIANA FEA BV
Arjen de Putter (Witteveen+Bos), Max A.N. Hendriks (Delft University of Technology), Jan G. Rots (Delft University of Technology), Yuguang Yang (Delft University of Technology), Morten Engen (NTNU), Ab van den Bos (DIANA FEA): Quantification of the resistance modelling uncertainty of 19 alternative 2D nonlinear finite element approaches benchmarked against 101 experiments on reinforced concrete beams. Structural Concrete. Journal of the *fib* (2022-1).

Delft University of Technology, DIANA FEA BV and NTNU
M. Pari (Delft University of Technology); A.V. van de Graaf (DIANA FEA); M.A.N. Hendriks (NTNU); J G Rots (Delft University of Technology). A multi-surface interface model for sequentially linear methods to analyse masonry structures. Engineering Structures. Volume 238, 1 July 2021.

Delft University of Technology, University of Antwerp and DIANA FEA BV
Rafid Al-Khoury (Delft University of Technology), Noori BniLam (University of Antwerp), Mehdi M. Arzanfudi (Delft University of Technology / DIANA FEA), Sanaz Saeid (Delft University of Technology): Analytical model for arbitrarily configured neighboring shallow geothermal installations in the presence of groundwater flow. Geothermics. Volume 93, June 2021.

DIANA FEA BV
van der Aa, P. J. & van den Bos, A. A. (DIANA FEA): Material Characterisation for Nonlinear Finite Element Analysis (NLFEA). Conference Paper, November 5, 2020, RILEM, volume 30.

Silesian University of Technology, University of Minho and The Graz University of Technology
Aneta Smolana, Barbara Klemczak (Silesian University of Technology, Gliwice, Poland); Miguel Azenha (University of Minho, Guimarães, Portugal); Dirk Schlicke (The Graz University of Technology, Graz, Austria): Early Age Cracking Risk in a Massive Concrete Foundation Slab – Comparison of Analytical and Numerical Prediction Models with on-site Measurements. Construction and Building Materials, Volume 301, 27 September 2021.

TNO Applied Geosciences
Orlic, B., & Van Eijs, R. (2021). Modelling of deep subsurface for geohazard risk assessment. In Finite Elements in Civil Engineering Applications (pp. 343-351). CRC Press.

Orlic, B., Moghadam, A., Brunner, L., van Unen, M., Wojcicki, A., Bobek, K., & Wollenweber, J. (2021). A Probabilistic well integrity analysis workflow for leakage risk assessment: Case studies for shale gas and re-use for CCS. Orlic et al.

University of Genoa, University of Napels and University of Catalonia
Chiara Ferrero, Chiara Calderini (University of Genoa), Francesco Portioli (University of Naples "Federico II"), Pere Roca (Tech. University of Catalonia): Large displacement analysis of dry-joint masonry arches subject to inclined support movements. Engineering Structures. Volume 238, 1 juli 2021.

University of Surrey and Cresco Civil and Structural Engineers and Universität für Bodenkultur

Emanuele Canestro (Univ. of Surrey, Guildford, UK and Cresco Civil and Structural Engineers, Genova, Italy), Alfred Strauss (Universität für Bodenkultur, Wien, Austria), Helder Sousa (University of Surrey, Guildford, UK and Research & Innovation, HS Consulting, Matosinhos, Portugal): Multiscale modelling of the long-term performance of prestressed concrete structures – Case studies on T-Girder beams. Engineering Structures. Volume 231, 15 March 2021.

Universitat Politècnica de València

Eduardo José Mezquida Alcaraz, Numerical Modelling of UHPFRC: From the Material to the Structural Element, PhD Thesis, March 2021