DIANA Users Association

Annual report 2023

12-01-2024

Dr.ir. A. de Boer
Chairman DIANA User's Association

Annual Report 2023

Contents

1   Aim of the Association

The members of the Association are all users of the DIANA software package of DIANA FEA BV. In this capacity, they have a considerable interest in gaining knowledge in the Finite Element Method and (numerical) mechanics, as well as in the further development and extension of DIANA.

To achieve this, the Association fulfils a coordinating role by taking stock of the members' needs in terms of research and development, and initiating new projects.

The Association is also a meeting place for the exchange of experiences with the software package.

Furthermore, DIANA FEA BV utilizes the Association to inform the Users on the DIANA package development progress.

2   Executive Committee

During this reporting year, the Executive Committee consisted of:
Chairman: Dr.ir. A. de Boer, Ane de Boer Technisch Advies
Treasurer/ Secretary: Ir. C. v.d. Vliet, Arcadis Nederland BV
Committee member: Ir. R. Tai, TNO Structural Reliability

The Executive Committee has mainly dealt with the following:
1. Discussion on continuing new research projects on the basis of a national and international user's wish list.
2. Organizing of the 14th International DIANA Users Meeting in Valencia, Spain.
3. Continuing contributing to the set-up a database with publications related to DIANA or FEA.
4. Extending the existing e-mail database with foreign users in the fields of concrete, concrete mechanics, bridges and tunnels.
5. Preparation of general and technical meetings.
6. Association finance.
7. Progress in an international response/discussion forum around developments now and in the future related to Users Wishes.

3   Actitivities

3.1 General
The Association has the intention to organize a general meeting of members twice a year, followed if possible by a technical meeting (lectures). In 2023 there have been held two general meetings and two technical meetings (lecture evenings).

3.2. Technical lectures February 15th, 2023

Overview research at TNO NITG
Loes Buijze, TNO Applied Geosciences

The Applied Geosciences expertise group is involved with the geoscientific knowledge about sustainable energy sources. Its focus is on the safe and efficient use of the subsurface in the field of geothermal energy; the storage, capture, and reuse of CO_2; and the efficient and safe phasing out of oil and gas production.
Research aspects of the team Applied Geosciences:
Capture, storage, and reuse of CO_2
Combining knowledge and experience
Geothermal energy
Underground energy storage
Integration into the energy system
Reservoir optimisation
Safe energy extraction
Developing methodology and technology

The structural assessment of historic masonry arch bridge
Willem Nobel, Witteveen en Bos

The structural assessment of a masonry arch bridge requires a specific approach. Common calculation tools are usually too conservative and would lead to unnecessary reinforcements or even demolition. The behaviour of masonry arch bridges is highly non-linearly elastic due to cracking in the masonry and the soil-structure interaction, meaning that there is a non-linear relationship between the forces and deformations in the structure. Programs based on the finite element method (FEM), in which the physical nonlinearities of both soil and structure can be described, are therefore essential in verification calculations of these type of bridges.

In recent years, Witteveen+Bos has examined and assessed the structural safety of some of the historic masonry bridges of the municipality of 's-Hertogenbosch by means of the non-linear FEM calculations mentioned. In this lecture an overview will be given of the underlying assumptions of the model and how the model has been validated.

Update Guideline Non-Linear Analyses of Concrete Structure RTD1016:2022, version 2.3
Marco Roosen, Rijkswaterstaat GPO

RWS uses non-linear calculations to assess existing concrete structures. In order to reduce the intrinsic model and user factors and to improve the robustness of the analyses, RWS manages a guideline for performing non-linear analyses of concrete structures, the RTD1016. RWS wants to continuously improve this guideline based on user experiences, validation studies, changes in standards and new insights based on

scientific research. Version 2.3 of this guideline was recently released, which was first published on https://standaarden.rws.nl

The presentation will explain the most important changes in this new version.
This concerns
(i) tightening the conditions of application,
(ii) adjusting the Global Resistance Factor,
(iii) adjusting the GRF material properties,
(iv) adjusting the long-term load factor and
(v) an adjustment in the Tension-Compression Interaction.

Overview TU Delft research unreinforced masonry structures for Groningen
Jan Rots, TU Delft

Since 2013 a team of researchers at TU Delft studies building response to mining-induced seismicity, with focus on Groningen unreinforced masonry structures. An overview of the activities will be given, from lab-testing to computational modelling, both for the lower damage states (cracks in the houses, damage claim processing) and the ultimate near collapse state (safety, the strengthening program). Related trends in nonlinear finite element analysis will be discussed, including constitutive developments, damage quantification and aspects of spatial as well as temporal discretization for quasi-brittle fracture.
DIANA applications will be included and possibly some innocent nostalgic confessions will be made.

3.3. Technical lectures June 14th, 2023

Shear strength of prestressed bridges girders
Dennis Schoenmakers, Wagemaker, Rosmalen

The shear strength of prestressed bridge girders is topic of research since years. Amongst others, in situations where the prestress reinforcement is located at the compressed side it is suggested the positive influence of the normal stress due to prestress (k_1 σ_{cp}) should be neglected in determining the shear strength capacity of the concrete part (V_{RdC}).
This statement resulted in insufficient load-bearing capacity of two existing bridge structures in the Almelo-region (Highway A1) using conventional reassessment techniques (linear elastic calculations, cross-sectional analysis).
NLFEA has showed that the structural safety of both bridges should not be questioned and hence, the load-bearing capacity may be considered sufficient. Yet, an apparent contribution of the prestress strands and its stress level is observed.

Shear capacity of steel anchors with a filled joint
Arco de Gelder, ADS-Ernter, Capelle aan de IJssel

In the graduation project, research was carried out into the shear capacity of a steel anchor when the adjustment space between the steel and concrete is filled with mortar. In the current standards (NEN 1993-1-8 and NEN-1992-4) various methods are described with large capacity differences. In daily practice, this causes a discussion about which method is correct and what would be a reliable capacity for the various methods of anchoring (glue anchors, bolt sleeves and cast-in anchors) both vertically and horizontally. In the study, a method was found and described to compare various experimental studies that have already been carried out. In this way, a framework could be created in which the results of an FEM model should be located. Using a parameterised FEM model (based on python), a proposal could be made that is in line with current standards and a comprehensive recommendation for further research to describe the practice and its influence on anchor shear capacity in a more complete way.

Developments of an improved total strain model for masonry applications
Marianthi Sousamli, BAM/TU Delft

In this seminar a new continuum orthotropic model will be presented that focuses on the cyclic, nonlinear behaviour of brick masonry structures. The model is based on a total-strain-rotating crack approach. Tensile and compressive failure are described in the two principal rotating directions, whereas the shear failure is included indirectly through an internal iterative algorithm. To account for the differences in the hysteretic behaviour in the case of different failure mechanisms (flexural or shear), the model makes two distinctions regarding the tensile behaviour of the material based on the crack orientation upon crack initiation. In the case of crack angles that correspond to diagonal shear failure slow-rate softening and bilinear unloading/reloading are adopted, while for crack angles that correspond to in-plane flexural failure a steep softening branch and secant unloading/reloading are adopted. Bilinear unloading/reloading is adopted in the case of compression as well. The constitutive model was implemented in DIANA software, and was validated against experimental results, reproducing the experimental results satisfactorily both in terms of damage localization and hysteretic behaviour.

Succumbing to bending (stucco) and the comparison with the Eurocode
Noah le Mair, Arcadis

Based on the outcomes of a reassessment analysis of a box girder bridge, I started a case study on the bearing capacity of over-reinforced concrete beams. The objective of this case study was to test the validity of the linear cross-sectional checks from the Eurocode for over-reinforced concrete beams. This objective is obtained through a comparison between the linear cross-sectional check and the actual behaviour of the beam. These linear checks are carried out by an analytical model based on the equations from the Eurocode. The actual behaviour of the beam is simulated by a numerical model using the finite element method. This study mainly focused on the bending moment capacity and used a variety of simple test cases with different reinforcement ratios. The main findings suggest that the linear cross-sectional checks, which are considered conservative, give more capacity than the nonlinear checks for some reinforcement ratios. This result is remarkable and could be the base of future research.

4. Financial aspects

5. Publication list 2023

<u>Australia</u>
University of Newcastle

Andrea C. Isfeld, Mark G. Stewart and Mark J. Masia
School of Engineering, Research Associate, Centre for Infrastructure Performance and Reliability, the University of Newcastle, Newcastle, New South Wales, Australia
Structural reliability and partial safety factor assessment of unreinforced masonry in vertical bending. Austrialian Journal of Structural Engineering 2023, Vol. 24, No. 3, 191–205 https://doi.org/10.1080/13287982.2023.2173868

<u>Bosnia and Herzegovina and Croatia</u>
IPSA Institute, University of Sarajevo and University of Zagreb

Vanesa Jusufbašić (1), Senad Medić (2), Mario Uroš(3)
(1) Mag.ing.aedif., IPSA Institute, Sarajevo
(2) Assistant professor, University of Sarajevo – Faculty of Civil Engineering,
(3) Associate professor, University of Zagreb – Faculty of Civil Engineering,
Nonlinear static and dynamic analysis of a typical masonry building in palmoticeva street in Zagreb. Proceedings of the 2nd Croatian Conference on Earthquake Engineering - 2CroCEE. Zagreb, Croatia - March 22 to 24, 2023.
DOI: https://doi.org/10.5592/CO/2CroCEE.2023.99

<u>Brasil</u>
Universidade Estadual de Campinas and Universidade Presbiteriana Mackenzie

Ingrid Rocio Irreño Palomo[a] , Juan de Jesus Martínez[a] , Carlos Alberto Benedetty[a]
Luiz Carlos de Almeida[a], Leandro Mouta Trautwein[a], Pablo Augusto Krahl[b]
[a]Universidade Estadual de Campinas – UNICAMP, Faculdade de Engenharia Civil, Departamento de Estruturas, Campinas, SP, Brasil
[b]Universidade Presbiteriana Mackenzie – UPM, Faculdade de Engenharia Civil, Departamento de Estruturas, Campinas, SP, Brasil
Prediction of the ultimate capacity of reinforced concrete elements using nonlinear analysis methodologies. Rev. IBRACON Estrut. Mater., vol. 17, no. 2, e17210, 2024| https://doi.org/10.1590/S1983-41952024000200010

Universidade Federal de Goiás – UFG

Daniel de Lima Araújoa, Cleiton Rodrigues Siqueira Filhoa and Fausto Arantes Loboa.
Universidade Federal de Goiás – UFG, Escola de Engenharia Civil e Ambiental, Goiânia, GO, Brasil.
Computational modeling of plain and steel fiber-reinforced concrete beams without transverse reinforcement. Rev. IBRACON Estrut. Mater., vol. 16, no. 3, e16311, 2023| https://doi.org/10.1590/S1983-41952023000300011

Universidade Federal de Goiás

Ygor Moriel Neuberger [a] and Daniel de Lima Araújo [b]
[a] Universidade Federal de Goiás, Escola de Engenharia Civil e Ambiental
[b] Universidade Federal de Goiás, Escola de Engenharia Civil e Ambiental, Rua Universitária, n° 1488, Qd 86, Setor Universitário, Goiânia/GO, CEP: 74605-220, Brazil
An improved analytical model for two-step corbels in a precast concrete system.
Engineering Structures. Volume 284, 1 June 2023, 115947.

The Federal University of Rio de Janeiro and Instituto Federal de Educacão

Eduardo M. R. Fairbairn[1], Larissa D. F. Santos[1], Oscar A. M. Reales[1], Marina B. Farias[1], Rodolfo G. M. Andrade[2] and Alfredo Q. Fores[1]
[1] The Federal University of Rio de Janeiro, COPPE/UFRJ, Rio de Janeiro, Brazil
[2] Instituto Federal de Educação, Vitoria, ES, Brazil
New Conceptions and Constructive Methods for Pumped Storage Hydropower plants. SynerCrete 2023: International RILEM Conference on Synergising Expertise towards Sustainability and Robustness of Cement-based Materials and Concrete Structures pp 840-850.

Brasil and Portugal

Pontifícia Universidade Católica do Rio de Janeiro, Universidade Federal Fluminense and University of Minho

Danielli Cristina Borelli Cintra[a], Deane de Mesquita Roehl[a], Emil de Souza Sánchez Filho[b], Paulo B. Lourenço[c] and Nuno Mendes[c].
[a] Pontifícia Universidade Católica do Rio de Janeiro – PUC-Rio, Programa de Pós-graduação em Engenharia Civil, Rio de Janeiro, RJ, Brasil
[b] Universidade Federal Fluminense – UFF, Programa de Pós-graduação em Engenharia Civil, Niterói, RJ, Brasil
[c] Universidade do Minho, Departamento de Engenharia Civil, Guimarães, Portugal
Methodologies for assessing the structural integrity of historic masonry domes and vaults. IBRACON Structures and Materials Journals, Rev. IBRACON Estrut. Mater., vol.17, no.4, e17406, 2024

Canada

University of Ottawa

Sepideh Zaghian, Beatriz Martín-Pérez and Husham Almansour
Department of Civil Engineering, University of Ottawa, Ottawa, ON, Canada.
Nonlinear finite element modeling of the impact of reinforcement corrosion on bridge piers under concentric loads. Structural Concrete Journal of the *fib,* Volume 23, Issue 1, February 2022, Pages 138-153.

Sepideh Zaghian.
Department of Civil Engineering, Faculty of Engineering, University of Ottawa.
The Effect of Combined Environmental and Service Loads on Bridge Piers Using Non-Linear Finite Element Analysis. Thesis submitted in partial fulfillment of the requirements for the degree of Doctor of Philosophy in Civil Engineering. 2023.

University of Ottawa and National Research Council Canada

Maha Dabas[1], Beatriz Martin-Pérez[1], Husham Almansour[2]
[1]Department of Civil Engineering, University of Ottawa 800 King Edward, Ottawa, Canada
[2]National Research Council of Canada, 1200 Montreal Road, Ottawa, Canada

Effect of Reinforcement Corrosion on Axial and Flexural Performance of R.C. Columns. Proceedings of the 8th World Congress on Civil, Structural, and Environmental Engineering (CSEE'23) Lisbon, Portugal – March 29 – 31, 2023 Paper No. ICSECT 117 DOI: 10.11159/icsect23.117

University of Ottawa and Construction Research Centre/National Research Council Canada

Amina Mohammed[1], Husham Almansour[2] and Beatriz Martín-Pérez[1]
[1]Department of Civil Engineering/Faculty of Engineering, University of Ottawa, Ottawa, Canada
[2]Construction Research Centre/National Research Council Canada, Ottawa, Canada

Simplified Seismic Evaluation of Aged Corrosion Damaged Reinforced Concrete Bridge Columns as Part of Simplified Semi-Quantitative Assessment Framework Engineering Science & Technology Volume 4 Issue 1|2023| 15.
http://ojs.wiserpub.com/index.php/EST/

China

Huaqiao University and Guangzhou Building Material Institute Limited Company

Yuli Dong[a], Jintao Duan[b], Dashan Zhang[a], Jianyong Liu[b], Sanfan Zhu[a], Jianquan Qi[a]
[a] College of Civil Engineering, Huaqiao University, Xiamen 361021, China
[b] Guangzhou Building Material Institute Limited Company, Guangdong Province Enterprise Key Laboratory of Materials and Elements Fire Testing Technology, Guangzhou 510663, China

Experimental research on fire resistance of the reduced scale immersed tunnel with fire in both traffic tubes. Tunnelling and Underground Space Technology. Volume 132, February 2023, 104922.

China/Hong Kong

School of Computer Science and Engineering, Sun Yat-sen University, University of Hongkong

Duojun Huang[1,2], Jichang Li[3], Weikai Chen[4], Junshi Huang[5], Zhenhua Chai[5], Guanbin Li[1,2†]
[1]School of Computer Science and Engineering, Sun Yat-sen University, Guangzhou, China, [2]Research Institute, Sun Yat-sen University, Shenzhen, China, [3]The University of Hong Kong, [4]Tencent America and [5]Meituan.

Divide and Adapt: Active Domain Adaptation via Customized Learning
This CVPR paper is provided by the Computer Vision Foundation.

China/Japan
Zhejiang University (China) and Taisei Corporation (Japan)
Weijian Zhao[1]; Lingmao Wang[2]; Yuanzhang Yang[3]; Hitoshi Takeda[4]; Tetsuo Kawaguchi[5] and Takahiko Watanabe[6]

[1]Professor, College of Civil Engineering and Architecture, Zhejiang Univ., Hangzhou 310058, China; Center for Balance Architecture, Zhejiang Univ., Hangzhou 310028, China.
[2]Graduate Student, College of Civil Engineering and Architecture, Zhejiang Univ., Hangzhou 310058, China.
[3]Postdoctoral Researcher, College of Civil Engineering and Architecture, Zhejiang Univ., Hangzhou 310058, China
[4]Chief Research Engineer, Taisei Advanced Center of Technology, Taisei Corporation, Yokohama 245-0051, Japan.
[5]Manager, Taisei Advanced Center of Technology, Taisei Corporation, Yokohama 245-0051, Japan.
[6]Assistant Manager, Taisei Advanced Center of Technology, Taisei Corporation, Yokohama 245-0051, Japan.
Experimental and Numerical Investigation of Headed Bar Joints between Precast Concrete Bridge Slabs Loaded in Tension. J. Bridge Eng., 2023, 28(11): 04023086.

China/United Kingdom
Zhejiang University (China), Ningbo Yizhong Concrete Pile Co. Ltd. (China) and University of Edinburgh (United Kingdom)

Cyprus
Cyprus University of Technology
Filippou Christiana A, Nicholas C Kyriakides and Christis Z Chrysostomou
Department of Civil Engineering and Geomatics, Cyprus University of Technology, Limassol, Cyprus.
Numerical study of the seismic retrofitting of masonry-Infilled RC frames with openings using TRM. Earthquake Engineering Struct Dyn. 2023;52:776–805.

Denmark/United Kingdom
Technical University of Denmark and Ulster University
Wenqian Liu[1], Frank Markert[1], Volodymyr Shentsov[2] & Luisa Giuliani[1]
[1]Technical University of Denmark, Lyngby, Denmark
[2]Ulster University, Newtownabbey, United Kingdom
Nonlinear analysis of a tunnel slab under a hydrogen explosion. Paper presented at 10th International Symposium on Tunnel Safety and Security, Stavanger, Norway. Published 26 april 2023

Equador
Universidad politécnica Salesiana (UPS)

F.P. Moncayo-Matute [a], P.B. Torres-Jara [a], E. Vázquez-Silva [a], P.G. Peña-Tapia [b], D.P. Moya-Loaiza [a], G. Abad-Farfán [a]
[a] Research Group on New Materials and Transformation Processes (GIMAT-acronym in Spanish), Universidad Politécnica Salesiana (UPS), Cuenca, Azuay, Ecuador
[b] Department of Neurosurgery/Society for the Fight Against Cancer, SOLCA Cancer Institute, Cuenca, Azuay, Ecuador

Finite element analysis of a customized implant in PMMA coupled with the cranial bone. Journal of the Mechanical Behavior of Biomedical Materials. Volume 146, October 2023, 106046.

India
Mahindra University

Faisal Mehraj Wani[1], Ruthviz Kodali[2], Vanga Amulya Reddy[3], Devireddy Sowmya[4], Abhishek Bondada[5] , Semanth Reddy[6], Jaya Prakash Vemuri[7] and Mohd Ataullah Khan[7]
1-7 Ecole Centrale College of Engineering, Mahindra University, India.

Finite element analysis of unreinforced masonry walls with different bond patterns. Sustainable Engineering and Innovation Original Research Vol. 5, No. 1, June 2023, pp.58-72 https://doi.org/10.37868/sei.v5i1.id194

India/Cyprus
Shri Ramswaroop Memorial University and Near East University

Kushagra Kapoor[a], Rishabh Joshi[a], Anjali Singh[a], Rifat Resatoglu[b] and Mohd Zain[a]
[a] Faculty of Civil Engineering, Shri Ramswaroop Memorial University, Lucknow-Deva Road, Barabanki, Uttar Pradesh, India.
[b] Faculty of Civil and Environmental Engineering, Near East University, Near East Boulevard, Nicosia, Cyprus.

Calibration of FEM models of historic masonry structures and its application on a local historic structure. Conference Paper *in* Materials Today Proceedings · April 2023 DOI: 10.1016/j.matpr.2023.04.050

India/Saudi Arabia
Mahindra University and King Abdullah University of Science and Technology

Ruthviz Kodali[1], Faisal mehraj wani[2], Tariq Anwar Aquib[3], Jayaprakash Vemuri[4]
[1,2,4] Ecole Centrale College of Engineering, Mahindra University, Hyderabad, India,
[3] King Abdullah University of Science and Technology, Saudi Arabia

Numerical Modelling of an Unreinforced Masonry Wall with Central Window Opening. Materials, Mechanics and Structures, 61–71. https://doi.org/10.1007/978-981-19-3371-4_6

Indonesia
Universitas Diponegoro

Purwanto[1], Han Ay Lie[1] and Blinka Hernawan Prasetya[1]
[1]Department of Civil Engineering, Universitas Diponegoro, Jl. Prof. Soedarto, SH., Semarang, 50275, Indonesia.

Comparation of Model and Experimental Results of Elastoplastic Structure Loaded with Bending Moment and Torsion. Journal of Advanced Civil and Environmental Engineering. Vol.6, No.2, 2023, pp 90-97.ISSN: 2599-3356
DOI: http://dx.doi.org/10.30659/jacee.6.2.90-97

University Muhammadiyah Jember

Wahyu Nur Aprillia[1], Muhtar[2] and Amri Gunasti[3]
[1]Mahasiswa Program Studi Teknik Sipil, Fakultas Teknik, Universitas Muhammadiyah Jember. [2]Dosen Program Studi Teknik Sipil, Fakultas Teknik, Universitas Muhammadiyah Jember. [3] Dosen Program Studi Teknik Sipil, Fakultas Teknik, Universitas Muhammadiyah Jember

Comparison Of Theoretical Cracking Moments And Concrete Beam Experiments double Reinforced With Normal Aggregate. Jurnal Smart Teknologi Vol. 4, No. 4, Juni 2023, Halaman 100 - 102 ISSN: 2774-1702.
http://jurnal.unmuhjember.ac.id/index.php/JST

Iran/Germany/USA
Toosi University of Technology (Iran), Technical University of Munich (Germany) and Clemson University (USA)

Ali Khansefid[a b], Seyed Mahmoudreza Yadollahi[c], Gerhard Müller[b] and Francesca Taddei[b]
[a] Civil Engineering Department, K.N. Toosi University of Technology, Tehran, Iran
[b] Civil Engineering Department, Technical University of Munich, Munich, Germany
[c] Civil Engineering Department, Clemson University, Clemson, USA

Soil-structure-interaction effects on the seismic performance of a masonry building under geothermal power plants induced earthquakes. Structures, Volume 55, September 2023, pages 468-481

Italy
Politecnico Di Torino and Movyon

Gabriele Bertagnoli[1], Mario Ferrara[1], Luca Giordano[1] and Marzia Malavisi[2]
[1] Department of Structural, Geotechnical and Building Engineering (DISEG), Politecnico di Torino, 10129 Turin, Italy
[2] Movyon, Autostrade per l'Italia S.p.A., 50013 Limite, Italy;

Preliminary Investigation on Steel Jacketing Retrofitting of Concrete Bridges Half-Joints. Applied Sciences 2023, 13, 8181. https://doi.org/10.3390/app13148181

Italy/Portugal

University of Rome Sapienza, Politecnico di Milano (Italy), University of Minho (Portugal)

Claudia Sansoni[1], Luís C. M. da Silva[2], Rui Marques[3], Stefano Pampanin[4], Paulo B. Lourenço[5]

[1]Department of Structural and Geotechnical Engineering, University of Rome Sapienza, Via Eudossiana 18, 00184 Rome, Italy.

[2]Department of Architecture, Built Environment and Construction Engineering, Politecnico di Milano, Piazza Leonardo da Vinci 32, 20133 Milano, Italy.

[3]ISISE, Department of Civil Engineering, University of Minho, Campus de Azurém, 4800-058 Guimarães, Portugal.

[4]Department of Structural and Geotechnical Engineering, University of Rome Sapienza, Via Eudossiana 18, 00184 Rome, Italy.

[5]ISISE, Department of Civil Engineering, University of Minho, Campus de Azurém, 4800-058 Guimarães, Portugal.

SLaMA-URM method for the seismic vulnerability assessment of UnReinforced Masonry structures: formulation and validation for a substructure. Journal of Building Engineering · January 2023 DOI: 10.1016/j.jobe.2022.105487

Italy/Spain

University of Genoa and Technical University of Catalonia

Chiara Ferrero [a], Chiara Calderini [a], Pere Roca [b]

[a] Department of Civil, Chemical and Environmental Engineering, University of Genoa, Via Montallegro 1, 16145 Genoa, Italy

[b] Department of Civil and Environmental Engineering, Technical University of Catalonia (UPC-BarcelonaTech), Jordi Girona 1-3, 08034 Barcelona, Spain

Effect of joint deformability on the experimental and numerical response of dry-joint masonry arches subjected to large support displacements. Engineering Structures, Volume 275, Part A, Januaru 2023, 115236.

Italy/USA

University School for Advances Studies IUSS, University of Pavia, University of California and European Centre for Training and Research in Earthquake Engineering (Eucentre)

Nicolò Damiani[1,2] , Matthew J. DeJong[3], Luca Albanesi[4], Andrea Penna[2] and Paolo Morandi[4]

[1]University School for Advanced Studies IUSS Pavia, Pavia, Italy

[2]Department of Civil Engineering and Architecture (DICAr), University of Pavia, Pavia, Italy

[3]Department of Civil and Environmental Engineering, University of California, Berkeley, California, USA

[4]European Centre for Training and Research in Earthquake Engineering (EUCENTRE), Pavia, Italy

Distinct element modeling of the in-plane response of a steel-framed retrofit solution for URM structures. Earthquake Engineering Struct Dyn. 2023;52:3030–3052.

Japan
Yamaguchi University

Peilun Shao, Gakuho Watanabe and Elfrido Elias Tita.
Advanced Prediction for Cyclic Bending Behavior of RC Columns Based on the Idealization of Reinforcement of Bond Properties

Yamaguchi University and Structural and Chodai Co. Ltd.

Elfrido Elias Tita[1], Gakuho Watanabe[1], Peilun Shao[1] and Kenji Arii[2]
[1] Department of Civil and Environmental Engineering, Yamaguchi University, 2-16-1, Tokiwadai, Ube City, Yamaguchi 7558611, Japan.
[2] Structural and Bridge Engineering Division, Chodai Co., Ltd., 17-18 Teppo-cho, Naka-ku, Hiroshima City, Hiroshima 7300017, Japan.
Development and Application of Digital Twin–BIM Technology for Bridge Management.

Japan/Australia
Nagaoka University of Technology and UNSW Sydney

Niamal Islam[1], Takeshi Miyashita[1], Sukanta Kumer Shill[2] and Safat Al-deen[2]
[1]Nagaoka University of Technology, Nagaoka, Niigata, Japan
[2]UNSW Sydney, Kensington, NSW, Australia
Assessment of structural health of an existing prestressed concrete bridge.

Kuwait/UK
American University of the Middel East, Northumbria University and The University of Edinburg

Enea Mustafaraj[1], Marco Corradi[2], Yavuz Yardim[3], Erion Luga[1] and Muhammed Yasin Codur[1]
[1] College of Engineering and Technology, American University of the Middle East, Egaila 54200, Kuwait;
[2] Department of Mechanical and Construction Engineering, Wynne Jones Building, Northumbria University, Newcastle upon Tyne NE1 8ST, UK
[3] Department of Civil and Environmental Engineering, The University of Edinburgh, Edinburgh EH9 3FG, UK.
Ferrocement, Carbon, and Polypropylene Fibers for Strengthening Masonry ShearWalls.

Lithuania
Vilnius Gediminas Technical University (Lithuania)

Vilius Masenas
Pre-tensioned reinforcement stress on the impact of the supporting analysis of the knot with notch for holding power.

Vilius Masenas, Adas Meškenas and Juozas Valivonis
Department of Reinforced Concrete Structures and Geotechnics, Faculty of Civil Engineering, Vilnius Gediminas Technical University, Sauletekis Ave. 11, LT-10223 Vilnius, Lithuania.
Analysis of the Bearing Capacity of Reinforced Concrete Dapped-End Beams

Malaysia
University Putra Malaysia

Sanjay Gokul Venigalla, Abu Bakar Nabilah, and Nor Azizi Safiee
Department of Civil Engineering, Faculty of Engineering, Universiti Putra Malaysia, 43400 Serdang, Malaysia.
Experimental and numerical simulation of bond-slip in textilereinforced concrete for multiple bond lengths. CONCET-2022. Journal of Physics: Conference Series **2521** (2023) 012017 IOP Publishing. doi:10.1088/1742-6596/2521/1/012017

Nepal
Purbanchal University

Looza Sthapit
Purbanchal University,Faculty of Engineering Gothgaun, Morang, Nepal. Khwopa Engineering College, Libali Bhaktapur.
A Thesis on Investigation of specific retrofitting techniques for mansonry school buildings in Nepal. Submitted in Partial Fulfillment of the Requirements for the Degree of Master of Engineering in Earthquake, February 2023.

Nepal/USA
Kathmandu University and Merrimack College

Shyam Sundar Khadka[1], Sabin Acharya[1], Ayush Acharya[1] and Marc J. Veletzos[2]
[1]Department of Civil Engineering, Kathmandu University, Dhulikhel, Nepal,
[2]Department of Civil Engineering, Merrimack College, North Andover, MA, United States
Enhancement of Himalayan irregular stone masonry buildings for resilient seismic design. Frontiers in Built Environment, published 06 March 2023.
DOI 10.3389/fbuil.2023.1086008

Netherlands

Delft University of Technology

Helena Catherian Bouwmeester

The glass sashimono joint designing a rigid and demountable connection for a portal frame

Graduation thesis to obtain the degree of Master of Science at Delft University of Technology to be defended publicly on Friday April 14, 2023.

Justyna Urszula Botor

Modelling the interface in concrete-to-concrete connections between precast girders and cast-in-situ top layers to obtain the degree of Master of Science at the Delft University of Technology, to be defended publicly on Thursday, March 30, 2022.

L.M. Gísladóttir

Curved concrete crownwalls on vertical breakwaters. Finite Element Analysis.

In partial fulfilment of the requirements for the degree of Master of Science at the Delft University of Technology, to be defended publicly on Friday February 24, 2023.

Uday Jain

Role of horizontal timber bands in the seismic response of masonry structures in the himalayan region.

In partial fulfilment of the requirements for the degree of Master of Science in Civil Engineering Track: Structural Engineering at the Delft University of Technology Faculty of Civil Engineering and Geosciences, October 27, 2023.

Satyadhrik Sharma, Michele Longo and Francesco Messali
Department of Materials Mechanics, Management and Design, Section of Applied Mechanics, Delft
University of Technology, Delft, Netherlands
A novel tier-based numerical analysis procedure for the structural assessment of masonry quay walls under traffic loads
Frontiers in Built Environment, published 26 April 2023.
DOI 10.3389/fbuil.2023.1194658

Delft University of Technology and ABT

D.A.H. Slockers

Thermal shrinkage cracking in steel fibre reinforced underwater concrete floors. A probabilistic finite element approach.

To obtain the degree of Master of Science in Civil Engineering at the Delft University of Technology, to be defended publicly on Wednesday 15:00, 21 June 2023.

Delft University of Technology and Deltares

Alfonso Prosperi[1], Michele Longo[1], Paul A. Korswagen[1], Mandy Korff[1,2], Jan G. Rots[1]
[1] Delft University of Technology, Faculty of Civil Engineering and Geosciences, Stevinweg 1, 2628
[2] Deltares, P.O BOX, 177, 2600 MH Delft, The Netherlands
Shape matters: Influence of varying settlement profiles due to multicausal subsidence when modelling damage in a masonry façade. Paper presented at Tenth International Symposium on Land Subsidence 2023, Delft, Netherlands.

Delft University of Technology and Nobleo

Laura Dieterich Murr
Investigation of the usage of SHCC as a closure pour to reduce the construction time of widening a prestressed concrete bridge
Thesis submitted to Delft University of Technology for the degree of Master of Science in Civil Engineering to be publicly defended on 01/November/2023

Delft University of Technology and Shell Global Solutions International BV

Jingming Ruan[1], Ranajit Ghose[1], and Wim A. Mulder[1,2]
[1]Delft University of Technology
[2]Shell Global Solutions International B.V.
3D geomechanical modeling of induced seismic slips considering realistic reservoir geometry with intersecting faults.
August 4, 2023. Manuscript submitted to JGR: Solid Earth.

Delft University of Technology and Permusteelisa Group

Evdokia Stavridou
Simulation of the Overall Performance of Glazed Unitised Curtain Walls Under Seismic Action Through Finite Element Modelling and Validation via Full-scale Experimental Testing. Thesis as part of the Master of Science Degree at the Delft University of Technology, Faculty of Civil Engineering and Geo-sciences. Master Track: Building Engineering. Specialisation: Building Physics and Technology.
31 March 2023

Delft University of Technology and Wagemaker

J.M. Schaper
Time-Dependent Finite Element Analysis in Restrained Concrete.
A study on the effect of analysing the combination of hardening processes and external loading on improving the prediction of the development of design stresses to obtain the degree of Master of Science at the Delft University of Technology,to be defended publicly on Friday August 25, 2023.

TNO

Sewcharan A. (2023), Master thesis, Delft University of Technology.
A smarter design calculation for quay walls based on volume elements and nonlinear approaches in terms of lowering the CO2 footprint. Available at https://repository.tudelft.nl/islandora/object/uuid%3A98fd32af-f757-4186-baf3-4d7e767d117b?collection=education

Joshi A. (2023), Master thesis, Delft University of Technology.
Non-linear time history modeling of damage initiation and development in an unreinforced masonry cavity wall under out-of-plane loading. Available at: https://repository.tudelft.nl/islandora/object/uuid%3A37e5b97f-3ecb-486d-a880-ce31cbee7729?collection=education

Tai, R. K., Slobbe, A. T., & Roosen, M. A. (2023, June).
Finite Element Modeling of Shear Failure in Prestressed Girders with a Continuous Cast-In-Situ Deck Slab. In Building for the Future: Durable, Sustainable, Resilient: Proceedings of the fib Symposium 2023-Volume 2 (pp. 520-530). Cham: Springer Nature Switzerland.

Netherlands/Italy/Germany

Delft University of Technology, Gerardini Ingegneria Sismica, Technical University of Munich

Michele Mirra (1), Andrea Gerardini (2), Geert Ravenshorst (3), Jan-Willem van de Kuilen (4)
(1) Postdoctoral researcher, Delft University of Technology
(2) Professional engineer, Gerardini Ingegneria Sismica
(3) Assistant professor, Delft University of Technology
(4) Full professor, Delft University of Technology & Technical University of Munich,
Application of wood-based seismic retrofitting techniques on existing timber and masonry structures: design strategies, modelling approaches and practical benefits for two case-study buildings. Proceedings of the 2nd Croatian Conference on Earthquake Engineering - 2CroCEE. Zagreb, Croatia - March 22 to 24, 2023.
DOI: https://doi.org/10.5592/CO/2CroCEE.2023.99

Delft University of Technology, Gerardini Ingegneria Sismica, Studio Architettura Sergio Ghirardelli and Technical University of Munich

Michele Mirra[a], Andrea Gerardini[b], Sergio Ghirardelli[c], Geert Ravenshorst[a] and Jan-Willem van de Kuilen[a,d]
[a]Bio-based structures and materials, Delft University of Technology, Delft, The Netherlands;
[b]Gerardini Ingegneria Sismica, Collio Val Trompia, Brescia, Italy;
[c]Studio Architettura Sergio Ghirardelli, Darfo Boario Terme, Brescia, Italy;
[d]Wood Technology, Technical University of Munich, Munich, Germany
Combining Architectural Conservation and Seismic Strengthening in the Wood-Based Retrofitting of a Monumental Timber Roof: The Case Study of St. Andrew's Church in Ceto, Brescia, Italy. International Journal of Architectural Heritage.
https://doi.org/10.1080/15583058.2023.2187726

Netherlands/USA

DIANA FEA BV and AECOM

M. Partovi[1], M. Bakhshi[2], A. Haghighat[2] and V. Nasri[2]
[1]DIANA FEA BV, Delft, The Netherlands
[2]AECOM, New York, USA

Design of FRC precast segments for fire in light-rail tunnels. Expanding Underground. Knowledge and Passion to Make a Positive Impact on the World – Anagnostou, Benardos & Marinos (Eds) © 2023 The Author(s), ISBN 978-1-003-34803-0 Open Access: www.taylorfrancis.com, CC BY-NC-ND 4.0 license

Norway

Oslo Metropolitan University

Amirhosein Shabani and Mahdi Kioumarsi
Department of Built Environment, Oslo Metropolitan University, Pilestredet 35, 0166 Oslo, Norway.

Seismic assessment and strengthening of a historical masonry bridge considering soil-structure interaction. Engineering Structues, Volume 293, 15 October 2023, 116589.

Norway/Quatar

Oslo Metropolitan University (Norway) and Quatar University (Quatar)

Amirhosein SHABANI[a], Mahdi KIOUMARSI[a], Vagelis PLEVRIS[b]
a Department of Built Environment, Oslo Metropolitan University, Oslo 0166, Norway
b Department of Civil and Architectural Engineering, Qatar University, Doha 2713, Qatar

Performance-based seismic assessment of a historical masonry arch bridge: Effect of pulse-like excitations. Front. Struct. Civ. Eng. https://doi.org/10.1007/s11709-023-0972-z

Pakistan

NED University

Aslam F. Mohammad[1], Rashid A. Khan[2], Engr. Bushra Fatima[1], Engr. Aaqib Shaukat[1], Engr. Muhammad Mujtaba[1]
[1] Department of Civil Engineering, NED University of Engineering and Technology, Karachi, Pakistan.
[2] Department of Earthquake Engineering, NED University of Engineering and Technology, Karachi, Pakistan

Seismic vulnerability assessment of masonry buildings in Karachi. Asian Journal of Civil Engineering. https://doi.org/10.1007/s42107-022-00493-1

Poland
Opole University of Technology

D. Bysiec, T. Maleska & A. Janda
Faculty of Civil Engineering and Architecture, Opole University of Technology, Opole, Poland

Dynamic characteristic of geodesic domes with different location of mass

Tomasz Maleska and Damian Beben
Faculty of Civil Engineering and Architecture, Opole University of Technology, 45-758 Opole, Poland

Behaviour of Soil–Steel Composite Bridges under Strong Seismic Excitation with Various Boundary Conditions. Materials 2023, 16, 650.
https://doi.org/10.3390/ma16020650

Tomasz Maleska and Damian Beben
Faculty of Civil Engineering and Architecture, Opole University of Technology, 45-758 Opole, Poland

Effect of the soil cover depth on the seismic response in a large-span thin-walled corrugated steel plate bridge. Soil Dynamics and Earthquake Engineering. Volume 166, March 2023, 107744.

Poland/Sweden
Consolis Group Technology Development Centre, Cracow University of Technology (Poland) and Linnæus University (Sweden)

Miłosz Jeziorski[1,2] and Wit Derkowski[2,3]
[1]Consolis Group Technology Development Centre, Łódź, Poland
[2]Chair of Reinforced and Prestressed Concrete Structures, Cracow University of Technology, Cracow, Poland
[3] Linnæus University, Växjö, Sweden

Finite Element Analysis of Hollow Core Floor Subjected to Point Load.
International Symposium of the International Federation for Structural Concrete. *fib* Symposium 2023: Building fort he Future: Durable, Sustainable, Resilient pp 3-12.

Portugal
University of Minho

Edward Alexis Baron Corredor. PhD Thesis, PhD in Civil Engineering
Structural damage identification for robustness assessment of railway infrastructure under flood effects. January 2023.

Neryvaldo de Jesus Galvão Pereira, Universidade do Minho, Escola de Engenharia.
The impact of human errors on the performance to failure of concrete bridges.
Doctoral Thesis. Doctoral Program in Civil Engineering. March 2023.

Abide Aşıkoğlu[1], Jennifer D'Anna[1], Rafael Ramirez[1], Fabio Solarino[1], Antonio Romanazzi[1], Maria Pia Ciocci[1], Nicoletta Bianchini[1]
[1] Department of Civil Engineering, ISISE, University of Minho 4800-058 Azurem, Guimaraes.
Simulation of blind pre-diction and post-diction shaking table tests on a masonry building aggregate using a continuum modelling approach
Bulletin of Earthquake Engineering. https://doi.org/10.1007/s10518-023-01666-2

University of Porto
Bruno Miguel Barros dos Santos
Analysis of the structural behavior of piles in fiber-reinforced concrete subjected to horizontal forces
Dissertation submitted for partial satisfaction of the requirements of the degree of Master in Civil Engineering – specialization in structures and geotechnics.
Advisor: Professor Mário Jorge Seixas Pimentel. March 2023

University of Porto and Mota-Engil
Rui Valente[1], Mário Pimentel[1], Carlos Sousa[1] and José Rui Pinto[2]
[1] Faculty of Engineering, University of Porto, Portugal
[2] Mota-Engil, Engenharia e Construção S.A., Portugal
Precast bridge deck for railway using HPFRC and UHPFRC
Building for the Future: Durable, Sustainable, Resilient. fib Symposium 2023. Lecture Notes in Civil Engineering, vol 350. Springer, Cham. https://doi.org/10.1007/978-3-031-32511-3_180

University of Porto, Instituto Politécnica de Viana do Castelo and Mota-Engil
Lucas Carvalho[1], Mario Pimentel[1], António Arêde[1], Nelson Vila Pouca[1], Pedro Degaldo[1,2] and José Rui Pinto[3]
[1]Construct, Faculty of Engineering, University of Porto, Porto, Portugal
[2]proMetheus, Instituto Politécnico de Viana do Castelo, Viana do Castelo, Portugal
[3]Mota-Engil, Engenharia e Construção S.A., Porto, Portugal

Design of Pre-cast Two-Column Bents Using Strut-and-Tie Models and Nonlinear Finite Element Analysis. International Symposium of the International Federation for Structural Concrete. *fib* Symposium 2023: Building fort he Future: Durable, Sustainable, Resilient pp 1732-1741.

Portugal/Spain

University of Minho (Portugal), Consejo Superior de Investigaciones Científicas (CSIC) (Spain).

Javier Ortega [a,b], , Nuno Mendes [b], Graça Vasconcelos [b]

[a] Instituto de Tecnologías Físicas y de la Informaci´on "Leonardo Torres Quevedo", Consejo Superior de Investigaciones Científicas (CSIC), C/Serrano 144, 28006 Madrid, Spain

[b] University of Minho, ISISE, ARISE, Department of Civil Engineering, Guimar˜aes, Campus de Azur´em, 4800-058 Guimaraes, Portugal

Structural behavior of steel tie connections in masonry veneer walls: Proposal of a simplified approach for practice. Elsevier Structures 55 (2023) 1159-1171. Journal homepage: www.elsevier.com/locate/structures

Saudi Arabia

King Abdullah University of Science and Technology

Kaja Gruntkowska, Alexander Tyurin and Peter Richtárik

King Abdullah University of Science and Technology, Thuwal, Saudi Arabia.

EF21-P and Friends: Improved Theoretical Communication Complexity for Distributed Optimization with Bidirectional Compression. Proceedings of the 40 th International Conference on Machine Learning, Honolulu, Hawaii, USA. PMLR 202, 2023.

Spain

UPC Barcelona

Paul Luna Castilla, Escola de Camins, Excola Tècnica Superior d'Enginyera de Camins, Canals i Ports. UPC BarcelonaTECH. Department of Civil and Environmental Engineering. January 2022.

Numerical Modeling of the Cyclic Response of Reinforced Concrete Walls using Continuum Finite Element Models. Final Thesis, Master in Structural and Construction Engineering,

Universitat Politècnica de Catalunya and Applus+ Laboratories

Ignasi Mundó [1,2], Mathieu Ichard[2], Ferhun Caner[1] and Antonio Mateo[1]

1 Center for Research in Structural Integrity, Reliability and Microme-chanics of Materials, Universitat Politècnica de Catalunya (UPC), Bar-celona, Spain

2 Applus+ Laboratories. Fire and In-dustrial Products Laboratory. Product Conformity B.U. Campus UAB, Carrer de la Font del Carme, s/n, 08193 Bellaterra, Spain

Predictive modelling of the cross-sectional reduction of smoke extraction ducts under fire resistance test. The Authors. Published by Ernst & Sohn GmbH. ce/papers 6 (2023), No. 3-4 2023.

Sri Lanka/United Kingdom
Sri Lanka Institute of Information Technology and School of Natural and Built Environment

Gobithas Tharmarajah[1], Su Taylor[2] and Desmond Robinson[2]
[1] Department of Civil Engineering, Faculty of Engineering, Sri Lanka Institute of Information Technology,
New Kandy Road, Malabe 10115, Sri Lanka
[2] School of Natural and Built Environment, Queen's University Belfast, Belfast BT9 5AG, UK.

Experimental and Numerical Investigation of Compressive Membrane Action in GFRP-Reinforced Concrete Slabs. Polymers 2023, 15, 1230.
https://doi.org/10.3390/polym15051230

Sweden
Chalmers University of Technology

Pär Nässlander
Database for training predictive AI-based assessment algorithms in Structural Health Monitoring
Master"s thesis in the Master"s Programme Structural Engineering and Building Technology

Switzerland
ETH Zurich

López López, David; Bernat-Maso, Ernest; Saloustros, Savvas; Gil, Lluís; Roca, Pere
Experimental testing and structural analysis of composite tile – reinforced concrete domes.
Engineering Structures 292, https://doi.org/10.1016/j.engstruct.2023.116512

Switzerland/Spain
ETH Zurich, Universitat Politècnica de Catalunya and École Polytechnique Fédérale de Lausanne.

David López López [a], Ernest Bernat Maso [b], Savvas Saloustros [c], Lluís Gil [d], Pere Roca [e]
[a] ETH Zurich, Department of Civil, Environmental and Geomatic Engineering, Switzerland
[b] Universitat Politècnica de Catalunya, Laboratory for the Technological Innovation of Structures and Materials, Spain
[c] École Polytechnique Fédérale de Lausanne, Earthquake Engineering and Structural Dynamics Laboratory, Switzerland
[d] Universitat Politècnica de Catalunya, Department of Strength of Materials and Engineering Structures, Spain
[e] Universitat Politècnica de Catalunya, Department of Civil and Environmental Engineering, Spain

Experimental testing and structural analysis of composite tile – reinforced concrete domes. Engineering Structures, Volume 292, 1 October 2023, 116512

Switzerland, Italy, Canada, Germany and Portugal

EFPL, University of Pavia, McGill University, RWTH Aachen University and LNEC

I. Tomić[1], A. Penna[2], M. de Jong[3], C. Butenweg[4], A. A. Correia[5] and P. X. Candeias[5]
[1] Earthquake Engineering and Structural Dynamics Laboratory (EESD), School of Architecture, Civil and Environmental Engineering (ENAC), Ecole Polytechnique Federale de Lausanne (EPFL), Lausanne, Switzerland
2 Department of Civil Engineering and Architecture (DICAr), University of Pavia, Pavia, Italy
3 Department of Civil Engineering, McGill University, Montreal, Quebec, Canada
4 Center for Wind and Earthquake Engineering, RWTH Aachen University, Aachen, Germany
5 National Laboratory for Civil Engineering (LNEC), Lisboa, Portugal
Shake-table testing of a stone masonry building aggregate: overview of blind prediction study. Bulletin of Earthquake Engineering https://doi.org/10.1007/s10518-022-01582-x. © The Author(s) 2023

Thailand

King Mongkut's University of Technology Thonburi

Thanapon Tipsunavee, Goran Arangjelovski and Pornkasem Jongpradist
Construction Innovations and Future Infrastructures Research Center, Department of Civil Engineering, Faculty of Engineering, King Mongkut's University of Technology Thonburi, Bangkok 10140, Thailand;
Numerical Analysis on Effects of Soil Improvement on Pile Forces on Existing High-Rise Building. Buildings **2023**, 13, 1523.
https://doi.org/10.3390/buildings13061523

Turkey

Hacettepe University and Ankara University

Ayhan Doğan[1] and Ünal Dikmen[2]
[1] Hacettepe University, Başkent OSB Vocational Higher School of Technical Sciences, Ankara,Turkey, ORCID: 0000-0002-9872-8889
[2] Ankara University, Faculty of Engineering, Geophysical Engineering, Ankara, Turkey, ORCID: 0000-0002-7603-4296
Site response analysis by generating a new 3-D mesh design with surface topography: a 3-D site response analysis of Northwest Turkey. Research Square, July 19th, 2023. DOI: https://doi.org/10.21203/rs.3.rs-3163395/v1

Istanbul Metropolitan Municipality, Istanbul Technical Univ. Dept. of Civil Engeering, Istanbul Technical Univ. Dept. of Architecture and General Directorate of Highways (KGM)

Vildan G. Mentese [a], Oguz Gunes[b],
Oguz C. Celik [c], Burcu Gunes [b], Ayse Avsin [d], Mehmet Yaz [d]
[a] Istanbul Metropolitan Municipality – Dept. of Cultural Assets Conservation, Turkey
[b] Istanbul Technical University, Dept. of Civil Engineering, Turkey
[c] Istanbul Technical University, Dept. of Architecture, Turkey
[d] General Directorate of Highways (KGM), Turkey

Experimental collapse investigation and nonlinear modeling of a single-span stone masonry arch bridge. Engineering Failure Analysis. Volume 152, October 2023, 107520.

Inonu Unversity and Firat University

Alper Özmen[1] and Erkut Sayin[2]
[1] Inonu University, Department of Civil Engineering Malatya, Turkey
[2] Firat University, Department of Civil Engineering, Elazig, Turkey

3D Soil Structure Interaction Effects on the Seismic Behavior of Single Span Historical Masonry Bridge. Geotechnical and Geological Engineering 41(4):1-19, March 2023. **DOI:10.1007/s10706-023-02389-6**

United Kingdom/Australia

Teesside University (United Kingdom), University of Newcastle (Australia) and University of Technology Sydney (Australia).

Imrose B. Muhit[a], Mark G. Stewart[b] and Mark J. Masia[c]
[a] School of Computing, Engineering and DigitalTechnologies, Teesside University, Middlesbrough, United Kingdom
[b] Centre for Built Infrastructure Resilience, University of Technology Sydney, Ultimo, Australia.
[c] Centre for Infrastructure Performance and Reliability, University of Newcastle, Callaghan, Australia.

Structural Reliability Assessment of Safety Factors for Unreinforced Masonry Veneer Walls Subjected to Out-of-plane Loading. 14th North American MASONRY CONFERENCE. Omaha, NE, USA, June 11-14, 2023.

Imrose B. Muhit [a], Mark J. Masia [b], Mark G. Stewart [c]
[a] School of Computing, Engineering and DigitalTechnologies, Teesside University, Middlesbrough, United Kingdom
[b] Centre for Infrastructure Performance and Reliability, University of Newcastle, Callaghan, Australia.
[c] Centre for Built Infrastructure Resilience, University of Technology Sydney, Ultimo, Australia.

Failure analysis and structural reliability of unreinforced masonry veneer walls: Influence of wall tie corrosion. Engineering Failure Analysis, Volume 151, September 2023, 107354.

United Kingdom/Italy
University College London and Università degli Studi di Trento

Luca Possidente[1] and Jérôme Randaxhe[2]
[1] University College London
[2] Università degli Studi di Trento

USA
University of Texas

Tanvir Mahmud and Diana Marculescu
The University of Texas at Austin

AVE-CLIP: AudioCLIP-based Multi-window Temporal Transformer for Audio Visual Event Localization. Computer Vision Foundation.

New Jersey Institute of Technology

Jin Fan – Graduate Research Assistant (corresponding author), New Jersey Institute of Technology, Department of Civil and Environmental Engineering, Newark, NJ, USA,
Matthew P. Adams, Ph.D**.** – Associate Professor, New Jersey Institute of Technology, Department of Civil and Environmental Engineering, Newark, NJ, USA.
Matthew J. Bandelt, Ph.D**.** – Associate Professor, New Jersey Institute of Technology, Department of Civil and Environmental Engineering, Newark, NJ, USA.

Service Life Prediction of RC and UHPC Bridge Decks Exposed to Regional Environments. Third International Interactive Symposium on Ultra-High Performance Concrete 2023. Publication type: Full paper Paper No: 29.

Joseph A. Almeida – Graduate Research Assistant, New Jersey Institute of Technology, Department of Civil and Environmental Engineering, Newark, NJ.
Matthew J. Bandelt, Ph.D. P.E. (corresponding author) – Associate Professor and Associate Dean for Research and Graduate Studies, New Jersey Institute of Technology, Department of Civil and Environmental Engineering, Newark, NJ,

Effects of Axial Load and Tensile Strength on Reinforced UHPC Plastic Hinge Length

USA/The Netherlands
AECOM and DIANA FEA

Dr. Navid Allahverdi[1], Dr. Mehdi Bakhshi[1], Dr. Maziar Partovi[2] and Dr. Verya Nasr[1]
[1]AECOM, 125 Broad St. 16th Floor, New York, NY 10004 USA
[2]DIANA FEA BV, Thijsseweg 11, 2629 JA Delft, The Netherlands

3D-nonlinear finite element analysis of staged shield-driven tunnel excavation with a focus on response of segmental tunnel lining. Geomechanics and Tunnelling. Volume 16, Issue 1, February 2023, pages 60-67.

6. Memberslist 2023

ABT
L. v.d. Meer
P.O. Box 82
6800 AB Arnhem
l.vd.meer@abt.eu

Ane de Boer Technisch Advies
A. de Boer
Magnoliaplein 3
6823 NM Arnhem
ane1deboer@gmail.com

Arcadis Nederland B.V.
C. van der Vliet
P.O. Box 220
3800 AE AMERSFOORT
coen.vandervliet@arcadis.com

Delft University of Technology
Faculteit CITG
Sectie Gebouwen & Civieltechnische constructies
Y. Yang
P.O. Box 5024
2600 GA Delft
Yuguang.yang@tudelft.nl

Delft University of Technology
Faculteit Bouwkunde
A. Borgart
P.O. Box 5024
2600 GA Delft
A.Borgart@tudelft.nl

Delft University of Technology
Faculteit CITG, Sectie Constructiemechanica
J.G. Rots
P.O. Box 5024
2600 GA Delft
j.g.rots@tudelft.nl

NLyse Consultants
A. Van den Bos
Vlamoven 34
6826 TN Arnhem
 a.vandenbos@NLyseConsultants.com

NTNU Faculty of Engineering Science and Technology
K.V.Høiseth

Department of Structural Engineering
Richard Birkelands vei 1a
7491 Trondheim, Norway
Karl.hoiseth@ntnu.no

Rijkswaterstaat GPO
J. de Boon
P.O. Box 8185
3502 RD Utrecht
johan.de.boon@rws.nl

Royal HaskoningDHV
N. Vollema
P.O. Box 151
6500 AD Nijmegen
nynke.vollema@rhdhv.com

TNO Applied Geosciences
L. Buijze
P.O. Box 80015
3508 TA Utrecht
loes.buijze@tno.nl

TNO Structural Reliability
R. Tai
P.O. Box 155
2600 AD Delft
ricky.tai@tno.nl

Universitat Politècnica de Valencia – ICITECH
Juan Navarro-Gregori / Eduardo J. Mezquida-Alcaraz
Camino de Vera s/n
460022 Valencia, Spain
juanagre@cst.upv.es / edmezal@alumni.upv.es

Wagemaker
D. Schoenmakers
Burgemeester Burgerslaan 44/30
5245 NH Rosmalen
D.Schoenmakers@wagemaker.nl

Witteveen+Bos
F. Kaalberg
P.O. Box 233
7400 AE Deventer
f.kaalberg@witteveenbos.com

Corresponding Members:

DIANA FEA BV
M. Partovi
Thijsseweg 11
2629 JA Delft
m.partovi@dianafea.com