



BCIT Civil Engineering Department

Publication List

2013-Present

Peer Reviewed Journal Publications and Books

Bazargani, P. and Adebar, P. (2015). "Interstory Drifts from Shear Strains at Base of High-Rise Concrete Shear Walls." ASCE Journal of Struct. Eng., 04015067.

Bazargani, P., Adebar, P., DeVall, R., and Anderson, D.L. (2015). "Nonlinear Analysis of Shear Wall Foundation Rocking", Proceedings of the 11th Canadian Conference on Earthquake Engineering, Victoria, BC, Canada.

Adebar, P., DeVall, R., **Bazargani, P.**, and D.L. Anderson (2014). "Seismic Design of Foundations: The 2015 Canadian Building Code", 10th U.S. National Conference on Earthquake Engineering, Anchorage, Alaska, USA.

Jain, S.K., and **Brzev, S.** (2015). Promoting Sustainable and Earthquake-Safe Building Construction Practices in India, Canadian Civil Engineer, Spring 2015, pp. 29-32.

Jain, S.K., **Brzev, S.**, and Rai, D.C. (2015). Use of Confined Masonry for Improved Seismic Safety of Buildings in India, The Bridge and Structural Engineer, Indian National Group of the International Association for Bridge and Structural Engineering, Vol.45, No.1, pp.28-38.

Hatzinikolas, M., Korany, Y., and **Brzev, S.** (2015). Masonry Design for Architects and Engineers, Fourth Edition, Canadian Masonry Publications, Edmonton, AB, Canada.

Perez Gavilan, J.J., **Brzev, S.**, et al. (2015). Análisis de Estructuras de Mampostería, Sociedad Mexicana de Ingeniería Estructural, Comité de Mampostería, Mexico (Analysis of Masonry Structures, in Spanish).



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Jain, S.K ., **Brzev, S.**, Bhargava, L.K., Basu, D., Ghosh, I., Rai, D.C., and Ghaisas, K.V. (2015). Campus on the Sabarmati IIT Gandhinagar: Confined Masonry for Residential Construction. Indian Institute of Technology Gandhinagar, India.

Brzev, S., Scawthorn, C., Charleson, A.W., Allen, L., Greene, M., Jaiswal, K., and Silva, V. (2013). GEM Building Taxonomy v2.0, GEM Building Taxonomy Global Component, Global Earthquake Model, ROSE School, Pavia, Italy (www.nexus.globalquakemodel.org/gem-building-taxonomy/posts)

Allen L., Charleson A. W., **Brzev, S.**, and Scawthorn C. (2013). Glossary for the GEM Building Taxonomy, GEM Building Taxonomy Global Component, Global Earthquake Model, ROSE School, Pavia, Italy (www.nexus.globalquakemodel.org/gem-building-taxonomy/posts)

Chan, C.C.V., Lari, K., Soulsbury, K., Use of a Biochar and Biosand Filter to Remove Chemical Contaminants from Drinking Water in Rural Communities in Low Income Countries, *Original Paper submitted to the International Journal of Environmental Science and Technology, March 2018*

Chan, C.C.V., Neufeld, K., Cusworth, D., Gavrilovic, S., Ngai, T. (2015) Investigation of the Effect of Grain Size, Flow Rate and Diffuser Design on the CAWST Biosand Filter Performance, *International Journal for Service Learning in Engineering*, 10(1), 1-23.

Karimi, K., Tait, M. J., and El-Dakhakhni, W. W. (2013), Analytical modeling and design of a novel FRP-encased steel-concrete composite column with various slenderness ratios, *Journal of Engineering Structures*, 46: 526-534.



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Krpan, R. N. (2013). Wind-driven rain on the walls of buildings in Metro Vancouver: Parameters for rain penetration testing of window assemblies. Thesis presented in partial fulfillment of the requirements for the Degree of Master of Applied Science in Building Engineering, Concordia University, Montreal, Quebec.

Brzev, S., **Pandey, B.**, Maharjan, D. and Ventura, C. (2017) "Seismic Vulnerability Assessment of Low-Rise Reinforced Concrete Buildings Affected by the 2015 Gorkha, Nepal Earthquake". *Earthquake Spectra*: December 2017, Vol. 33, No. S1, pp. S275-S298.

Pandey, B. and Brzev, S. (2017). "Rural Housing: Performance of Vernacular Stone Masonry Buildings." *Report on the M7.8 Gorkha, Nepal Earthquake on April 25, 2015 and its Aftershocks*, Canadian Association of Earthquake Engineering (CAEE), ISBN: 978-0-9685376-2-6, Pp 64-81

Pandey, B. (2017). "Performance of Schools." *Report on the M7.8 Gorkha, Nepal Earthquake on April 25, 2015 and its Aftershocks*, Canadian Association of Earthquake Engineering (CAEE), ISBN: 978-0-9685376-2-6, Pp 82-95

Brzev, S., **Pandey, B.** and Pao, J. (2017). "Urban Housing: Performance of Reinforced Concrete Buildings." *Report on the M7.8 Gorkha, Nepal Earthquake on April 25, 2015 and its Aftershocks*, Canadian Association of Earthquake Engineering (CAEE), ISBN: 978-0-9685376-2-6, Pp 43-62

Petal, M., Baral, S., Giri, S., Rajbanshi, R., Gajurel, S., Paci-Green, R., **Pandey, B.**, Shoaf, K. (2017). Research Report: Causes of Deaths and Injuries in the 2015 Gorkha Earthquake, Save the Children, in cooperation with Health Research and Development Forum with support from: Red Cross Global Disaster Preparedness Center, National Society for Earthquake Technology–Nepal (NSET), Risk RED, and Nepal Risk Reduction Consortium.



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Pandey, B., Brzev, S., Culbert, R. and Schoenfeld, G. (2017). "Illustrated Guidelines for Construction of Stone Masonry Houses in Seismic Regions of Nepal." NRA, BWB-Canada, BCIT, RJC and UNDP-Nepal.

Paci-Green, R., **Pandey, B.** (2016). "School Construction as Catalysts for Community Change: Evidence from Safer School Construction Projects in Nepal," *International Journal of Mass Emergencies and Disasters*, Nepal Earthquake special issue, 34(3):32-54

Paci-Green, R. and **Pandey, B.** (2015). "Towards Safer School Construction: A Community-based Approach", Save the Children, Global Facility for Disaster Reduction and Recovery, UNESCO, Arup International Development, and Risk RED, Melbourne: Save the Children. Pp 93

Paci-Green, R., **Pandey, B.** and Friedman, R. (2015). "Safer Schools, Resilient Communities: A comparative Assessment of School Safety after the 2015 Nepal (Gorkha) Earthquake." Risk RED.

Petal, M., Wisner, B., Kelman, I., Alexander, D., Cardona, O., Benouar, D., Bhatia, S., Bothara, J., Dixit, A., Green, R., Kandel, R., Monk, T., **Pandey, B.**, Rodgers, J., Sanducvac, Z. and Shaw, R. (2015). School seismic safety – case studies, *Encyclopedia of Earthquake Engineering*, Article ID 398245, Chapter ID 406. Beer, M., Patelli, E., Koughioumtzoglou, I., Au, I., eds., Springer-Verlag Berlin Heidelberg Publications, DOI 10.1007/978-3-642-36197-5_406-1.

Alexander, D. Bhatia, S., Benouar, D., Bothara, J., Cardona, O. Dixit, A., Green, R., Gupta, M., Kandel, R., Kelman, I., Monk, T., **Pandey, B.**, Petal, M., Sanducvac, Z., Shaw, R., Wisner, B. (2015). School seismic safety – case studies, *Encyclopedia of Earthquake Engineering*, Article ID 398245, Chapter ID 406. Beer, M., Patelli, E., Koughioumtzoglou, I., Au, I., eds., Springer-Verlag Berlin Heidelberg Publications, DOI 10.1007/978-3-642-36197-5_406-1.



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Talukdar, S., Heere, R., Sappakittipakorn, M., McAskill, N., (2016). "Lessons learnt from the shotcrete repair of the Powell River concrete hulks, and their applicability to other marine structures". Innovations in Corrosion and Materials Science. Article ID: ICMS-16-9885.

Talukdar, S., Banthia, N., (2016). "Carbonation in Concrete Infrastructure in the Context of Global Climate Change: Model Refinement and Representative Concentration Pathway Scenario Evaluation". Journal of Materials in Civil Engineering, 28(4), Article ID: 04015178.

Talukdar, S., Banthia, N., Grace, J., (2015). "Modelling the effects of structural cracking on carbonation front advance into concrete". International Journal of Structural Engineering, 6(1):73-87.

Zanotti, C., **Talukdar, S.**, Banthia, N., (2014). "Chapter 4: A State-of-the-Art on Concrete Repairs and Some Thoughts on Ways to Achieve Durability in Repairs". Infrastructure Corrosion and Durability - a sustainability study. OMICS E-Books.

Talukdar, S., Banthia, N., Grace, J., Cohen, S., (2013). "Climate change-induced carbonation of concrete infrastructure". Proceedings of the ICE – Construction Materials, 167(3):140-150.

Talukdar, S., Banthia, N., (2013). "Carbonation in concrete infrastructure in the context of global climate change: development of a service lifespan model". Construction and Building Materials, 40:775-782.

Talukdar, S., Banthia, N., Grace, J., Cohen, S. (2013). "Carbonation in concrete infrastructure in the context of global climate change—Part 2: Canadian urban simulations". Cement and Concrete Composites, 34(8):931-935.



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2013-Present

Talukdar, S., Banthia, N., Grace, J., (2013). "Carbonation in concrete infrastructure in the context of global climate change—Part 1: Experimental results and model development". *Cement and Concrete Composites*, 34(8):924-930.

Conference Publications, Talks and Poster Presentations

Centeno, J., Ventura, C., **Brzev, S.**, and Anderson, D.L. (2015). Estimating Sliding Shear Displacements in Reinforced Masonry Shear Walls, Proceedings, 11th Canadian Conference on Earthquake Engineering, Canadian Association for Earthquake Engineering, Victoria, BC, Canada.

Robazza, B.R., **Brzev, S.**, et al. (2015). Effect of In-Plane Reversed Cyclic Loading on the Out-of-Plane Stability of Reinforced Masonry Shear Walls, Proceedings, 11th Canadian Conference on Earthquake Engineering, Canadian Association for Earthquake Engineering, Victoria, BC, Canada.

Chane, P., **Brzev, S.**, Booth, J., McEwen, B., and Gupta, R. (2015). Mechanical Properties of Low-Strength Concrete Blocks Simulating Construction in Developing Countries, Proceedings, 12th North American Masonry Conference, Denver, CO, USA.

Robazza, B.R., **Brzev, S.**, et al. (2015). A Study on the Out-of-Plane Stability of Ductile Reinforced Masonry Shear Walls Subjected to In-Plane Reversed Cyclic Loading, Proceedings, 12th North American Masonry Conference, Denver, CO, USA.

Allen, L., **Brzev, S.**, Charleson, A.W., Scawthorn, C., and Silva, V. (2015). GEM Building Taxonomy - an Open Global Building Classification System, Proceedings of the 15th NZSEE Conference, New Zealand.



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2013-Present

Hart, T., and **Brzev, S.** (2014). The Confined Masonry Network's Design and Construction Guidelines. Proceedings of the Tenth U.S. National Conference on Earthquake Engineering, Anchorage, Alaska.

Von Rotz, U., Yang, T.Y., **Brzev, S.**, and Stojadinovic, B. (2014). Seismic Performance Evaluation of an Unreinforced Masonry Building in Switzerland. Proceedings of the Tenth U.S. National Conference on Earthquake Engineering, Anchorage, Alaska.

Jain, S.K., Basu, D., Ghosh, I., Rai, D.C., **Brzev, S.**, and Bhargava, L.K. (2014). Application of Confined Masonry in a Major Project in India. Proceedings of the Tenth U.S. National Conference on Earthquake Engineering, Anchorage, Alaska.

Robazza, B., Elwood, K., Anderson, D., and **Brzev, S.** (2013). In-Plane Seismic Behaviour of Slender Reinforced Masonry Shear Walls: Experimental Results. Proceedings of the 12th Canadian Masonry Symposium, Vancouver, Canada.

Centeno, J., Ventura, C., **Brzev, S.**, and Anderson, D. (2013). Sliding Shear Resistance of Squat Reinforced Masonry Squat Walls under Seismic Loading. Proceedings of the 12th Canadian Masonry Symposium, Vancouver, Canada.

Krisanova, J., Ojdovic, N., and **Brzev, S.** (2013). Seismic Analysis of the West Block Parliament Building in Ottawa – Challenges and Approach. Proceedings of the 12th Canadian Masonry Symposium, Vancouver, Canada.



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Chan, C.C.V., Ferraby, J., Lari, K., Ip, M., Soulsbury, K. (2017) Chemical Contaminant Removal in Drinking Water Using Biosand/biochar Filters, Presented at IWA Water and Development Congress, Buenos Aires, Argentina

Ferraby, J., **Chan, C.C.V.** (2015) The Use of Biochar to Remove Pesticides from Drinking Water, Water and Environment Student Talk (WEST) Conference, University of British Columbia, Vancouver, B.C.

Kim, J., **Chan, C.C.V.** (2015) Effect of Prolonged Inactivity of Biosand Filter on Water Quality, Water and Environment Student Talk (WEST) Conference, University of British Columbia, Vancouver, B.C.

Pandey, B. (2018). Invited Speaker, "Engineers and Tradespersons at the Doorsteps of Communities", Symposium on Understanding Risk in the Built Environment, BC Construction Association, Victoria, Canada

Pandey, B. (2018). Invited speaker (Remote Presentation) "Findings and Recommendations of Research on Causes of Deaths and Injuries in the 2015 Nepal Earthquake", National Symposium on Earthquake Disaster Management and Risk Reduction in Nepal, Ministry of Home Affairs, Government of Nepal, Kathmandu

Pandey, B., Paci-Green, R. and Ventura, C. (2017) Comparative Assessment of Performance of School Buildings in the 2015 Gorkha (Nepal) Earthquakes". Proceedings of the 16th world Conference on Earthquake Engineering, Santiago, Chile.

Brzev, S., **Pandey, B.**, Maharjan, D. and Ventura, C. (2017) "Seismic Vulnerability Index for Low-Rise Reinforced Concrete and Masonry Buildings". Proceedings of the 16th world Conference on Earthquake Engineering, Santiago, Chile.



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Pandey, B. (2017). Invited speaker. International practice of seismic code revisions. Seminar on revision of NBC105, Nepal engineers Association, Lalitpur, Nepal.

Pandey, B. (2017) Invited speaker. Application of confined masonry in Nepalese context, Seminar on confined masonry initiative in Nepal, Institute of Engineering, Tribhuvan University, Nepal

Pandey B. (2017). Speaker, Post-earthquake Reconstruction: Technology at the Doorsteps, 2- days Workshop on Reconstructing Nepal: Politics and Practice after the 2015 Earthquake, University of British Columbia, Vancouver.

Pandey, B. (2016). Keynote speaker, The 2015 Nepal Earthquake and Research on Reducing vulnerability of Masonry Buildings, Annual 2016 Dinner of Masonry Institute of British Columbian, Vancouver

Pandey, B. (2015). Invited speaker, Impact of Gorkha Earthquake to Schools and Low- rise Reinforced Concrete Buildings, Structural Seminar of Graduate program of Dept. of Civil Engineering, UBC, and Vancouver.

Pandey, B. (2015). Invited speaker, Community Engagement in Reconstruction Technology, Seminar organized by Institute of Asian Research and Himalaya Program, UBC

Pandey, B. (2015). Speaker, "Damage to Schools and Low- rise Reinforced Concrete Buildings from the 2015 Gorkha earthquake" , Seminar organized by Structural Engineers Association of BC (SEABC), Vancouver.



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2013-Present

Pandey, B. , Ventura, C.E., RioFrio, P. , Pummell, J. and Dowling, S., “ Development of Response Plan of Airport for Mega Earthquakes in Nepal.” Proceedings of the 10th National Conference in Earthquake Engineering, Earthquake Engineering Research Institute, Anchorage, AK, USA, 2014.

Pandey, B. (2014). Keynote speaker, “Making Schools Safe in the Republic of Kyrgyzstan: Technical and Policy Issues” national workshop on school safety, Ministry of Education of Republic of Kyrgyzstan and UNICEF, Bishkek, Kyrgyzstan.

Bown, K., **Talukdar, S.**, Brzev, S., Nguyen, B., Zhang, C., Booth, J., Cox, N. (2017). “The Effects of Adjusting Aggregate Fineness and Mix Proportions to Produce Concrete Masonry Blocks of Various Strengths”. Proceedings of the 6th International Conference on Engineering Mechanics and Materials, Vancouver, Canada, June, 2017

Booth, J., Bown, K., Nguyen, B., Zhang, C., Song, B., Mendoza, M., **Talukdar, S.**, Cox, N. (2017). "Non-Destructive Acoustic Evaluation of Masonry Compressive Strength". Proceedings of the 6th International Conference on Engineering Mechanics and Materials, Vancouver, Canada, June, 2017

Talukdar, S., Banthia, N., Bindiganavile, V., (2015). “How do accelerated carbonation tests affect the natural morphology and transport characteristics of concrete?”. Proceedings of the Fifth International Conference on Construction Materials, Whistler, Canada. August, 2015.

Talukdar, S., Banthia, N., Grace, J., Cohen, S., (2015). “Climate Change Induced Corrosion of Concrete Infrastructure”. American Concrete Institute, Spring Convention. April 13, 2015. Kansas City, USA.

Talukdar, S., Banthia, N., (2013). “Understanding the Consequences of Global Climate Change on the Durability of Our Concrete Infrastructure”. International Doctoral Symposium in Structural and Hydraulic Engineering: Disaster, Prevention, Mitigation and Restoration. February 7, 2013. Hokkaido, Japan.



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