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### **Selected Publications:**

#### **Book:**

Suhasini N. Madhekar, and Vasant A. Matsagar, "Passive Vibration Control of Structures", CRC Press, Taylor and Francis Group, UK.

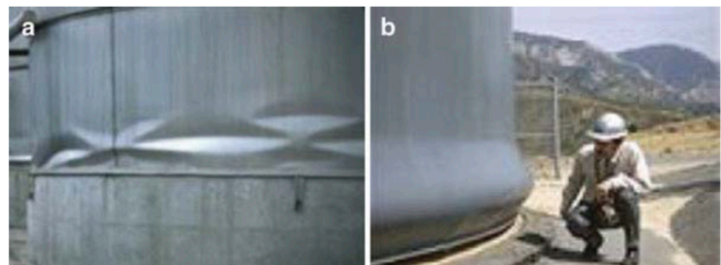
#### **Journal Articles, etc.:**

Aruna Rawat, V. A. Matsagar, and A. K. Nagpal, "Free Vibration Analysis of Thin Circular Cylindrical Shell with Closure using Finite Element Method", International Journal of Steel Structures, Springer (SCI-IF = 0.609), 2019

Anil Kumar, Sandip Kumar Saha, and Vasant A. Matsagar, "Stochastic Response Analysis of Elastic and Inelastic Systems with Uncertain Parameters under Random Impulse Loading", Journal of Sound and Vibration, Elsevier (SCI-IF = 3.123) 114899, 2019

Pratik Bhatt, Venkatesh Kodur, and Vasant Matsagar, "Numerical Approach to Evaluate Elevated Temperature Behavior of Steel Fiber Reinforced Concrete Columns", Indian Concrete Journal, Volume 93, No. 8, 2019, pp. 8-15.

S. Chandra, K. Sepahvand, V.A. Matsagar, and S. Marburg, "Stochastic Dynamic Analysis of Composite Plate with Random Temperature Increment", Composite Structures, Elsevier (SCI-IF = 4.829), Volume 226, 111159, 2019



**Fig. 1** (a) Diamond shape and (b) elephant foot buckling of tanks (source: NISEE e-Library)

From: Sandip Kumar Saha and Vasant Matsagar, "Reliability of base-isolated liquid storage tank under horizontal base excitation", Chapter in: Numerical Methods for Reliability Assessment: Multiscale and Multiphysics Systems, S. Kadry and A. El Hami (Editors), Springer, 2015

Manisha V. Waghmare, Suhasini N. Madhekar, Vasant A. Matsagar, "Semi-Active Fluid Viscous Dampers for Seismic Mitigation of RC Elevated Liquid Storage Tanks", *International Journal of Structural Stability and Dynamics*, World Scientific (SCI-IF = 1.617), Volume 19, No. 3, 1950020, 2019

Aruna Rawat, Vasant A. Matsagar, and A.K. Nagpal, "Numerical Study of Base-Isolated Cylindrical Liquid Storage Tanks using Coupled Acoustic-Structural Approach", *Soil Dynamics and Earthquake Engineering*, Elsevier (SCI-IF = 2.077), Volume 119, 2019, pp. 196-219,

Aruna Rawat, Matsagar V. A., and Nagpal A. K. "Seismic Analysis of Steel Cylindrical Liquid Storage Tank Using Coupled Acoustic-Structural Finite Element Method", *International Journal of Acoustics and Vibration*, *Nauchno-tekhnicheskii Tsent* (SCI-IF = 0.375), 2019.

R. S. B. Rathod, M. D. Goel, Tanusree Chakraborty, Vasant Matsagar, Pierrick Guégan, and Christophe Binetruy, "Experimental and Numerical Investigations on Dynamic Behavior of CFRP Laminates", *SN Applied Sciences*, Springer, Volume 1, No. 7, 2019, pp. 736.

Arundhuti Banerjee, Tanusree Chakraborty, and Vasant Matsagar, "Stochastic Dynamic Analysis of an Offshore Wind Turbine Considering Frequency-Dependent Soil-Structure Interaction Parameters", *International Journal of Structural Stability and Dynamics*, World Scientific (SCI-IF = 1.617), 2018

Sandip Kumar Saha, Kheirollah Sepahvand, Vasant A. Matsagar, Arvind K. Jain, and Steffen Marburg, "Fragility Analysis of Base-Isolated Liquid Storage Tanks under Random Sinusoidal Base Excitation using Generalized Polynomial Chaos Expansion Based Simulation", *Journal of Structural Engineering*, American Society of Civil Engineers (ASCE) (SCI-IF = 1.7), 04016059, 2016

Aruna Rawat, Vasant Matsagar, and A. K. Nagpal, "Finite Element Analysis of Thin Circular Cylindrical Shells", *Proceedings of the Indian National Science Academy (INSA)*, Volume 82, No. 2, 2016, pp. 349-355

S. K. Saha, V. A. Matsagar, and A. K. Jain, "Seismic Fragility of Base-Isolated Water Storage Tanks under Non-Stationary Earthquakes", *Bulletin of Earthquake Engineering*, Springer (SCI-IF = 1.899), Volume 14, No. 4, 2016, pp. 1153-1175.

Sandip Kumar Saha, Vasant Matsagar, and Subrata Chakraborty, "Uncertainty Quantification and Seismic Fragility of Base-Isolated Liquid Storage Tanks using Response Surface Models", *Probabilistic Engineering Mechanics*, Elsevier (SCI-IF = 1.717), Volume 43, 2016, pp. 20-35.

Manmohan Dass Goel, Vasant A. Matsagar, and Anil K. Gupta, "Blast Resistance of Stiffened Sandwich Panels with Aluminum Cenosphere Syntactic Foam", *International Journal of Impact Engineering*, Elsevier (SCI-IF = 2.938), Volume 77, 2015, pp. 134-146.

M. D. Goel, P. Altenhöfer, V. A. Matsagar, A. K. Gupta, C. Mundt, and S. Marburg, "Interaction of a Shock Wave with a Closed Cell Aluminum Metal Foam", *Combustion, Explosion, and Shock Waves*, Springer (SCI-IF = 0.889), Volume 51, No. 3, 2015, pp. 373-380.

S. K. Saha, V. A. Matsagar, and A. K. Jain, "Reviewing Dynamic Analysis of Base-Isolated Cylindrical Liquid Storage Tanks under Near-Fault Earthquakes", *The IES Journal Part A: Civil and Structural Engineering*, Taylor & Francis, 2015, pp. 41-61.

Mohammad Nadeem, Tanusree Chakraborty, and Vasant Matsagar, "Nonlinear Buckling Analysis of Slender Piles with Geometric Imperfections", *Journal of Geotechnical and Geoenvironmental Engineering*, American Society of Civil Engineers (ASCE) (SCI-IF = 2.464), Volume 141, No. 1, 2015

Aruna Rawat, V. A. Matsagar, and A. K. Nagpal, "Finite Element Simulation of Cylindrical Liquid Storage Tank under Tri-Directional Components of Earthquake", *Journal of Structural Engineering*, Structural Engineering Research Centre (SERC), India, Volume 42, No. 1, 2015, pp. 28-39.

Sandip Kumar Saha and Vasant Matsagar, "Reliability of base-isolated liquid storage tank under horizontal base excitation", Chapter in: *Numerical Methods for Reliability Assessment: Multiscale and Multiphysics Systems*, S. Kadry and A. El Hami (Editors), Springer, 2015

S. K. Saha, V. A. Matsagar, and A. K. Jain, "Earthquake Response of Base-Isolated Liquid Storage Tanks for Different Isolator Models", *Journal of Earthquake and Tsunami*, World Scientific (SCI-IF = 0.692), Volume 8,

Manmohan Dass Goel, Vasant A. Matsagar, and Anil K. Gupta, "Blast Resistance of Stiffened Sandwich Panels with Aluminum Closed Cell Foam", *Latin American Journal of Solids and Structures* (SCI-IF = 1.106), Volume 11, No. 13, 2014, pp. 2497-2515

Vaibhav Mittal, Tanusree Chakraborty, and Vasant Matsagar, "Dynamic Analysis of Liquid Storage Tank under Blast using Coupled Euler Lagrange Formulations", *Thin-Walled Structures*, Elsevier (SCI-IF = 2.063), Volume 84, 2014, pp. 91-111.

S. K. Saha, K. Sepahvand, V. A. Matsagar, A. K. Jain, and S. Marburg, "Stochastic Analysis of Base-Isolated Liquid Storage Tanks with Uncertain Isolator Parameters under Random Excitation", *Engineering Structures*, Elsevier (SCI-IF = 2.258), Volume 57, 2013, pp. 465-474.

Manmohan Dass Goel, Vasant A. Matsagar, Steffen Marburg, and Anil K. Gupta, "Comparative Performance of Stiffened Sandwich Foam Panels under Impulsive Loading", *Journal of Performance of Constructed Facilities*, American Society of Civil Engineers (ASCE) (SCI-IF = 1.192), Volume 23, No. 5, 2013, pp. 540-549.

S. K. Saha, V. A. Matsagar, and A. K. Jain, "Comparison of Base-Isolated Liquid Storage Tank Models under Bi-Directional Earthquakes", *Natural Science, SCIRP*, Special Issue: Earthquake, Volume 5, No. 8A1, 2013, pp. 27-37.

Manmohan Dass Goel, Tanusree Chakraborty, and Vasant A. Matsagar, "Dynamic Response of Steel-Sand Composite Stiffened Plates under Impulsive Loading", *Journal of Battlefield Technology*, Argos Press, Volume 15, No. 3, 2012, pp. 7-13.

Manmohan Dass Goel, Marco Peroni, George Solomos, Dehi Pada Mondal, Vasant A. Matsagar, Anil K. Gupta, Martin Larcher, and Steffen Marburg, "Dynamic Compression Behavior of Cenosphere Aluminum Alloy Syntactic Foam", *Materials & Design*, Elsevier (SCI-IF = 3.997), Volume 42, 2012, pp. 418-423.

M. D. Goel, V. A. Matsagar, and A. K. Gupta, "Dynamic Response of Stiffened Plates under Air Blast", *International Journal of Protective Structures*, SAGE, Volume 2, No. 1, 2011, pp. 139-155.

Vasant A. Matsagar, "Comparative Performance of Composite Sandwich Panels and Non-Composite Panels under Blast Loading", *Materials and Structures*, Springer (SCI-IF = 2.707), Volume 49, No. 1, 2016, pp. 611-629.

Vasant A. Matsagar, "Computing Stress and Displacement Response of Composite Plates under Blast", *Disaster Advances* (SCI-IF = 2.272), Volume 7, No. 1, 2014, pp. 23-28.