SEKHAR CHANDRA DUTTA

ARTICLE I. DETAILS OF PUBLICATIONS

TOTAL NUMBER OF PUBLICATIONS: 212

Book/ Book Chapter: 2

Publications in Journals: 130

Publications in Conferences: 80

Technical Reports: 3

Articles: 2

Publications of Books

1. Dutta, S. C., and Mukhopadhyay, P. (2012). *Improving earthquake and cyclone resistance of structures: Guidelines for the Indian subcontinent*, ***TERI***, New Delhi, ISBN: 978-81-7993-302-2.
2. Mukhopadhyay. P., and Dutta, S. C. (2018). *Indian Cyclones and Earthquake: Impact of Structures*, **Encyclopaedia of Natural Hazards**, ***CRC press, Chapter-4***.
3. Debnath, P., Dutta, S.C. (2024). Seismic Retrofitting and Strengthening of Structures. In: Singh, S.B., Murty, C.V.R. (eds) *RC Structures Strengthened with FRP for Earthquake Resistance*. Composites Science and Technology. Springer, Singapore. https://doi.org/10.1007/978-981-97-0102-5_6.

Publications in Journals

1. **Dutta, S. C.**, Ansari, G., Dwivedi, A. S., Jha, I., (2024) Impact of incidence angle of seismic excitation on vertically irregular structures, Earthquakes and Structures, An International Journal; Techno-Press (Accepted).

2. Sahu, S. K., Kumar, V., **Dutta, S. C.**, Sarkar, R. Bhattacharya, S., Debnath P. (2024) Structural safety of offshore wind turbines: Present state of knowledge and future challenges. Ocean Engineering. Volume 309, Part 1. DOI: https://doi.org/10.1016/j.oceaneng.2024.118383

3. Kumar, S., **Dutta, S. C.**, Debnath P. (2024) Vulnerability of structures designed with seismic provision due to explosion in mines. Proceedings of the Institution of Civil Engineers-Structures and Buildings. DOI: https://doi.org/10.1680/jstbu.23.00038

4. Debnath, P., **Dutta, S. C**., Halder, L. Choubey, B. (2023) Lateral behaviour of unreinforced masonry walls with different sizes and locations of opening and effect of strengthening measures: a computational approach. Bulletin of Earthquake Engineering. Springer Nature. DOI: https://doi.org/10.1007/s10518-023-01798-5

5. Debnath, P., & **Dutta, S. C.** (2023). In-plane and out-of-plane strength of different masonry bonds along with the effect of some waste materials for strengthening masonry wallets. Journal of Building Engineering, 73, 106766. DOI: https://doi.org/10.1016/j.jobe.2023.106766

6. Hussain M.A, **Dutta S.C,** Das S, Mandal P. (2022) "Influence of Post-elastic Range Bidirectional Interaction for Various Angles of Incidence of Ground Motions on One-story Asymmetric Structures" ***Journal of Earthquake Engineering, Taylor & Francis,*** DOI: https://doi.org/10.1080/13632469.2023.2183047

7. Debnath P., **Dutta S.C.,** Mandal P., (2022) "Lateral behaviour of masonry walls with different types of brick bonds, aspect ratio and strengthening measures by polypropylene bands and wire mesh" ***Structures, Elsevier,*** DOI: https://doi.org/10.1016/j.istruc.2023.01.155

8. Choubey, B. **Dutta, S.C.,** Hussain, M.A, (2022) "Effects of unconfined blast on strategic structures and its protective measures" Structural Engineering and Mechanics, **Techno Press**, DOI: https://doi.org/10.12989/sem.2022.84.2.167

9. Debnath P., Halder L., **Dutta S.C.,** (2022) **"**Damage survey and seismic vulnerability assessment of unreinforced masonry structures in low-intensity Ambasa earthquake of northeast India**"** ***Structures, Elsevier,*** DOI: http://dx.doi.org/10.1016/j.istruc.2022.08.005

10. Hussain M.A., **Dutta S.C.,** Das S., (2022) "Seismic behaviour of structures under bidirectional ground motion: Does the angle of incidence have any influence?" Soil Dynamics and Earthquake Engineering, **Elsevier**, DOI: https://doi.org/10.1016/j.soildyn.2022.107328

11. Hussain M.A., **Dutta S.C.,** Das S., (2022) "Inelastic seismic behavior of asymmetric structures with mass and stiffness eccentricity under bidirectional ground motions" The Structural Design of Tall and Special Buildings, **Wiley**, DOI: http://dx.doi.org/10.1002/tal.1947

12. Choubey, B., Kumar V., **Dutta, S.C.,** Saikia, S.K. (2021) "Behavior of thermo-mechanically treated rebar exposed to elevated temperatures, Journal of Structural Fire Engineering, **Emerald Publishing Limited, DOI:** https://doi.org/10.1108/JSFE-05-2021-0026

13. Hussain M.A., **Dutta S.C.,** Das S., (2021) "Effect of bidirectional ground shaking on structures in the elastic and post-elastic range: adequacy of design provisions" Journal of Building Engineering, **Elsevier**, DOI: https://doi.org/10.1016/j.jobe.2021.103656

14. Choubey, B. **Dutta, S.C.,** Kumar V., (2021) "Effect of Fire in Tunnel: Analysis and Remedial Measures" Structural Engineering and Mechanics, **Techno Press**, DOI: https://doi.org/10.12989/sem.2021.80.6.701

15. **Dutta, S.C.,** Kumar, S., Bhoyar P.S., Hussain M.A., and Sajal (2021) "Behaviour of vertically irregular structures near mines: Comparison of responses under seismic and mine blast-induced ground motion" ***The Structural Design of Tall and Special Buildings, Willey.*** DOI: https://doi.org/10.1016/j.jobe.2020.101190

16. Halder, L., **Dutta, S.C**., and Sharma, R.P. Bhattacharya., S., (2021) "Lessons learnt from post-earthquake damage study of Northeast India and Nepal during last ten years: 2021 Assam earthquake, 2020 Mizoram earthquake, 2017 Ambasa earthquake, 2016 Manipur earthquake, 2015 Nepal earthquake, and 2011 Sikkim earthquake" ***Soil Dynamics and Earthquake Engineering,*** **Elsevier** DOI: https://doi.org/10.1016/j.soildyn.2021.106990

17. Kumar, S. **Dutta, S.C.,** Goswami K, Mandal P., **(**2021) "Vulnerability assessment of building structures due to underground blasts using ANN and non-linear dynamic analysis" ***Journal of Building Engineering, Elsevier***, DOI: https://doi.org/10.1016/j.jobe.2021.102674

18. Halder, L., **Dutta S.C**., and Sharma, R.P. (2021) "Seismic vulnerability assessment of low to mid-rise RC buildings addressing prevailing design and construction practices in the

Northeastern region of the Indian subcontinent: a case study based approach" *Structures, Elsevier,* DOI: https://doi.org/10.1016/j.istruc.2021.05.032

19. Das, P.K., **Dutta, S.C**., Datta, T.K., (2021) "Seismic behaviour of plan and vertically irregular structures: State of the art and future challenges" ***Natural Hazards Review***, ***ASCE,* Vol.** 22(2), DOI: 10.1061/(ASCE)NH.1527-6996.0000440

20. Halder, L., Dutta, S.C., Debnath, P, Sharma R, P., (2021) Seismic vulnerability assessment of low-rise unreinforced masonry buildings in Northeast India considering variability of material properties. ***Asian Journal of Civil Engineering***. https://doi.org/10.1007/s42107-021-00350-7

21. **Dutta, S.C.,** Jangid, R., Mandal, P. and Arora, R.K., (2021) Influence of strength dependent stiffness on seismic design. ***Engineering Structures***, ***Elsevier***, Vol. 227, pp.111444, DOI: https://doi.org/10.1016/j.engstruct.2020.111444

22. Das, P.K., and **Dutta S.C**., (2021) Dynamic characteristics and seismic behavior of plan irregular buildings. Indian Concrete Journal. Vol. 95 (8), pp 1-11.

23. Choubey, B., **Dutta, S.C.,** Prakhya, G.K.V., Mandal, P. and Tanwar, R.K., 2020. Blast pressure analysis due to confined explosion-after effects. ***Structures, Elsevier***, Vol. 28, pp. 521-536. DOI: https://doi.org/10.1016/j.istruc.2020.08.057

24. Halder, L., **Dutta S.C**., and Sharma, R.P. (2020) Damage study and seismic vulnerability assessment of existing masonry buildings in Northeast India, ***Journal of Building Engineering, Elsevier***, 29 (2020) 101190, DOI: https://doi.org/10.1016/j.jobe.2020.101190

25. Saha, R., **Dutta, S.C**., Halder, S, and Kumar, S. (2020) "Effect of soil-pile raft-structure interaction on elastic and inelastic seismic behaviour" ***Structures***, ***Elsevier***, Vol 26, pp. 2352-0124. DOI: 10.1016/j.istruc.2020.04.022

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27. Das, P.K., **Dutta S.C**. and Sengupta, P. (2020) "Damage assessment of recent Indian earthquakes: review of existing rapid visual screening schemes" ***Current Science***. Vol. 119(2), pp. 352-363. DOI: https://doi.org/ 10.18520/cs/v119/i2/352-363

28. Hussain M.A., **Dutta S.C**. (2020) "Inelastic seismic behavior of asymmetric structures under bidirectional ground motion: An effort to incorporate the effect of bidirectional interaction in load resisting elements" ***Structures***, ***Elsevier***, vol. 25, pp 241-255. DOI: https://doi.org/10.1016/j.istruc.2020.03.014

29. Rajeswari J.S, Sarkar R, **Dutta S.C**, Shaw R, and Singh J.P. (2020) "Seismic behavior of RC building with raft foundation in the Ganges basin, India***" Current Science***, vol. 118(5), pp 759-770. DOI: https://doi.org/10.18520/cs/v118/i5/759-770

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34. Banerjee A., Pasupuleti S., Singh MK, **Dutta, S.C.,** and Kumar GNP (2019) "Modelling of Flow Through Porous Media Over the Complete Flow Regime". ***Transport in Porous Media***, pp.1-23. DOI: https://doi.org/10.1007/s11242-019-01274-2

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37. Karmkar S., Kumar S., **Dutta S.C**. and Hussain A. (2018). "Base Isolation versus Dual Design Philosophy for Seismic Design of Buildings: Preliminary Case Study" ***Journal of Institute of Engineers (India): Series A***. pp. 1-9 **DOI:** https://doi.org/10.1007/s40030-018-0320-9

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