

List of Publications

Patent/Copyright Details

1. **“A cement-free mortar (CFM) composition”** by **Satadru Das Adhikary** and Dipanshu Jain (PhD student); Indian Patent Application Number: 202431006089; Status: Published on 16.02.2024 (Indian Patent)
2. **TZTFM: “A GUI-based computer program for predicting the nominal and travelling fire inside concrete compartment”**; by Dr. Umang Pulkit and **Prof. Satadru Das Adhikary**, Copyright Diary Number: 33764/2024-CO/SW dated 25.10.2024
3. **STRUCT-FIRE: “A GUI-based computer program for analysis of reinforced concrete flexural members exposed to fire”**; by Dr. Umang Pulkit and **Prof. Satadru Das Adhikary**, Copyright Diary Number: 34108/2024-CO/L dated 29.10.2024

Development of Computer Program

1. **FRAG-BLAST**: “A novel GUI based computer program developed to assist with the design and the analysis of reinforced concrete structures subjected to cased and uncased explosive charges”; PhD Student: Dr. Abhiroop Goswami, Guide: Prof. Satadru Das Adhikary, 2022
2. **CALCI-BLAST**: “A novel GUI based computer program for quantification of the blast loading parameters due to the detonation of uncased high explosive charges”; PhD Student: Dr. Abhiroop Goswami, Guide: Prof. Satadru Das Adhikary, 2022

List of Publications: Total No. of Publications: 62; No. of citations: 846; h-Index: 12; i10 Index: 14

Citations (Google Scholar): [Click here](#)

Total Number of Citations	885
h-index	12
i-10 index	14

International Journal Articles

1. Jain, D. and **Adhikary, S.D.** (2024) “Sustainable Utilization of Basalt Waste Dust as Replacement of River Sand in One-Part Geopolymer Mortar” *Structural Concrete Journal*, DOI: <https://doi.org/10.1002/suco.202400979>, **Impact Factor – 3.2 (Q2)**
2. Pulkit, U., **Adhikary, S.D.** and V. Kodur (2024) “Influence of fire severity and concrete properties on the thermo-hygral behaviour of concrete during fire exposure,” *Structural Concrete Journal*, DOI: <https://doi.org/10.1002/suco.202400067>, **Impact Factor – 3.2 (Q2)**
3. Pulkit, U., and **Adhikary, S.D.** (2024) “Development of novel GUI-based computer program for predicting the temperature distribution in concrete compartment and member,” *ASCE Journal of Structural Design and Construction Practice*, DOI: <https://doi.org/10.1061/JSDCCC.SCENG-1617>, **Impact Factor – 1.6 (Q3)**
4. Goswami, A., Thiagarajan, G, **Adhikary, S.D.** (2022) “RC Structures Subjected to Combined Blast and Fragment Impact Loading: A State-Of-The-Art Review on the Present and the Future Outlook”, *International Journal of Impact Engineering*, DOI: <https://doi.org/10.1016/j.ijimpeng.2022.104355>, **Impact Factor – 5.1 (Q1)**
5. Goswami, A., Thiagarajan, G, **Adhikary, S.D.** (2022) “High Strength Materials for the Response Enhancement of Reinforced Concrete Structures Subjected to Cased Explosive Charges,” *ASCE Journal of Structural Engineering*, DOI: [https://doi.org/10.1061/\(ASCE\)ST.1943-541X.0003491](https://doi.org/10.1061/(ASCE)ST.1943-541X.0003491), **Impact Factor – 3.7 (Q1)**
6. Roy, D.M., **Adhikary, S.D.**, and Sengupta, P. (2022) “Assessment of Mechanical and Micro-Structural Characterization of Novel Ambient Cured Cement-Free Composite Concrete”, *Ceramics International*, DOI: <https://doi.org/10.1016/j.ceramint.2022.05.348>, **Impact Factor – 5.2 (Q1)**
7. Goswami, A., Thiagarajan, G, **Adhikary, S.D.** (2021) “Dynamic Response Prediction of RC Structural Components Subjected to Combined Blast and Fragment Impact,” *ASCE Journal of Structural Engineering*, Vol. 148, Issue 2, DOI: [https://doi.org/10.1061/\(ASCE\)ST.1943-541X.0003242](https://doi.org/10.1061/(ASCE)ST.1943-541X.0003242), **Impact Factor – 3.7 (Q1)**

8. Pulkit, U., and **Adhikary, S.D.** (2021) "Effect of Micro-structural changes on concrete properties at elevated temperature: Current Knowledge and Outlook," *Structural Concrete Journal*, DOI: <https://doi.org/10.1002/suco.202000365>, **Impact Factor – 3.2 (Q2)**
9. Patel, K., Goswami, A., **Adhikary, S.D.** (2020) "Response Characterization of Highway Bridge Piers Subjected to Blast Loading," *Structural Concrete Journal*, Vol. 21, Issue 6, pp. 2377-2395, DOI: <https://doi.org/10.1002/suco.201900286>, **Impact Factor – 3.2 (Q2)**
10. Goswami, A., **Adhikary, S.D.** (2019) "Retrofitting materials for enhanced blast performance of Structures: Recent advancement and challenges ahead," *Construction and Building Materials Journal*, Vol. 204, pp. 224-243, DOI: <https://doi.org/10.1016/j.conbuildmat.2019.01.188>, **Impact Factor – 7.4 (Q1)**
11. Goswami, A., **Adhikary, S.D.** and Li Bing (2019) "Predicting Punching Shear Failure of Concrete Slabs under Low Velocity Impact Loading," *Engineering Structures Journal*, Vol. 184, pp. 37-51, DOI: <https://doi.org/10.1016/j.engstruct.2019.01.081>, **Impact Factor – 5.5 (Q1)**
12. Fukuda, T., **Adhikary, S.D.**, Fujikake, K., Sasaki, K. and Tanaka, M. (2019) "Feasibility Study on Application of Controlled Electrical Discharge Impulse Crushing System to Lifesaving Operations in Earthquake Disasters," *ASCE Journal of Practice Periodical on Structural Design and Construction*, Vol. 24, Issue 1, pp. 1-7, DOI: [https://doi.org/10.1061/\(ASCE\)SC.1943-5576.0000401](https://doi.org/10.1061/(ASCE)SC.1943-5576.0000401), **Impact Factor – 1.9 (Q3)**
13. **Adhikary, S.D.** and Dutta, S.C. (2019) "Blast Resistance and Mitigation Strategies of Structures: Present Status and Future Trends," *Proceedings of the ICE - Structures and Buildings Journal*, Vol. 172, Issue 4, pp. 249-266, DOI: <https://doi.org/10.1680/jstbu.17.00056>, **Impact Factor – 1.6 (Q3)**
14. **Adhikary, S.D.**, Lado, R.C., Christian, A., and Ong, K.C.G. (2018) "SHCC-strengthened RC panels under near-field explosions," *Construction and Building Material Journal*, Vol. 183, pp. 675-692, DOI: <https://doi.org/10.1016/j.conbuildmat.2018.06.199>, **Impact Factor – 7.4 (Q1)**
15. **Adhikary, S.D.** and Li, B. (2018) "Simplified Analytical Models to predict low-velocity Impact Response of RC Beams," *ASCE Journal of Practice Periodical on Structural Design and Construction*, Vol. 23, Issue 2, pp. 1-10, DOI: [https://doi.org/10.1061/\(ASCE\)SC.1943-5576.0000357](https://doi.org/10.1061/(ASCE)SC.1943-5576.0000357), **Impact Factor – 1.9 (Q3)**

16. **Adhikary, S.D.,** Lado, R.C., Christian, A., and Ong, K.C.G. (2017) "Influence of Cylindrical Charge Orientation on the Blast Response of High Strength Concrete Panels," *Engineering Structures Journal*, Vol. 149, pp. 35-49, DOI: <https://doi.org/10.1016/j.engstruct.2016.04.035>, **Impact Factor – 5.5 (Q1)**
17. **Adhikary, S.D.,** Li, B., and Fujikake, K. (2016) "State-of-the-Art Review on Low Velocity Impact Response of Reinforced Concrete Beams," *Magazine of Concrete Research Journal*, Vol. 68, Issue 14, pp. 701-723. DOI: <https://doi.org/10.1680/jmacr.15.00084>, **Impact Factor – 2.7 (Q2)**
18. **Adhikary, S.D.** (2016) "Review of Glazing and Glazing Systems under Blast Loadings," *ASCE Journal of Practice Periodical on Structural Design and Construction*, Vol. 21, Issue 1, pp. 1-10, DOI: [https://doi.org/10.1061/\(ASCE\)SC.1943-5576.0000264](https://doi.org/10.1061/(ASCE)SC.1943-5576.0000264), **Impact Factor – 1.9 (Q3)**
19. Christian, A., Lado, R.C., **Adhikary, S.D.,** and Ong, K.C.G. (2016) "Influence of Charge Shape and Orientation on the Response of Steel-Concrete Composite Panels," *International Journal of Engineering and Technology Innovation*, Vol. 6, No. 4, pp. 284-293, **Impact Factor – 1.3 (Q3)**
20. **Adhikary, S.D.,** Li, B., and Fujikake, K. (2015) "Low velocity Impact Response of Reinforced Concrete Beams: Experimental and Numerical Investigation," *International Journal of Protective Structures*, Vol. 6, No. 1, pp. 81-111, DOI: <https://doi.org/10.1260/2041-4196.6.1.81>, **Impact Factor – 2.0 (Q2)**
21. **Adhikary, S.D.,** Li, B., and Fujikake, K. (2015) "Parametric study of RC Beam under Wide range of Loading Rates," *Proceedings of the ICE - Structures and Buildings Journal*, Vol. 168, No. 10, pp. 729-746. DOI: <https://doi.org/10.1680/stbu.15.00024>, **Impact Factor - 1.6 (Q3)**
22. **Adhikary, S.D.,** Li, B., and Fujikake, K. (2014) "Effects of High Loading Rate on Reinforced Concrete Beams," *ACI Structural Journal*, Vol. 111, No. 3, pp. 651-660. DOI: [10.14359/51686579](https://doi.org/10.14359/51686579), **Impact Factor – 1.8 (Q3)**
23. **Adhikary, S.D.,** Li, B., and Fujikake, K. (2014) "Residual Resistance of Impact-damaged Reinforced Concrete Beams," *Magazine of Concrete Research Journal*, Vol. 67, Issue 7, pp. 364-378. DOI: <https://doi.org/10.1680/macr.14.00312>, **Impact Factor – 2.7 (Q2)**

24. **Adhikary, S.D.**, Li, B., and Fujikake, K. (2013) “Strength and Behavior in Shear of Reinforced Concrete Deep Beams under Dynamic Loading Conditions,” *Nuclear Engineering and Design Journal*, Vol. 259, pp. 14-28. (**Most Downloaded Article after 90 days of online publication**), DOI: <https://doi.org/10.1016/j.nucengdes.2013.02.016>, Impact Factor –1.86 (Q1)
25. **Adhikary, S.D.**, Li, B., and Fujikake, K. (2012) “Dynamic Behavior of Reinforced Concrete beams under Varying Rates of Concentrated Loading,” *International Journal of Impact Engineering*. Vol. 47, pp. 24-38. (**Most Downloaded Article after 90 days of online publication**), DOI: <https://doi.org/10.1016/j.ijimpeng.2012.02.001>, Impact Factor – 5.1 (Q1)

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26. Kumar, S., Pulkit, U., **Adhikary, S.D.**, Rai A.K. (2024) “Numerical investigation on blast resistance of composite system with concrete filled thin-walled tube” *14th Structural Engineering Convention (SEC-2024)*, NIT Tiruchirappalli, India, December 12-14.
27. Kumar, A., **Adhikary, S.D.**, Rana A. (2024) “Local Damage Prediction of Concrete Slab Under Contact Detonation Through FEM-SPH Modelling Techniques” *14th Structural Engineering Convention (SEC-2024)*, NIT Tiruchirappalli, India, December 12-14.
28. Jain, D. and **Adhikary, S.D.** (2024) “Investigation on Effect of Basalt Waste Fines as Replacement of River Sand in One-part Geopolymer Mortar” *10th International Conference on Concrete under Severe Conditions (CONSEC-2024)*, Chennai, India, September 25-27.
29. Pulkit, U. and **Adhikary, S.D.** (2023) “Variation of pore pressure in NSC slabs subjected to non-uniform heating: Analytical study” *13th Structural Engineering Convention (SEC-2023)*, VNIT, Nagpur, India, December 07-09.
30. Pulkit, U and **Adhikary, S.D.** (2022) “Theoretical model for assessing the spatiotemporal temperature inside a building compartment” *8th International Congress on Computational Mechanics and Simulation (ICCMS-2021)* IIT Indore, Madhya Pradesh, December 09-11
31. Deshpande, P.A. and **Adhikary, S.D.** (2020) “SFRC Slabs Under Low Velocity Impact Loading: An Analytical Approach for Response Assessment,” *Second ASCE India*

Conference on “Challenges of Resilient and Sustainable Infrastructure Development in Emerging Economies” (CRSIDE2020), Kolkata, India, March 2-4.

32. Goswami, A. and **Adhikary, S.D.** (2018) “Synergistic Effects of Combined Blast and Fragment Loading on Structures: State-of-the-Art,” **3rd RN Raikar Memorial International Conference and Gettu- Kodur International Symposium**, Mumbai, India, December 14-15.
33. Goswami, A., Gunjan, A. and **Adhikary, S.D.** (2018) “Response Assessment of Steel Fibre-Reinforced Concrete Slabs under Impact Loading,” **International Conference on Advances in Construction Materials and Structures (ACMS 2018)**, IIT Roorkee, India, March 7-8.
34. Goswami, A., Singh, A. and **Adhikary, S.D.** (2017) "Blast Resistance of Ultra High Performance Concrete Structures," **2nd International Conference on Innovation in Structural Engineering (IC-ISE)**, Osmania University, Hyderabad, India, December 29-31.
35. Gunjan, A., Goswami, A., and **Adhikary, S.D.** (2017) “Impact Performance of Reinforced Concrete Slabs,” **2nd International Conference on Innovation in Structural Engineering (IC-ISE)**, Osmania University, Hyderabad, India, December 29-31.
36. Thakur, M.S. and **Adhikary, S.D.** (2017) "Structural Steel silos: An alternative of RC silos," **ASCE India Conference**, IIT Delhi, India, December 12-14.
37. Kumar, S., Dutta, S.C., **Adhikary, S.D.**, Hussain, M.A., Kundu, S., and Chatterjee, S. (2017) “Non-Linear Dynamic Analysis of Structures on Opencast Backfilled Mine Due to Blast Vibration,” **13th International Conference on Vibration Problems**, IIT Guwahati, India, November 29 -December 2.
38. **Adhikary, S.D.**, Lado, R.C., Christian, A., and Ong, K.C.G. (2015) “Blast Performance of High Strength Concrete panels: Experimental, Numerical and Analytical Investigation,” **5th International Conference on Design and Analysis of Protective Structures**, pp. 602-612, Singapore, May 19-21.
39. Lado, R.C, **Adhikary, S.D.**, and Ong, K.C.G. (2015) “Bond Characteristics of Concrete-to-SHCC Interfaces and Numerical Analysis of SHCC-strengthened RC panels under Blast Loading,” **5th International Conference on Design and Analysis of Protective Structures**, pp. 464-473, Singapore, May 19-21.

40. **Adhikary, S.D.**, Li, B., and Fujikake, K. (2013) "Numerical Investigation on Residual Resistance of RC Beams Subjected to Impact Loading," *10th International Conference on Shock & Impact Loads on Structures*, pp. 287-294, Singapore, Nov. 25-26.
41. Fujikake, K., Li, B., **Adhikary, S.D.**, and Salem, H.M. (2012) "Dynamic Shear Resistance of Short RC Beams," *4th International Conference on Design and Analysis of Protective Structures*, pp. 570-578, Jeju, Korea, June 19-22.
42. **Adhikary, S.D.**, Li, B., and Fujikake, K. (2011) "Performance Assessment of Reinforced Concrete Beams under Varying Rates of Concentrated Loading," *9th International Conference on Shock & Impact Loads on Structures*, pp. 261-268, Fukuoka, Japan, Nov. 16-18.

Book/Book Chapter

43. Roy, D.M., **Adhikary, S.D.**, and Sengupta, P. (2021) "Experimental Optimization of GGBS Fly Ash-Based Geopolymer Concrete Paver Blocks", *Sustainable Cities and Resilience; Lecture Notes in Civil Engineering*, Vol. 180, Springer, https://doi.org/10.1007/978-981-16-5543-2_13.
44. Goswami, A. and **Adhikary, S.D.** (2021) "Theoretical Framework for Response Prediction of Reinforced Concrete Structures Subjected to Cased Explosive Charges" *Advances in Geotechnics and Structural Engineering, Lecture Notes in Civil Engineering, Springer*, pp. 449-459, https://doi.org/10.1007/978-981-33-6969-6_39
45. Kumar, S., Dutta, S.C., **Adhikary, S.D.**, and Hussain, M.A. (2020) "Non-Linear Dynamic Analysis of Structures on Opencast Backfilled Mine due to Blast Vibration" *Advances in Structural Vibration, Lecture Notes in Mechanical Engineering, Springer*, pp. 95-104, https://doi.org/10.1007/978-981-15-5862-7_9
46. Jha, A. K, Goswami, A. and **Adhikary, S.D.** (2019) "Are FRP's the Way Forward for the Blast Retrofitting of Reinforced Concrete Structures?" *Advances in Structural Engineering and Rehabilitation, Lecture Notes in Civil Engineering, Springer*, Vol. 38, pp. 93-104, https://doi.org/10.1007/978-981-13-7615-3_8.
47. Jethwani, R., Thakur, M.S. and **Adhikary, S.D.** (2019) "Development of Geopolymer Concrete for Sustainable Infrastructures," *Advances in Sustainable Construction Materials*

- and Geotechnical Engineering, Lecture Notes in Civil Engineering, Springer, Vol. 35, pp. 1-14, https://doi.org/10.1007/978-981-13-7480-7_1.*
48. Kumar, A. and **Adhikary, S.D.** (2018) "Effect of Blast Loading on Reinforced Concrete Buildings", *Bloomsbury Publishing India Pvt. Ltd.*, pp. 354-360, ISBN: 978-93-87471-69-6
49. Thakur, M.S. and **Adhikary, S.D.** (2018) "Characterization of Fly Ash Concrete", *Bloomsbury Publishing India Pvt. Ltd.*, pp. 406-411, ISBN: 978-93-87471-69-6
50. Anand, S., Sengupta, P. and **Adhikary, S.D.** (2018) "Wind Loading Effects on High-Rise Reinforced Concrete Buildings", *Bloomsbury Publishing India Pvt. Ltd.*, pp. 676-682, ISBN: 978-93-87471-69-6
51. Mondal, P., Sengupta, P. and **Adhikary, S.D.** (2018) "Vulnerability Assessment of Reinforced Concrete Beams under Impact Loading", *Bloomsbury Publishing India Pvt. Ltd.*, pp. 521-527, ISBN: 978-93-87471-69-6
52. **Adhikary, S.D.** (2017) "RC Structures under High Speed and Impact Loading", *LAP LAMBERT Academic Publishing*, 301 pages, ISBN: 978-620-2-09364-4

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53. Ong, K.C.G, Lado, R.C. and **Adhikary, S.D.** (2016) "High Performance Concrete for Protective Structures: Part A: Design of Structures with HPC materials against Blast and Impact loadings," *Project Report D5&D6*, submitted to Defense Science & Technology Agency (DSTA), Singapore by Centre for Protective Technology, National University of Singapore.
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56. Ong, K.C.G, Lado, R.C. and **Adhikary, S.D.** (2014) “ATREC Blast Test-Pretest Calculation,” **Project Report**, submitted to Defense Science & Technology Agency (DSTA), Singapore by Centre for Protective Technology, National University of Singapore.
57. Ong, K.C.G, Lado, R.C. and **Adhikary, S.D.** (2014) “High Performance Concrete for Protective Structures: Part A: Design of Structures with HPC materials against Blast and Impact loadings,” **Project Report D3**, submitted to Defense Science & Technology Agency (DSTA), Singapore by Centre for Protective Technology, National University of Singapore.
58. **Adhikary, S.D.** (2014) “Dynamic Behavior of Reinforced Concrete Beams under Varying Rates of Concentrated and Impact Loadings,” **Doctor of Philosophy Thesis**, Division of Structures and Mechanics, School of Civil and Environmental Engineering, Nanyang Technological University.
59. Ang, C.K., **Adhikary, S.D.** and Low, K. (2013) “Blast Effect Analysis, Structural Resiliency Study and Protective Hardening Measures of Tampines Town Hub (Seven storey with two basements) Building in Singapore,” **Project Report**, Prostruct Consulting Pte Ltd, Singapore.
60. **Adhikary, S.D.** (2007) “Planning and Design of an Industrial Complex,” **Final Year Project Report**, Bengal Engineering and Science University Shibpur, India.

Magazine Articles/Research Bulletin

61. **Adhikary, S.D.** (2018) “Utilization of Pulverized Fuel Ash,” **EnergiTalk Magazine @ Maithon**, Maithon Power Limited, Jharkhand, India, January, Issue 5.
62. Ang, C.K. and **Adhikary, S.D.** (2014) “Blast-Resistant Design of Facades,” **The Singapore Engineer-Magazine**, The Institution of Engineers Singapore, February Issue, Singapore.
63. Ang, C.K. and **Adhikary, S.D.** (2014) “Progressive-Collapse-Resistant Design of Buildings,” **The Singapore Engineer-Magazine**, The Institution of Engineers Singapore, February Issue, Singapore.
64. Li, B. and **Adhikary, S.D.** (2013) “Dynamic Behavior of Reinforced Concrete beams under Varying Rates of Concentrated Loading,” **CEE Research Bulletin**, Nanyang Technological University, Singapore.