

**CONMAT 2003**  
**Department of Civil Engg**  
**Indian Institute of Technology, Kharagpur**

**CONFERENCE PAPERS**

**Keynote Papers**

1. Evaluating Structural Design For Constructability  
*Mirosław Skibniewski and Krishan Mathur*
2. Long Span Truss Bridges in Seismic Zones  
*Issam E. Harik and Wael A. Zatar*

**Part I: Construction Management**

**Invited Papers**

3. Application of Un-Bonded Post-Tensioning in Infrastructure – (a review on research and development)  
*P.R.Chakrabarti and Keith Thornton*
4. Soils and Structures under Wave Load  
*Werner Richwien*
5. Construction and Evaluation Of CFRP Prestressed Concrete DT-Girder  
*Nabil F. Grace and George Abdel-Sayed*
6. Supporting Creative Collaboration in A/E/C Through Network-Like, Interleaved Information Technology  
*Yehuda E. Kalay*
7. Retrofit of Concrete Beams Strengthened With FRP Laminates against Impact Loading  
*Taiping Tang and Hamid Saadatmanesh*
8. Repairing Corrosion-Damaged Prestressed Piles Using FRP  
*Rajan Sen and Gray Mullins*
9. Role of Thin walled Prefab Steel Tubular Structural Building Systems for Better Construction Management  
*Arunendu Banerjee*
10. Plasticity Based Assessment of Slab-Girder Bridges  
*Kiran Akella, Ib Enevoldsen and Finn M. Jensen*
11. Earthquake Source Model and Estimation of Ground Motion  
*R. N. Iyengar and S. T. G. Raghu Kanth*

**Contributory Papers**

**Construction Management Aspects**

12. Assessment of Risk for International Firms in the Chinese Construction Market: A Case Study  
*Jie Situ, Qingbin Cui and Makarand Hastak*

13. Investigation Of Constructibility Issues In Building Projects  
*Reshma R, Koshy Varghese and J. Bhattacharya*
14. Mitigation of Risks Associated with Construction Equipment  
*S. S. Pimplikar*
15. Risk Analysis in Production Shop Floor Pressure Vessle Unit  
*D. Gerard David, V. Manikandan, G. L. Samuel, and A. Mohanakrishnan*
16. TLC Analysis In Engineering Industry  
*D. Gerard David , S. T. Danier, G. SundarRaj and A. Doraiswamy*
17. Construction Process- An Integrated Approach  
*Shailesh Jha, Virendra Kumar and M. M. Prasad*
18. Activity Sequencing in Construction Projects Using Dependency Matrix  
*J. Uma Maheswari and Koshy Varghese*

#### Analysis and Design

19. Assessment of Coefficient of the Consolidation in Geotechnical Practice  
*A. Richwien and N. Meyer*
20. Impact in composite concrete panels due to small arms firing  
*Major R.K. Mengi and Ashok K. Jain*
21. Flexural Behaviour of Two Way Reinforced SFRC Slabs  
*S. Sivaraj, N.Arunachalam and Vengatasalapathy*
22. Tensegrity – an Alternative to Conventional Structures  
*Akhil Bhutani and Ankit Khanna*
23. Steel–Concrete Composite Structural Systems In Buildings  
*Mital M Shah, V V Nori and R D Vaswani*
24. Influence of Berm Width on the Stability of Berm Breakwaters  
*Subba Rao and Balakrishna Rao K*
25. Hysteritic Response Of Multistorey Reinforced Cement Concrete Infilled Frame  
*S. Basil Gnanappa and E.B. Perumal Pillai*
26. Design Scour Depth at Abutments in Thin Armor-Layers  
*Subhasish Dey and Abdul Karim Barbhuiya*
27. Modular Ratio Analysis of Flexible Pavement Using Falling Weight Deflectometer  
*R. Srinivasa Kumar, K. S. Reddy, M. Mazumdar and B. B. Pandey*
28. Estimation of In-Situ Pavement Layer Moduli Using Falling Weight Deflectometer  
*R. Srinivasa Kumar, K. S. Reddy, M. Mazumdar and B. B. Pandey*
29. Vibration Analysis of Eccentrically Stiffened Laminated Plates with Cutouts  
*A.N. Nayak and J. N. Bandyopadhyay*
30. An Approach For Sustainable Construction  
*Anil K. Dikshit and Ashok K. Gupta*

#### Information Technology Applications

33. A Comparative Study On Machine Learning Models for Constructability Analysis  
*S V Barai and Rajeev S Nair*

34. Neuro Models For Finding Earthquake & Wind Forces On Building Frames  
*V. S. Purani and S. C. Patodi*

35. Feedback System for Designers  
*Rajendra P. Adhikari*

36. Probability Assessment Of Project Risks Using Fuzzy - Fault Tree Approach  
*A. V. Thomas, K. N. Satyanarayana and K. Ananthanarayanan*

37. Knowledge Management in Construction Organisations  
*V. Paul Christopher Charlesraj and Satyanarayana Kalidindi*

38. Knowledge based Expert System for optimizing the decision making process in tender evaluation  
*Suvojit Bhattacharya and Ramesh Karnam*

## Part II: Materials

### Invited Papers

39. Role of Fibres in the Flexural and shear Response of Prestressed Concrete Beams  
*S. K. Padmarajaiah and Ananth Ramaswamy*

40. High Performance Concrete – Research and Practice  
*Ashok K. Jain*

41. Coarse Recycled Aggregates for More Sustainable Concrete Construction  
*Mukesh C Limbachiya*

42. The Difficult Choice of Appropriate Materials and Techniques for Retrofitting in Historic Centres  
*L. Binda*

43. Deterioration of Concrete  
*A P Gupta*

44. Fabrication, Mechanical Testing and Scanning Electron Microscopic Study of Short Carbon Fibre Reinforced Reactive Powder Concrete (CFRPC) with Improved Fibre Dispersion  
*Gary Jui-Pu Kao, Sri Bandyopadhyay and N. Gowripalan*

45. An Experience In The Development Of Corrosion Resistant Reinforcement Steel  
*U. K. Chatterjee , K. Banerjee and A. K. Chakrabarti*

### Contributory Papers

#### Performance Studies

46. Performance Of Pulverised Fuel Ash In Cement Concrete  
*Md. Kamruzzaman, S. M. Zahurul Islam, S. Md. Nizamud-Doulah and Star Jingkaojai*
47. Static Modulus Of Elasticity Of Flyash-Silica Fume Concrete  
*Virendra Kumar and M.M. Prasad*
48. Strength and Flow Characteristics Of High Performance Mortars  
*P.Rathish Kumar and C.B.K.Rao*
49. Materials, Construction Quality Control and Energy Conservation with Special Reference to Cement Concrete Materials  
*P Krishnamachar and Saroj Rangnekar*
50. Failures in Cohesive Geomaterials Due to Shear Band Formation  
*Siddhartha Sengupta and Aniruddha Sengupta*
51. Morphology of Aggregates for Concrete- State of Art Report on Methods of Evaluation  
*Sanjay Shrinivasrao Jamkar and C. B. Kameswara Rao*
52. Role of Coarse Aggregate Gradation And Shape Factors in Bituminous Mix Properties  
*Mohamed Ilyas Anjum and Krishnamurthy*
53. Effect of Replacement of Cement by Silica Fume on the Permeability of Silica Fume Concrete  
*T D Gunneswara Rao and D R Seshu*
54. Fatigue Studies of Bituminous Concrete With Polymer Modified Bitumen  
*V.S. Punith, M.M.K. Durrani and A. Veeraragavan*
55. Indirect Tensile Tests On Crumb Rubber Modified Bituminous Mixes  
*M. P. S. Reddy and A. Veeraragavan*
56. Evaluation of hardened concrete properties using non-destructive methods  
*Manu Santhanam, Amal Raj, and R. Vikramaditya*
57. Behaviour of Ferrocement Specimens with & without fibres for various span to depth Ratios  
*V. Bhaskar Dasai, K. Lakshmi Pathi and P. Krishnaveni*
58. Shear Reinforcement For Brick Work Beams Using Ferrocement  
*V.Bhaskar Desai and Ravi Shankar*
59. Cementitious Materials In Road Construction  
*B. B. Pandey*

#### **Alternate Materials**

60. The Potential Utilization of phosphogypsum in concrete  
*Rajesh B. Thakare, O. P. Bhatia and K. G. Hiraskar*
61. Characterization of GGBFS as Partial Cement Replacement in Concrete  
*S C Pal, A. Mukherjee and S.R. Pathak*

62. Phosphogypsum Applications in Cement Concrete  
*M.S. Mulla, V.V. Karjinni, V.D. Gundakalle and R.B. Thakare*

63. Suitability of No-Fines Concrete Short Columns with Glass Fibre Reinforced Plastic (GFRP) Casings  
*Prashanth G. Kulkarni, B. R. Patagundi and K.B. Prakash*

64. Activation of Lime Kiln Dust to Develop a Cementitious Material  
*V.T.L.Bogahawatta and Hassan Karam*

#### **Inexpensive Technology**

65. Behaviour Of Bamboo-Reinforced Flexural Members  
*Sanjay Kumar and M. M. Prasad*

66. Recycling of crushed Rock Dust as fine Aggregate for concrete  
*K.Kumarasamy , K.Nagamani and R.Ilangovan*

67. Promotion of Appropriate Low-Cost Housing Walling Materials in Rwanda  
*Kyambadde Benjamin Senyonga and K.K. Singh*

#### **Innovative Applications**

68. Radiation Shielding Concrete With Special Aggregate *Rabindranath De, S. Chakraborty and Tapas Bandopadhyay*

69. Fly Ash- As An Additive For Stabilization Of Soils  
*A. A. Mir and N.S. Pandian*

70. Cenospheres: The High Potency Fillers for Specialty Construction Materials  
*A. Sarkar, A. Kumar, G.Udayabhanu and A.K.Basu*

71. A Survey of Use of Ferrocement as Potential Rehabilitating Material for Various Structures  
*Narendra Arora and C. B. Kameswara Rao*