

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|-------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Record Nr.           | UNINA9910506399403321                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Autore                  | Pal Indrajit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Titolo                  | Sustainable Cities and Resilience : Select Proceedings of VCDRR 2021                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Pubbl/distr/stampa      | Singapore : , : Springer Singapore Pte. Limited, , 2021<br>©2022                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| ISBN                    | 981-16-5543-X                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Descrizione fisica      | 1 online resource (482 pages)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Collana                 | Lecture Notes in Civil Engineering Ser. ; ; v.183                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Altri autori (Persone)  | KolathayarSreevalsa                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Soggetti                | Electronic books.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Lingua di pubblicazione | Inglese                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Formato                 | Materiale a stampa                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Livello bibliografico   | Monografia                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Nota di contenuto       | Intro -- Contents -- About the Editors -- City Resilience and Sustainable Infrastructure-An Introduction -- 1 Introduction and Background -- 2 Resilient Infrastructure in Construction -- 3 Innovative Construction Interventions -- 4 Waste Management and Disaster Risk Reduction -- 5 Urban Development and Sustainability -- 6 Cross-Cutting Issues -- 7 Summary -- References -- Resilient Infrastructure in Construction -- Risk and Resilience of Railway Infrastructure: An Assessment on Uncertainties of Rail Accidents to Improve Risk and Resilience Through Long-Term Data Analysis -- 1 Introduction -- 2 Literature Reviews -- 3 Methodology -- 3.1 Data Availability -- 3.2 An Application on the Bayesian Network -- 3.3 Research Framework -- 3.4 Risk Prediction Model -- 4 Evaluating Risk Level Through DT Models -- 5 Result and Discussions -- 6 Conclusion and Future Work -- References -- Assessing Resilience of Transportation Networks Under Multi-hazards: A Review -- 1 Introduction -- 2 Infrastructure and Hazards -- 2.1 Infrastructure and Hazards -- 3 Research in Bridge Resilience Assessment Under Multi-hazards -- 3.1 Modelling Resilience -- 3.2 Recent Research Studies -- 4 Modelling Resilience and Post-Event Recovery -- 4.1 Operational Level -- 4.2 Role of Gradual Degradation -- 4.3 Losses and Recovery Time -- 5 Case Study -- 6 Conclusions -- References -- Risk Management in Construction Industry -- 1 Introduction -- 1.1 Research Significance -- 1.2 Objectives -- 2 Literature Review -- 3 Research Methodology -- 4 Analysis of Results and Discussion |

of Vijayawada and Visakhapatnam -- 5 Limitations of the Study -- 6  
 Recommendations -- 7 Conclusion -- References -- Achieving  
 Sustainability Goals Through Infrastructure Modifications: Lessons  
 Learnt from COVID-19 Pandemic -- 1 Introduction -- 2 Impact  
 of COVID-19 -- 3 Consequences of Infrastructure.  
 4 Reverting Back to Better Infrastructure -- 5 Green Alternatives -- 5.1  
 Energy Storage Systems (ESS) -- 5.2 Green Investment -- 6 Strategies  
 Required for Both Existing and for New Buildings -- 7 Conclusions --  
 References -- Vulnerability and Impact Assessment of Extreme Climate  
 Events in the Greek Oil Industry -- 1 Introduction -- 2 Methodology --  
 3 Results -- 3.1 High-Resolution Model Simulations Against  
 Observations -- 3.2 Projections of Future Climate Conditions at HELPE  
 Facilities -- 3.3 Analysis of 50 Years Return Period -- 4 Vulnerability  
 and Impact Analysis -- 5 Conclusions -- References -- Catastrophic  
 Events at the River Basins Due to Permafrost Thawing: Review  
 and Examples -- 1 Introduction -- 2 Discharges, Air and Ground  
 Temperature at Pan-Arctic River Mouths -- 2.1 Data, Methods  
 and Location -- 2.2 Variations of Water Discharges -- 2.3 Impact  
 of Changes of Ta and Tg on the Pan-Arctic River Discharges -- 3  
 Catastrophic Events in Permafrost Zone -- 3.1 Ice Jams -- 3.2 Erosion  
 of Banks in River Bends and Land Sliding -- 3.3 Scour Holes  
 in the Mackenzie River -- 4 Discussion and Concluding Remarks --  
 References -- Effect of Land Uses on Personal Exposure of Street  
 Vendors at a Metropolitan City -- 1 Introduction -- 2 Methodology --  
 2.1 Study Area Description -- 2.2 Monitoring and Instrumentation --  
 2.3 Chemical Characterization of Particulate Samples -- 2.4 Health Risk  
 Assessment -- 3 Results and Discussion -- 3.1 Variation of Personal  
 Exposure Profiles at Different Land Uses -- 3.2 Chemical  
 Characterization of Particulates -- 3.3 Health Risk Assessment -- 4  
 Conclusion -- References -- Social Vulnerability Assessment to Natural  
 Hazards in Western Nepal -- 1 Introduction -- 2 Social Vulnerability --  
 3 Study Area -- 4 Methodology -- 4.1 Data -- 4.2 Calculation of Social  
 Vulnerability Index -- 4.3 Development of Social Vulnerability Map.  
 5 Result and Discussion -- 5.1 Social Vulnerability of All Indicators --  
 5.2 Overall Social Vulnerability -- 6 Conclusion -- References --  
 Sustainable Urban Drainage System to Avoid Flooding of Rain Origin  
 and Improving Green Areas, Lima, Peru -- 1 Introduction -- 2  
 Determination of Rainfall Excess -- 2.1 Watershed Characteristics --  
 2.2 Analysis of Maximum Precipitation -- 2.3 Design Peak Discharge  
 Estimation -- 3 Determination of the Water Requirement for the Green  
 Area -- 4 Urban Systems Alternatives Sustainable Drainage -- 4.1  
 General Considerations -- 4.2 Bioretention Areas/Rain Gardens -- 4.3  
 Filtering Water Drains -- 4.4 Green Gutters and Vegetation -- 4.5  
 Detention Tank -- 5 Economic and Environmental Evaluation  
 of the Alternatives -- 5.1 Economic Evaluation -- 5.2 Environmental  
 Evaluation -- 5.3 Selected Alternative -- 6 Conclusions  
 and Recommendations -- References -- Innovative Construction  
 Interventions -- Replacement of River Sand with Coal Bottom Ash  
 as Fine Aggregate in Cement Mortar -- 1 Introduction -- 2  
 Experimental Programme -- 2.1 Casting of Specimens -- 2.2 Testing  
 of Specimens -- 3 Results and Discussions -- 3.1 Compressive  
 Strength of Mortar -- 3.2 Modulus of Elasticity of Masonry Mortar -- 4  
 Conclusion -- References -- Strength and Durability Properties  
 of Alkali-Activated Fly Ash Earth Bricks -- 1 Introduction -- 2  
 Experimental Programme -- 2.1 Characterization of Soil -- 2.2 Mix  
 Proportion -- 2.3 Casting Procedure -- 2.4 Tests Conducted -- 3  
 Testing Procedures -- 3.1 Dry Compressive Strength -- 3.2 Wet  
 Compressive Strength -- 3.3 Flexure Test -- 3.4 Split Tensile Test --

3.5 Complete Saturation Test -- 4 Results and Discussions -- 5  
 Concluding Remarks -- References -- Experimental Optimization  
 of GGBS Fly Ash-Based Geopolymer Concrete Paver Blocks -- 1  
 Introduction -- 2 Materials -- 2.1 Coal-Fired Fly Ash.  
 2.2 Ground Granulated Blast Furnace Slag (GGBS) [13] -- 2.3 Alkali  
 Activator Solution (AAS) -- 2.4 Aggregate -- 3 Experimental  
 Programme -- 3.1 Mix Proportion -- 3.2 Testing Program -- 4 Results  
 and Discussions -- 5 Conclusions -- References -- An Experimental  
 Study of Creep Behavior for Disturbance of Unsaturated Expansive Clay  
 Soil -- 1 Introduction -- 2 The Importance and Objectives of Research  
 -- 3 Test Material -- 4 Test Equipment and Test Procedure -- 5 Results  
 and Discussion -- 5.1 The Results of Physical and Mechanical  
 Properties -- 5.2 The Systemic Proctor Experiment Results -- 5.3  
 Chemical Test Results -- 5.4 The Results of the Oedometer Tests -- 6  
 Results -- 7 Conclusions -- References -- Practical Design of Stone  
 Column in Predicting Settlement Performance -- 1 Introduction -- 2  
 Settlement Prediction -- 2.1 Large Column Group -- 2.2 Design  
 Example 1 -- 2.3 Small Column Group -- 2.4 Design Example 2 -- 3  
 Conclusion -- References -- Using Prestressed Reinforced Concrete  
 Piles as Basement Walls for High-Rise Buildings -- 1 Introduction -- 2  
 Materials and Methods -- 3 Results and Discussion -- 3.1 Construction  
 of the Basement of High-Rise Buildings According to the Open Method  
 of Excavation -- 3.2 Construction of the Basement of a High-Rise  
 Building According to the Method of Wall in Soil -- 3.3 Construction  
 of the Basement of a High-Rise Building According to the Topdown  
 Method -- 4 Conclusion -- References -- Analytical Study on Single  
 Span Reinforced Concrete Beam with Continuous Spiral Reinforcement  
 Under Pure Torsion -- 1 Introduction -- 2 Previous Works in Torsional  
 Beam -- 3 Analytical Program -- 3.1 Design Criteria -- 3.2 Description  
 of Specimens -- 4 Results and Discussion -- 4.1 Load Versus Crack --  
 4.2 Load Versus Deflection -- 4.3 Stiffness -- 4.4 Torque Versus Angle  
 of Twist -- 5 Conclusion -- References.  
 Investigation of Wind Loads on Setback Building Using Computational  
 Fluid Dynamics -- 1 Introduction -- 1.1 Details of the Model -- 2  
 Numerical Simulation -- 2.1 Computational Domain -- 2.2 Meshing --  
 2.3 Validation -- 3 Result and Discussion -- 3.1 Pressure Contour -- 4  
 Flow Pattern -- 5 Conclusion -- References -- A Review on Role  
 of Pavement Materials on Urban Heat Island Effects -- 1 Introduction --  
 2 Pavement Materials -- 3 Parameters Influencing Pavement  
 Performance -- 3.1 Development of Modified Pavement Materials --  
 3.2 Concluding Remarks -- References -- Studies on Strip Footings  
 Resting on Lateritic Slopes -- 1 Introduction -- 2 Laboratory Model  
 Tests -- 2.1 Lateritic Soil -- 2.2 Test Setup -- 2.3 Preparation of Slope  
 -- 2.4 Testing Procedure -- 3 Finite Element Analyses -- 4 Results  
 and Discussions -- 4.1 Effect of Distance of Footing from Edge of Slope  
 (Eccentricity) -- 4.2 Effect of Slope Angle -- 4.3 Contact Pressure  
 Distributions Beneath Footing -- 5 Conclusions -- References -- Waste  
 Management and Disaster Risk Reduction -- Effective Utilization  
 of Waste Plastic Bottle as Geocell in Road Pavement: A Numerical Study  
 -- 1 Introduction -- 2 Literature Review -- 2.1 Experimental Studies  
 on Waste Plastic Bottle Geocell (WPBG) -- 2.2 Experimental  
 and Numerical Studies on WPBG -- 3 Numerical Analysis -- 3.1  
 Optimization of WPBG in PLAXIS 2D -- 3.2 Static Cyclic Loading  
 Analysis in PLAXIS 3D -- 4 Results and Discussion -- 4.1 Traffic Benefit  
 Ratio (TBR) and Rutting Reduction Ratio (RRR) -- 5 Conclusions --  
 References -- Impacts of Temple Waste on the Environment and Its  
 Mitigation -- 1 Introduction -- 2 Materials and Methods -- 3 Results  
 and Discussions -- 4 Conclusion -- References -- Age and Household

Solid Waste Arising in Suburban Malaysia: A Statistical Approach -- 1  
Introduction -- 2 Methods -- 3 Results and Discussion -- 4  
Conclusion.  
References.

---