

1. Record Nr.	UNINA9910688382003321
Titolo	Applied methods in design and construction of bridges, highways and roads : theory and practice // edited by Khaled Ghaedi
Pubbl/distr/stampa	London, England : , : IntechOpen, , 2022
Descrizione fisica	1 online resource (164 pages)
Disciplina	624.25
Soggetti	Bridges - Design and construction Roads - Design and construction
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Preface -- Chapter 1 Introductory Chapter: Design, Construction, and Retrofit of Bridges, Roads, and Highways by Khaled Ghaedi, Meisam Gordan, Ahad Javanmardi, Hamed Khatibi and Ramin Vaghei -- Chapter 2 Introduction to Monitoring of Bridge Infrastructure Using Soft Computing Techniques by Meisam Gordan, Saeed-Reza Sabbagh-Yazdi, Khaled Ghaedi, David P. Thambiratnam and Zubaidah Ismail -- Chapter 3 Perspective Chapter: Simplified Matrix Calculation for Analysis of Girder-Deck Bridge Systems by Alvaro Gaute-Alonso and David Garcia-Sanchez -- Chapter 4 A Deep Review on a Historical Brick Bridge in South Moravia; Reconstruction and Assessment by Denisa Bohacova and Eva Burgetova -- Chapter 5 Challenges in the Construction of Highways in the Brazilian Amazonia Environment: Part I -- Identification of Engineering Problems by Nilton de Souza Campelo, Arlene Maria Lamego da Silva Campos, Marcos Valerio Mendonca Baia, Daniel Jardim Almeida, Raimundo Humberto Cavalcante Lima, Danielly Kelly dos Reis Dias, Julio Augusto de Alencar Junior and Mario Jorge Goncalves Santoro Filho -- Chapter 6 Challenges in the Construction of Highways in the Brazilian Amazonia Environment: Part II: Engineering Solutions by Nilton de Souza Campelo, Arlene Maria Lamego da Silva Campos, Marcos Valerio Mendonca Baia, Daniel Jardim Almeida, Raimundo Humberto Cavalcante Lima, Danielly Kelly dos Reis Dias, Julio Augusto de Alencar Junior and Mario Jorge Goncalves Santoro Filho -- Chapter 7 Development of Highways Management Systems in Iraq by

Sommario/riassunto

This book presents a comprehensive overview of bridge and road engineering. Apart from bridge structures, roads and highways are integral to the advancement of cities. The lack of quantifiable, sustainable construction methods creates gaps in sustainability knowledge, leading to public, environmental, and financial dissatisfaction with completed highways and urban roads. This book discusses the key points in the design and construction assessment of bridges, highways, and roads. Chapters discuss such topics as bridge optimization techniques, risk assessment of roads, highway management systems, and challenges in highway construction. The book provides detailed insight into the impact of bridges and roads on the environment and the benefits of adopting development assessment systems to increase the safety of bridge structures, roads, and highways.

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