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| Titolo                  | Computational Mathematics and Modelling for Diabetes // edited by Abdesslam Boutayeb, Mohamed E.N. Lamlili  |
| Pubbl/distr/stampa      | Singapore : , : Springer Nature Singapore : , : Imprint : Springer, , 2025  |
| ISBN                    | 981-9619-25-4   |
| Edizione                | [1st ed. 2025.]   |
| Descrizione fisica      | 1 online resource (XVIII, 339 p. 64 illus., 45 illus. in color.)  |
| Collana                 | Industrial and Applied Mathematics, , 2364-6845   |
| Disciplina              | 003.3   |
| Soggetti                | Mathematical models<br>Mathematics<br>Mathematical Modeling and Industrial Mathematics<br>Applications of Mathematics<br>Diabetis<br>Models matemàtics<br>Llibres electrònics   |
| Lingua di pubblicazione | Inglese   |
| Formato                 | Materiale a stampa  |
| Livello bibliografico   | Monografia  |
| Nota di contenuto       | Chapter 1 A Systematic Review of Mathematical Models Dealing with Diabetes Population Dynamics -- Chapter 2 Mathematical Modelling for Glucose Homeostasis and Associated Mechanisms a State-of-the-Art Review -- Chapter 3 A Comprehensive Review of Mathematical and Data-driven Models in Glucose Homeostasis and Diabetes Pathways.   |
| Sommario/riassunto      | This book is a theoretical and pragmatic tool that applies mathematical modelling in understanding and managing diabetes and related complications such as diabetes predisposition, diabetes onset, regular glycaemic monitoring, glycated haemoglobin HbA1c, diabetes homeostasis, gestational diabetes and other associated diseases and conditions. Chapters in the book provide mathematical models dealing with the dynamics of insulin/glucose, the evolution from pre-diabetes to diabetes without and with complications, gestational diabetes and the association between diabetes and benign prostatic hyperplasia. It also applies new methods such as data mining, machine learning and deep learning. By offering pragmatic examples and comprehensive reviews on mathematical models used for diabetes, this book is useful |

for advanced researchers, academic teachers, students, scientists and high pharmaceutical industry executives willing to start modelling.

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