

1. Record Nr.	UNINA9910484132903321
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Titolo	Flow modelling and control in pipeline systems : a formal systematic approach // Sina Razvarz, Raheleh Jafari, Alexander Gegov
Pubbl/distr/stampa	Cham, Switzerland : , : Springer, , [2021] ©2021
ISBN	3-030-59246-4
Edizione	[1st ed. 2021.]
Descrizione fisica	1 online resource (XIV, 198 p. 82 illus., 67 illus. in color.)
Collana	Studies in systems, decision and control ; ; Volume 321
Disciplina	621.8672
Soggetti	Pipelines - Hydrodynamics Pipelines - Mathematical models
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	The importance of pipeline transportation -- A review on different pipeline defect detection techniques -- Modelling of pipeline flow -- Theory and applications of Fuzzy logic Controller for Flowing Fluids -- Basic concepts of neural networks and deep learning and their applications for pipeline damage detection -- Leakage modelling for pipeline -- Blockage detection in Pipeline -- Leakage Detection in Pipeline Based on Second Order Extended Kalman Filter Observer -- Control of flow rate in heavy-oil pipelines using PD and PID controller.
Sommario/riassunto	This book introduces novel methods for leak and blockage detection in pipelines. The leak happens as a result of ageing pipelines or extreme pressure forced by operational error or valve rapid variation. Many factors influence blockage formation in pipes like wax deposition that leads to the formation and eventual growth of solid layers and deposition of suspended solid particles in the fluids. In this book, initially, different categories of leak detection are overviewed. Afterwards, the observability and controllability of pipeline systems are analysed. Control variables can be usually presented by pressure and flow rates at the start and end points of the pipe. Different cases are considered based on the selection of control variables to model the system. Several theorems are presented to test the observability and controllability of the system. In this book, the leakage flow in the

pipelines is studied numerically to find the relationship between leakage flow and pressure difference. Removing leakage completely is almost impossible; hence, the development of a formal systematic leakage control policy is the most reliable approach to reducing leakage rates.

2. Record Nr.	UNINA9910586579503321
Titolo	Plants and Palynomorphs around the Permian-Triassic Boundary of South China // edited by Jianxin Yu, Jean Broutin, Zongsheng Lu
Pubbl/distr/stampa	Singapore : , : Springer Nature Singapore : , : Imprint : Springer, , 2022
ISBN	981-19-1492-3
Edizione	[1st ed. 2022.]
Descrizione fisica	1 online resource (261 pages)
Collana	New Records of the Great Dying in South China, , 2524-4582
Disciplina	561.13
Soggetti	Paleontology Plants - Evolution Plant Evolution
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Chapter 1 Literature Review -- Chapter 2 Stratigraphy of the studied sections -- Chapter 3 Materials and methods -- Chapter 4 Late Permian Changhsingian flora in varied palaeogeographic settings in South China -- Chapter 5 Early Triassic Induan flora in varied palaeogeographic settings in South China -- Chapter 6 Palynology across the Permian-Triassic Boundary in South China -- Chapter 7 Extinction Pattern and recovery of the Permian-Triassic Flora in South China -- Chapter 8 Plant and environment co-evolution in Permian-Triassic Transition -- Chapter 9 Systematic Palaeontology -- Chapter 10 Plant Fossils -- Chapter 11 Megaspores -- Chapter 12 Spore and Pollen Fossils.
Sommario/riassunto	This book documents timely and systematically marvelous fossils (plants and sporopollen) related to the biggest mass extinction of the Permian–Triassic transition. Numerous beautiful pictures and comprehensive records on the plants of this unique and critical interval

of geohistory are presented in this book. It greatly contributes to understanding of the Permian–Triassic plant diversity and evolution. For geologists, it is important to understand the Permian–Triassic crisis, and for students, it is attractive to learn about the plants' response to palaeoclimatic changes.

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