1. Record Nr. UNISA996464494503316

Autore	Helbing Dirk
Titolo	Next civilization : digital democracy and socio-ecological finance - how to avoid dystopia and upgrade society by digital means / / Dirk Helbing
Pubbl/distr/stampa	Cham, Switzerland : , : Springer, , [2021] Â©2021
ISBN	3-030-62330-0
Edizione	[Second edition.]
Descrizione fisica	1 online resource (XXIV, 325 p. 43 illus., 40 illus. in color.)
Disciplina	303.483
Soggetti	Automation - Social aspects Technological innovations - Social aspects
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Preface -- The Digital Society -- Complexity Time Bomb -- Social Forces -- Google as God -- Genie out of the Bottle -- Digitally-assisted Self-organization -- How Society works -- Networked Minds -- Economy 4.0 -- The Self-organizing Society -- Digital Democracy and Democratic Capitalism -- The Future of Human Society.
Sommario/riassunto	"Digital transformation" sounds harmless, given that the explosion in data volumes, processing power and Artificial Intelligence has driven humanity and the entire world to a point of no return. We will surely see a new civilization, but we are at a crossroads. The future needs to be re-invented, decisions must be taken. After the automation of factories and the creation of self-driving cars, the automation of society is on its way. But there are two kinds of automation: a centralized top-down control of the world and a distributed control approach, supporting local self-organization. Using the power of today’ s information systems, governments and big tech companies seem to engage in the first approach. Might they even build a „digital Crystal Ball“ that knows almost everything, including your personality, and a super-intelligent "digital God“ to control what we do? We are much closer to such „science fiction scenarios“ than you probably think. In this much expanded second edition of "The Automation of Society is Next: How to Survive the Digital Revolution" (2015), the author discusses lessons learned on digital democracy, aspects of

	transhumanism and far-reaching thoughts about life in the digital age and what it may mean to be human in the future.

2.

Record Nr.	UNINA9910299775903321
Autore	Ohtsu Kohei
Titolo	Time Series Modeling for Analysis and Control : Advanced Autopilot and Monitoring Systems / / by Kohei Ohtsu, Hui Peng, Genshiro Kitagawa
Pubbl/distr/stampa	Tokyo : , : Springer Japan : , : Imprint : Springer, , 2015
ISBN	4-431-55303-7
Edizione	[1st ed. 2015.]
Descrizione fisica	1 online resource (127 p.)
Collana	JSS Research Series in Statistics, , 2364-0065
Disciplina	519.55
Soggetti	Statistics Mathematical statistics - Data processing Statistics in Engineering, Physics, Computer Science, Chemistry and Earth Sciences Statistics and Computing Statistical Theory and Methods
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references at the end of each chapters and index.
Nota di contenuto	Ch1 Introduction (1.1 Necessity of Statistical Modeling for Complex, Large Systems -- 1.2 Model of Ship Motion and Main Engine -- 1.3 Experimental Ships and Outline of Topics Discussed in Remaining Chapters) -- Ch2 Time Series Analysis through AR Modeling (2.1 Univariate Time Series Analysis through AR Modeling -- 2.2 Analysis of Ship Motion through Univariate AR Modeling -- 2.3 Multivariate AR Modeling of Controlled Systems -- 2.4 Power Contribution Analysis of a Feedback System -- 2.5 State-Space Model and Kalman Filter -- 2.6 Piecewise Stationary Modeling -- 2.7 Model-Based Monitoring System -- 2.8 RBF-ARX Modeling for a Nonlinear System) -- Ch3 Design of a Model-Based Autopilot System for Course Keeping Motion (3.1 Statistical Optimal Controller Based on the ARX Model -- 3.2 AR Model-Based Autopilot System -- 3.3 Rudder-Roll Control System -- 3.4 Application to the Marine Main Engine Governor System) -- Ch4

Advanced Autopilot Systems (4.1 Noise-Adaptive Autopilot System -- 4.2 RBF-ARX Model-Based Predictive Control -- 4.3 GPS Signal-Based Computation of a Ship’s Tracking Error and Course Deviation -- 4.4 Tracking Control Approach to Marine Vehicles).

Sommario/riassunto

This book presents multivariate time series methods for the analysis and optimal control of feedback systems. Although ships’ autopilot systems are considered through the entire book, the methods set forth in this book can be applied to many other complicated, large, or noisy feedback control systems for which it is difficult to derive a model of the entire system based on theory in that subject area. The basic models used in this method are the multivariate autoregressive model with exogenous variables (ARX) model and the radial bases function net-type coefficients ARX model. The noise contribution analysis can then be performed through the estimated autoregressive (AR) model and various types of autopilot systems can be designed through the state–space representation of the models. The marine autopilot systems addressed in this book include optimal controllers for course-keeping motion, rolling reduction controllers with rudder motion, engine governor controllers, noise adaptive autopilots, route-tracking controllers by direct steering, and the reference course-setting approach. The methods presented here are exemplified with real data analysis and experiments on real ships. This book is highly recommended to readers who are interested in designing optimal or adaptive controllers not only of ships but also of any other complicated systems under noisy disturbance conditions.