

1. Record Nr.	UNINA9910165181303321
Autore	Maurer Markus
Titolo	Autonomous Driving [[electronic resource]] : Technical, Legal and Social Aspects / / edited by Markus Maurer, J. Christian Gerdes, Barbara Lenz, Hermann Winner
Pubbl/distr/stampa	Cham, : Springer Nature, 2016 Berlin, Heidelberg : , : Springer Berlin Heidelberg : , : Imprint : Springer, , 2016
ISBN	3-662-48847-7
Edizione	[1st ed. 2016.]
Descrizione fisica	1 online resource (XV, 706 p. 130 illus., 27 illus. in color.)
Disciplina	629.2
Soggetti	Automotive engineering Engineering design User interfaces (Computer systems) Management Industrial management Automotive Engineering Engineering Design User Interfaces and Human Computer Interaction Innovation/Technology Management
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Section I – Man and Machine -- Section II – Mobility -- Section III – Traffic -- Section IV – Safety and Security -- Section V – Law and Liability -- Section VI – Acceptance.
Sommario/riassunto	This book takes a look at fully automated, autonomous vehicles and discusses many open questions: How can autonomous vehicles be integrated into the current transportation system with diverse users and human drivers? Where do automated vehicles fall under current legal frameworks? What risks are associated with automation and how will society respond to these risks? How will the marketplace react to automated vehicles and what changes may be necessary for companies? Experts from Germany and the United States define key societal,

engineering, and mobility issues related to the automation of vehicles. They discuss the decisions programmers of automated vehicles must make to enable vehicles to perceive their environment, interact with other road users, and choose actions that may have ethical consequences. The authors further identify expectations and concerns that will form the basis for individual and societal acceptance of autonomous driving. While the safety benefits of such vehicles are tremendous, the authors demonstrate that these benefits will only be achieved if vehicles have an appropriate safety concept at the heart of their design. Realizing the potential of automated vehicles to reorganize traffic and transform mobility of people and goods requires similar care in the design of vehicles and networks. By covering all of these topics, the book aims to provide a current, comprehensive, and scientifically sound treatment of the emerging field of "autonomous driving".

2. Record Nr.	UNINA9910830662103321
Autore	Murio Diego A. <1944->
Titolo	The mollification method and the numerical solution of ill-posed problems [[electronic resource] /] / Diego A. Murio
Pubbl/distr/stampa	New York, : Wiley, c1993
ISBN	1-283-10099-1 9786613100993 1-118-03146-6 1-118-03321-3
Descrizione fisica	1 online resource (272 p.)
Disciplina	515.353 515/.353
Soggetti	Numerical analysis - Improperly posed problems Inverse problems (Differential equations) - Numerical solutions
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	"A Wiley interscience publication."
Nota di bibliografia	Includes bibliographical references (p. 232-248) and index.
Nota di contenuto	The Mollification Method and the Numerical Solution of Ill-Posed

Problems; Contents; Preface; Acknowledgments; 1. Numerical Differentiation; 1.1. Description of the Problem; 1.2. Stabilized Problem; 1.3. Differentiation as an Inverse Problem; 1.4. Parameter Selection; 1.5. Numerical Procedure; 1.6. Numerical Results; 1.7. Exercises; 1.8. References and Comments; 2. Abel's Integral Equation; 2.1. Description of the Problem; 2.2. Stabilized Problems; 2.3. Numerical Implementations; 2.4. Numerical Results and Comparisons; 2.5. Exercises; 2.6. References and Comments

3. Inverse Heat Conduction Problem3.1. One-Dimensional IHCP in a Semi-infinite Body; 3.2. Stabilized Problems; 3.3. One-Dimensional IHCP with Finite Slab Symmetry; 3.4. Finite-Difference Approximations; 3.5. Integral Equation Approximations; 3.6. Numerical Results; 3.7. Exercises; 3.8. References and Comments; 4. Two-Dimensional Inverse Heat Conduction Problem; 4.1. Two-Dimensional IHCP in a Semi-infinite Slab; 4.2. Stabilized Problem; 4.3. Numerical Procedure and Error Analysis; 4.4. Numerical Results; 4.5. Exercises; 4.6. References and Comments

5. Applications of the Space Marching Solution of the IHCP5.1. Identification of Boundary Source Functions; 5.2. Numerical Procedure; 5.3. IHCP with Phase Changes; 5.4. Description of the Problems; 5.5. Numerical Procedure; 5.6. Identification of the Initial Temperature Distribution; 5.7. Semi-infinite Body; 5.8. Finite Slab Symmetry; 5.9. Stabilized Problems; 5.10. Numerical Results; 5.11. Exercises; 5.12. References and Comments; 6. Applications of Stable Numerical Differentiation Procedures; 6.1. Numerical Identification of Forcing Terms; 6.2. Stabilized Problem; 6.3. Numerical Results

6.4. Identification of the Transmissivity Coefficient in the One-Dimensional Elliptic Equation6.5. Stability Analysis; 6.6. Numerical Method; 6.7. Numerical Results; 6.8. Identification of the Transmissivity Coefficient in the One-Dimensional Parabolic Equation; 6.9. Stability Analysis; 6.10. Numerical Method; 6.11. Numerical Results; 6.12. Exercises; 6.13. References and Comments; Appendix A. Mathematical Background; A.1.  $L_p$  Spaces; A.2. The Hilbert Space  $L_2()$ ; A.3. Approximation of Functions in  $L_2()$ ; A.4. Mollifiers; A.5. Fourier Transform; A.6. Discrete Functions

A.7. References and CommentsAppendix B. References to the Literature on the IHCP; Index

---

#### Sommario/riassunto

Uses a strong computational and truly interdisciplinary treatment to introduce applied inverse theory. The author created the Mollification Method as a means of dealing with ill-posed problems. Although the presentation focuses on problems with origins in mechanical engineering, many of the ideas and techniques can be easily applied to a broad range of situations.

---