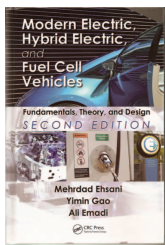




by Marian P. Kazmierkowski
and Fernando da Silva

Electric Power Systems

Modern Electric, Hybrid Electric, and Fuel Cell Vehicles: Fundamentals, Theory, and Design, Second Edition



By Mehrdad Ehsani, Yimin Gao, and Ali Emadi, CRC Press, Taylor & Francis Group, Boca Raton, Florida, USA, 2010, Hardcover, 534 pages, 413 illustrations and diagrams, ISBN: 978-1-

4200-5398-2.

This newly published book is coauthored by Mehrdad Ehsani and Yimin Gao, Texas A&M University, College Station, and Ali Emadi, Illinois Institute of Technology, Chicago. This book appeared in CRC Press' Power Electronics and Applications Series, with Muhammad H. Rashid, University of West Florida, as the series editor. This is an expanded, updated, and corrected second edition of the best-selling book published by CRC Press in 2004 [1]. Several new chapters and paragraphs, recent references, and a case study have been added:

- three new chapters (9, 10, and 16) on drive-train design methodology and control principles
- a completely rewritten chapter (2) on fundamentals of regenerative braking
- corrections and updates of the material in the first edition
- a case-study appendix that breaks down the Toyota Prius hybrid system.

Therefore, the book now has 16 chapters altogether:

- 1) Environmental Impact and History of Modern Transportation
- 2) Fundamentals of Vehicle Propulsion and Brake
- 3) Internal Combustion Engines
- 4) Electric Vehicles
- 5) Hybrid Electric Vehicles
- 6) Electric Propulsion Systems
- 7) Design Principle of Series (Electrical Coupling) Hybrid Electric Drive Train
- 8) Parallel (Mechanically Coupled) Hybrid Electric Drive Train Design (new chapter)
- 9) Design and Control Methodology of Series-Parallel (Torque and Speed Coupling) Hybrid Drive Train (new chapter)
- 10) Design and Control Principles of Plug-In Hybrid Electric Vehicles
- 11) Mild Hybrid Electric Drive Train Design
- 12) Peaking Power Sources and Energy Storages
- 13) Fundamentals of Regenerative Braking
- 14) Fuel Cells
- 15) Fuel Cell Hybrid Electric Drive Train Design
- 16) Design of Series Hybrid Drive Train for Off-Road Vehicles (new chapter)

Appendix: technical overview of Toyota Prius (new).

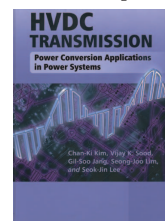
Similar to the earlier announced book on this hot topic [2], [3], the presented book is well balanced, and the description of technical material is simple with physically insightful discussions. Each chapter is supplemented with a selected list of references. The

authors illustrate key concepts with simulations and calculation examples. This new edition of this excellent reference book will greatly aid engineers, students, researchers, and other professionals who are working in automotive-related industries, as well as those in government and academia. I believe that this up-to-date second edition of the book will certainly be as successful as the first one.

References

- [1] M. Eshani, Y. Gao, S. E. Gay, and A. Emadi, *Modern Electric, Hybrid Electric, and Fuel Cell Vehicles-Fundamentals, Theory, and Design*. Boca Raton, FL: CRC, 2004.
- [2] M. P. Kazmierkowski, *Handbook of Automotive Power Electronics and Motor Drives*, A. Emadi, Ed. Boca Raton, FL: CRC, 2006.
- [3] M. P. Kazmierkowski, "Handbook of automotive power electronics and motor drives," *IEEE Ind. Electron. Mag.*, vol. 2, no. 2, pp. 46-47, 2008.

HVDC Transmission: Power Conversion Applications in Power Systems



By Chan-Ki Kim, Vijay K. Sood, Gil-Soo Jang, Seong-Joo Lim, and Seok-Jin Lee, IEEE Press, Wiley, Singapore, 2009, Hardcover, 458 pages, ISBN: 978-0-

470-82295-1 (cloth) and ISBN: 978-0-470-82295-1 (HB).

High-voltage direct current (HVDC) transmission systems use dc for the bulk transmission of electrical power. Compared with the common ac systems, HVDC