New book review

„ADVANCED ELECTRIC DRIVE VEHICLES”, by Ali Emadi

CRC Press, Taylor & Francis Group,

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Electrification of automobiles, in propulsion and non-propulsion loads is in nowadays a major task for the automotive industry.

Having 28 contributors from Canada and USA, with Ali Emadi as coordinator, the work is a comprehensive textbook covering the major aspects of advance electric drive vehicle.

The book contains 17 chapters with various illustrations, practical examples and case studies.

Chapter 1 is an introduction to the automotive industry and explains the „Continuum of Automotive Electrifications”, from the first Evs to a „Transportation 2.0” future.

Chapters 2 and 3 present the fundamentals of conventional vehicles and ICEs.

Chapters 4 to 8 describe the components of electrified vehicles, regarding the energy conversion and storage, including the hybrid solutions.

Chapters 9 and 10 are focused on the automotive power systems, the new 48V electrification and belt-driven starter-generator.

Chapters 11 and 12 introduce the hybrid power train and HEVs.

The charger needed structures are presented in chapter 13.

Chapters 14 to 16 present PHEVs, Evs, REEVs and V2G concepts and configurations.

Finally, chapter 17 describes the energy management and optimization in advance electric vehicles.

Each chapter ends with some questions or problems, having its own reference list.

Containing all major problems in electrified vehicles, with detailed description of all main parts, this book is very useful for those who are interested in this field, especially for students in bachelor or master programs.

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