

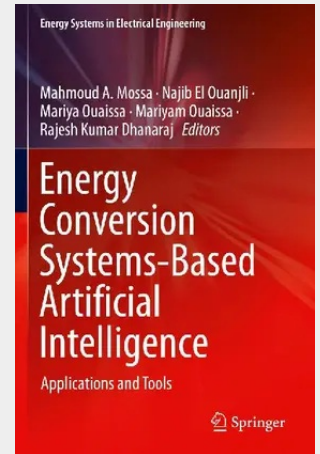
# Energy Conversion Systems-Based Artificial Intelligence

Applications and Tools

This book aims to propose advanced solutions based on artificial intelligence techniques for ECS in order to increase energy efficiency, ensure the safety of the ECS, and to improve the quality of the energy supplied to the grid. The efficiency and quality of the electrical energy produced depends mainly on the structure and efficiency of the control technology developed for the Energy Conversion System (ECS). To improve the performance of ECSs, it is interesting to design control systems that emulate some functions performed by the human brain. Among these interesting functions are self-adaptation, learning, flexibility of operation and planning in the presence of large uncertainties and with minimal information. Based on these aspects, artificial intelligence (AI) techniques can be developed and applied to solve the different control problems of ECSs.

For academics, professionals, practitioners, and graduate students interested in the most recent research on the application of AI in ECS, it is the ideal reference source.

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**192,59 €**

179,99 € (zzgl. MwSt.)

Lieferfrist: bis zu 10 Tage

**Artikelnummer:** 9789819626670

**Medium:** Buch

**ISBN:** 978-981-962667-0

**Verlag:** Springer

**Erscheinungstermin:** 25.04.2026

**Sprache(n):** Englisch

**Auflage:** Erscheinungsjahr 2026

**Serie:** Energy Systems in Electrical Engineering

**Produktform:** Kartoniert

**Gewicht:** 414 g

**Seiten:** 223

**Format (B x H):** 155 x 235 mm

