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# **River Publishers Book Catalogue**

Series in Transport Technology

River Publishers Series in Transport Technology

## **Urban Air Mobility** Intelligent, Safe and Sustainable Systems for Future Transportation

**Editor:** Vishnu Kumar Kaliappan, Konkuk University, Seoul, South Korea

**ISBN:** 9788770226783

**e-ISBN:** 9788770226776

**Available From:** September 2022

**Price:** € 98.50



### **Description:**

In recent years, the growth of the world's urban population has increased tremendously, and it is predicted that by 2040, 70% of the world population will be living in an urban setting. Existing ground transportation will be unable to cope with such an expansion, especially as congestion and over crowding becomes more common. An answer may be found with the advent of recent technologies such as urban air mobility, which may play a vital role in providing solutions for public transportation. The impact of modelling, analysis and application of intelligent algorithms is very much at the core of the design and implementation of Urban Air Mobility.

This book provides a resource for young engineers and researchers to understand state-of-the-art technologies through showcasing intelligent, safe and sustainable systems for urban air mobility. The various chapters are configured to address the challenges in modelling, analysis, navigation, traffic control, battery efficiency, safety and security in terms of Artificial intelligence techniques.

**Keywords:** Urban Air Mobility, DLN, DQN, Control systems, Unmanned Aerial Vehicle, Deep Learning models, PID, FOPID, Navigation control law, Traffic control law, power control system, energy efficient batteries, security mechanisms.

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## Human Factors in Intelligent Vehicles

**Editors:**

Cristina Olaverri-Monreal, Chair ITS-Sustainable Transport Logistics 4.0, and Johannes Kepler University, Austria

Fernando García-Fernández, University Carlos III de Madrid, Spain

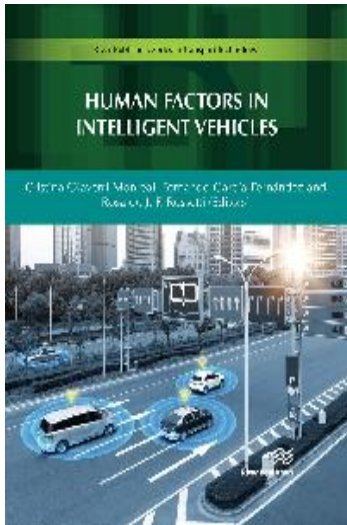
Rosaldo J. F. Rossetti, Faculdade de Engenharia da Universidade do Porto, Portugal

**ISBN:** 9788770222044

**e-ISBN:** 9788770222037

**Available From:** October 2020

**Price:** € 95.00



**Description:**

Human Factors in Intelligent Vehicles addresses issues related to the analysis of human factors in the design and evaluation of intelligent vehicles for a wide spectrum of applications and over different dimensions. To commemorate the 8th anniversary of the IEEE ITS Workshop on Human Factors (<http://hfiv.net>) some recent works of authors active in the automotive human factors community have been collected in this book. Enclosed here are extended versions of papers and tutorials that were presented at the IEEE ITSS Workshop on "Human Factors in Intelligent Vehicles" and also included is additional deeper analysis along with detailed experimental and simulation results. The contributors cover autonomous vehicles as well as the frameworks for analyzing automation, modelling and methods for road users' interaction such as intelligent user interfaces, including brain-computer interfaces and simulation and analysis tools related to human factors.

**Keywords:** Pedestrian crossing; Interactions; Game Theory; Autonomous vehicles, Brain-computer interfaces, Electroencephalography, Brain waves, Machine learning, Intelligent vehicles, Automation design and assessment, Allocation of functions and tasks, Authority, Responsibility, Human-machine interaction, Pedestrians behavior, Field Test, Older driver, Driver behavior, Age-related limitations, Technology acceptance, Effectiveness Data fusion model, Integration patterns, Driving simulator, Human factors, Ergonomics

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## **Internet of Things in Automotive Industries and Road Safety**

**Electronic Circuits, Program Coding and Cloud Servers**

### **Authors:**

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**Available From:** September 2018



### **Description:**

The aim of this book is to provide a platform to readers through which they can access the applications of 'Internet of Things' in the Automotive field. *Internet of Things in Automotive Industries and Road Safety* provides the basic knowledge of the modules with interfacing, along with the programming. Several examples for rapid prototyping are included, this to make the readers understand about the concept of IoT.

The book comprises of ten chapters for designing different independent prototypes for the automotive applications, and it would be beneficial for the people who want to get started with hardware based project prototypes. The text is based on the practical experience of the authors built up whilst undergoing projects with students and industry.

Technical topics discussed in the book include:

- Role of IoT in automotive industries
- Arduino and its interfacing with I/O devices
- Ti Launch Pad and its interfacing with I/O devices
- NodeMCU and its interfacing with I/O devices
- Serial Communication with Arduino and NodeMCU

**Keywords:** Internet of Things (IoT), Automotive, road safety, Arduino, NodeMCU, GPRS, Mobile App, cloud Server