

Online Library Sae Journal Of  
Automotive Engineering

**Sae Journal Of  
Automotive  
Engineering**

*The automotive industry is one of  
the largest and most important*

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*industries in the world. Cars, buses, and other engine-based vehicles abound in every country on the planet, and it is continually evolving, with electric cars, hybrids, self-driving vehicles, and so on. Technologies that were once thought to be*

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*decades away are now on our roads right now. Engineers, technicians, and managers are constantly needed in the industry, and, often, they come from other areas of engineering, such as electrical engineering, process engineering, or chemical*

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*engineering. Introductory books like this one are very useful for engineers who are new to the industry and need a tutorial. Also valuable as a textbook for students, this introductory volume not only covers the basics of automotive engineering, but*

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*also the latest trends, such as self-driving vehicles, hybrids, and electric cars. Not only useful as an introduction to the science or a textbook, it can also serve as a valuable reference for technicians and engineers alike. The volume also goes into other*

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*subjects, such as maintenance and performance. Data has always been used in every company irrespective of its domain to improve the operational efficiency and performance of engines. This work deals with details of various*

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*automotive systems with focus on designing various components of these system to suit the working conditions on roads. Whether a textbook for the student, an introduction to the industry for the newly hired engineer, or a reference for the technician or*

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*veteran engineer, this volume is the perfect introduction to the science of automotive engineering.*

*The rapidly growing need for mobility has brought with it a major challenge for improvement in the operation and utilization of*



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*automotive systems. The economical, environmental and safety constraints imposed by the increase in the number of road vehicles and subsequent government policies also require substantial product development through the application of infor*

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*mation technology. This involves the enhancement of vehicle informatics and telematic systems with additional sensors and systems. The advance in the design and development of automotive sensory systems is so rapid that there is urgent need*

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*for the experts involved in the technology to work together to provide a reference book for the engineer of today and tomorrow. This motivated me to spend two years researching the topics and the basis on which such a book should be written. The result is*

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*the present compilation of the work of international experts on the state-of-the-art in the field of automotive sensory systems. Thus, a unique collection has been created for the reference of all those concerned with, or interested in, the design and*

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*development of modern, safe and intelligent vehicles. Although this book is intended for engineers, managers, scientists, academicians and policy makers, students should also find it valuable. To meet the requirements of students the*

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*basics are explained in simple terms; however, it is hoped that others will appreciate this approach, since most of us are well aware that gaps remain in our knowledge of the elements of our profession.*

*Automotive Sensory Systems*

*Page 14/106*

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*The National Union Catalog,  
Pre-1956 Imprints*

*A Symposium*

*The Journal of the Society of  
Automotive Engineers*

*Research and Development of  
Materiel*

*'An Introduction to Modern Vehicle*

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*Design' provides a thorough introduction to the many aspects of passenger car design in one volume. Starting with basic principles, the author builds up analysis procedures for all major aspects of vehicle and component design. Subjects of current interest to the motor industry, such as failure prevention, designing with*



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*modern materials, ergonomics and control systems are covered in detail, and the author concludes with a discussion on the future trends in automobile design. With contributions from both academics lecturing in motor vehicle engineering and those working in the industry, "An Introduction to Modern Vehicle Design"*

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*provides students with an excellent overview and background in the design of vehicles before they move on to specialised areas. Filling the niche between the more descriptive low level books and books which focus on specific areas of the design process, this unique volume is essential for all students of*

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*automotive engineering. Only book to  
cover the broad range of topics for  
automobile design and analysis  
procedures Each topic written by an  
expert with many years experience of the  
automotive industry*

*Air Pollution*

*Modern Electric, Hybrid Electric, and*

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*Fuel Cell Vehicles*

*Automotive User Interfaces*

*1965 Passenger-car Engineering Trends*

*The SAE Story*

Fundamentals of Integrated Vehicle  
Realization is a unique and solid  
contribution to the subject of product

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development, centered on the automotive industry. Automotive manufacturers and suppliers are under pressure to transform themselves and deliver a higher level of product refinement coupled with more functionality. This could lead to the sprouting of organizational structures not in alignment with the required product

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development phases. Consequently, many product development initiatives may be cancelled or dropped at later stages despite all the efforts and financial investments. Therefore, it is vital that organizational unity be always intact during any transformation. A highly effective organization should always act

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as one cohesive entity dedicated to serving the customer with creative aptitude, integrative skills, analytical thinking, and synergistic management. Written by Dr. Mohamed El-Sayed, Professor and Director of Vehicle Durability and Integration Laboratory of Kettering University (Mechanical

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Engineering Department), Fundamentals of Integrated Vehicle Realization addresses an essential need for deep knowledge in the realm of vehicle development process, from idealization to market launch. The book covers realization process phases, process and vehicle characteristics and attributes,



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front-end innovation, virtual and physical realization, among other topics. Aim is to provide a broad understanding of the many systems and component parts that constitute the vehicle electrical and electronics in a detailed way. The book should also be a valuable source of information and reference. The book

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provides clear explanation of vehicle electrical and electronic components and systems with unique illustrations, which should be of value both to the students and to the experienced faculty members. Each chapter takes the reader systematically through the details of each component system. Key topics are

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emphasized and are reinforced by numerous illustrations.

Automobile Fuel Economy and Research and Development, Hearings Before...

94-1, Mar. 12 and 13, 1975

The Automotive Assembly

The Tire Pavement Interface

Bibliography on Motor Vehicle & Traffic

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Safety

NIST Serial Holdings

"This book is an  
introduction to  
automotive technology,  
with specific reference to  
battery electric, hybrid

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electric, and fuel cell  
electric vehicles. It  
could serve electrical  
engineers who need to  
know more about  
automobiles or  
automotive engineers who

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need to know about electrical propulsion systems. For example, this reviewer, who is a specialist in electric machinery, could use this book to better

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understand the  
automobiles for which  
the reviewer is  
designing electric drive  
motors. An automotive  
engineer, on the other  
hand, might use it to

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better understand the nature of motors and electric storage systems for application in automobiles, trucks or motorcycles. The early chapters of the book are



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accessible to  
technically literate  
people who need to know  
something about cars.  
While the first chapter is  
historical in nature,  
the second chapter is a

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good introduction to automobiles, including dynamics of propulsion and braking. The third chapter discusses, in some detail, spark ignition and compression

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ignition (Diesel)  
engines. The fourth  
chapter discusses the  
nature of transmission  
systems." —James  
Kirtley, Massachusetts  
Institute of Technology,

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USA "The third edition covers extensive topics in modern electric, hybrid electric, and fuel cell vehicles, in which the profound knowledge, mathematical

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modeling, simulations,  
and control are clearly  
presented. Featured with  
design of various  
vehicle drivetrains, as  
well as a multi-  
objective optimization

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software, it is an  
estimable work to meet  
the needs of automotive  
industry." —Haiyan Henry  
Zhang, Purdue  
University, USA "The  
extensive combined

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experience of the  
authors have produced an  
extensive volume  
covering a broad range  
but detailed topics on  
the principles, design  
and architectures of

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Modern Electric, Hybrid  
Electric, and Fuel Cell  
Vehicles in a well-  
structured, clear and  
concise manner. The  
volume offers a complete  
overview of



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technologies, their selection, integration & control, as well as an interesting Technical Overview of the Toyota Prius. The technical chapters are

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complemented with  
example problems and  
user guides to assist  
the reader in practical  
calculations through the  
use of common scientific  
computing packages. It

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will be of interest  
mainly to research  
postgraduates working in  
this eld as well as  
established academic  
researchers, industrial  
R&D engineers and allied

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professionals.”

—Christopher Donaghy-

Sparg, Durham

University, United

Kingdom The book deals

with the fundamentals,

theoretical bases, and

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design methodologies of  
conventional internal  
combustion engine (ICE)  
vehicles, electric  
vehicles (EVs), hybrid  
electric vehicles  
(HEVs), and fuel cell

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vehicles (FCVs). The design methodology is described in mathematical terms, step-by-step, and the topics are approached from the overall drive train

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system, not just individual components. Furthermore, in explaining the design methodology of each drive train, design examples are presented

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with simulation results.  
All the chapters have  
been updated, and two  
new chapters on Mild  
Hybrids and Optimal  
Sizing and Dimensioning  
and Control are also



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included • Chapters updated throughout the text. • New homework problems, solutions, and examples. • Includes two new chapters. • Features accompanying MATLAB™

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software.

Comprehensive dictionary  
of acronyms and  
abbreviations of  
institutions and  
organizations / Großes  
Wörterbuch der Akronyme

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und ... und

Organisationen: Pd -

Soz: Volume 6.

SAE journal

SAE Journal of

Automotive Engineering

Encyclopedia of

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Automotive Engineering

S.A.E. Bulletin

Part 1: Engines -  
Fundamentals

This one-stop Mega Reference  
eBook brings together the  
essential professional reference

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content from leading international contributors in the automotive field. An expansion the Automotive Engineering print edition, this fully searchable electronic reference book of 2500 pages delivers content to meet all the main information needs of

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engineers working in vehicle design and development. Material ranges from basic to advanced topics from engines and transmissions to vehicle dynamics and modelling. \* A fully searchable Mega Reference Ebook, providing all the essential

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material needed by Automotive Engineers on a day-to-day basis. \* Fundamentals, key techniques, engineering best practice and rules-of-thumb together in one quick-reference. \* Over 2,500 pages of reference material, including over 1,500 pages not

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included in the print edition

The auto industry is facing tough competition and severe economic constraints. Their products need to be designed "right the first time" with the right combinations of features that not only satisfy the customers but continually



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please and delight them by providing increased functionality, comfort, convenience, safety, and craftsmanship. Based on t  
Air Pollution  
Hearings Before the Committee on Commerce, United States Senate, Ninety-fourth Congress,

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First Session ... March 12 and 13,  
1975

Automotive Handbook

Automotive Engineering

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Air pollution, global warming, and the steady decrease in petroleum resources continue to stimulate interest in the development of safe, clean, and highly efficient transportation. Building on the foundation of the

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bestselling first edition, Modern Electric, Hybrid Electric, and Fuel Cell Vehicles: Fundamentals, Theory, and Design, Second Edition updates and expands its detailed coverage of the vehicle technologies that offer the most

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promising solutions to these issues affecting the automotive industry. Proven as a useful in-depth resource and comprehensive reference for modern automotive systems engineers, students, and

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researchers, this book speaks from the perspective of the overall drive train system and not just its individual components. New to the second edition: A case study appendix that breaks down the Toyota Prius hybrid

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system Corrections and updates  
of the material in the first edition  
Three new chapters on drive  
train design methodology and  
control principles A completely  
rewritten chapter on  
Fundamentals of Regenerative

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Braking Employing sufficient mathematical rigor, the authors comprehensively cover vehicle performance characteristics, EV and HEV configurations, control strategies, modeling, and simulations for modern vehicles.



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They also cover topics including:  
Drive train architecture analysis  
and design methodologies  
Internal Combustion Engine  
(ICE)-based drive trains Electric  
propulsion systems Energy  
storage systems Regenerative

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braking Fuel cell applications in  
vehicles Hybrid-electric drive  
train design The first edition of  
this book gave practicing  
engineers and students a  
systematic reference to fully  
understand the essentials of this

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new technology. This edition introduces newer topics and offers deeper treatments than those included in the first.

Revised many times over many years, it will greatly aid engineers, students,

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researchers, and other professionals who are working in automotive-related industries, as well as those in government and academia.

This book focuses on automotive user interfaces for in-vehicle

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usage, looking at car electronics, its software of hidden technologies (e.g., ASP, ESP), comfort functions (e.g., navigation, communication, entertainment) and driver assistance (e.g., distance

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checking). The increased complexity of automotive user interfaces, driven by the need for using consumer electronic devices in cars as well as autonomous driving, has sparked a plethora of new research within

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this field of study. Covering a broad spectrum of detailed topics, the authors of this edited volume offer an outstanding overview of the current state of the art; providing deep insights into usability and user

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experience, interaction  
techniques and technologies as  
well as methods, tools and its  
applications, exploring the  
increasing importance of Human-  
Computer-Interaction (HCI)  
within the automotive industry



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Automotive User Interfaces is intended as an authoritative and valuable resource for professional practitioners and researchers alike, as well as computer science and engineering students who are

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interested in automotive  
interfaces.

Theory of Ground Vehicles

Introduction to Automotive  
Engineering

Creating Interactive Experiences  
in the Car

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New York State Safety Car  
Project

Argonne List of Serials

**THEORY OF GROUND  
VEHICLES A leading and  
authoritative text for  
advancing ground vehicle**

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**mobility Theory of  
Ground Vehicles, Fifth  
Edition presents updated  
and expanded coverage of  
the critical factors  
affecting the  
performance, handling,**

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**and ride essential to the  
development and design  
of road and off-road  
vehicles. Replacing  
internal combustion  
engines with zero-  
emission powerplants in**

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**ground vehicles to  
eliminate greenhouse gas  
emissions for curbing  
climate change has  
received worldwide  
attention by both the  
vehicle industry and**

**governmental agencies.  
To enhance safety, traffic  
flow, and operating  
efficiency of road  
transport, automated  
driving systems have been  
under active**

**development. With  
growing interest in the  
exploration of the Moon,  
Mars, and beyond,  
research in  
terramechanics for  
guiding the development**



**of extraterrestrial rovers  
has been intensified. In  
this new edition, these  
and other topics of  
interest in the field of  
ground vehicle  
technology are explored,**

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**and technical data are updated. New features of this edition include:  
Expanded coverage of the fundamentals of electric drives, hybrid electric drives, and fuel cell**

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**technology Introduction  
to the classification and  
operating principles of  
the automated driving  
system and cooperative  
driving automation  
Applications of**

*Page 83/106*

**terramechanics to  
guiding the development  
of extraterrestrial rovers  
Elaboration on the  
approach to achieving the  
optimal operating  
efficiency of all-wheel**

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**drive off-road vehicles  
Introduction to updated  
ISO Standards for  
evaluating vehicle ride An  
updated and  
comprehensive text and  
reference for both the**

*Page 85/106*

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**educational and  
professional  
communities, Theory of  
Ground Vehicles, Fifth  
Edition will prove  
invaluable to aspiring and  
practicing engineers**

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**seeking to solve real-  
world road and off-road  
vehicle mobility  
problems.**

**Bosch literature sets the  
standard for concise  
explanations of the**

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**function and engineering  
of automotive systems  
and components: from  
Fuel Injection, to Anti-  
lock Braking Systems, to  
Alarm Systems. These  
books are a great**



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**resource for anyone who  
wants quick access to  
advanced automotive  
engineering information.  
The vocational or  
technical school  
instructor faced with**

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**tough questions from  
inquiring students will  
find welcome answers in  
their pages. Advanced  
enthusiasts who want to  
understand what goes on  
under the skin of today's**

**sophisticated automobiles  
will find the explanations  
they seek. And motivated  
technicians who want to  
cultivate a confident  
expertise will find the  
technical information**

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**they need. Both handbooks are fully stitched, case bound and covered with strong but flexible "shop-proof" vinyl for long life. Each of these exhaustive**

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**reference manuals  
includes application-  
specific material gathered  
from the engineers of  
leading European auto  
companies and other  
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input from leading  
authorities at universities  
throughout the world.  
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same Bosch technical  
experts who design and**

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automotive and diesel  
systems and components.  
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single, indispensable  
reference work that rises  
above the rest. In the**

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**automotive world that  
reference is the blue  
Automotive Handbook  
from Bosch. Now in its  
brand new 4th edition  
and expanded to over 840  
pages. With more than**



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**1,000 cut-away  
illustrations, diagrams,  
tables and sectional  
drawings, this definitive  
encyclopedia of  
automotive engineering  
information is both**

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**exhaustive and  
accessible, making even  
sophisticated  
automotive concepts easy  
to visualize and  
understand. The 4th  
edition includes an all-**

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**new, comprehensive  
section on Vehicle  
Dynamics Control (VDC),  
that covers traction  
control system design and  
operation. 19 other  
subject areas have been**

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**expanded and updated.  
Section headings in the  
new 4th edition include:  
-- Vehicle Dynamics  
Control (NEW!) -- Sensors  
-- Reliability -- Lighting --  
Air supply -- Mathematics**

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**-- Navigation systems --  
Braking equipment --  
Power transmission --  
Chassis -- Starting and  
ignition -- Comfort and  
safety -- General technical  
knowledge -- Motor-**

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**vehicle dynamics --**

**Vehicle bodies, passenger  
and commercial --**

**Symbols used in vehicle  
electrical systems --**

**Vehicle windows and  
window cleaning --**

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**Heating and air  
conditioning --  
Communication and  
information systems --  
Vehicle hydraulics and  
pneumatics --  
Environmental effects of**

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**vehicle equipment --  
Actuators -- Quality --  
Vehicle drives -- Fuel  
metering -- Physics --  
Driver information --  
Materials science -- Road-  
vehicle systems -- Alarm**



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**& signaling systems --  
Engine exhaust gases --  
Road traffic legislation  
Highway Safety Literature  
New Serial Titles  
Fundamentals of  
Integrated Vehicle**

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**Realization  
Automotive Engineering e-  
Mega Reference  
Automotive Electrical and  
Electronics**