

Car Science

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CHRIS REID

Intelligent Vehicles Butterworth-Heinemann

Covering every decade from the 1920s until now, this book reveals an incredible array of fascinating and advanced aerodynamic designs - cars shaped to cheat the wind or stick to the road. Meet an automotive inventor so weird he'd taken a vow of silence and had to communicate by writing notes... discover one of the lowest-drag cooling systems ever used in a production car... and see how the science and art of car aerodynamics have progressed over the last 100 years. Written with the full cooperation of car aerodynamicists from Porsche, Tesla, General Motors and Volkswagen, the coverage is detailed and accurate. Over 60 individual cars are described - from the tiny Fiat Uno to the mighty Bluebird Land Speed Record car. Learn about wings and spoilers, the Kamm tail and how today's low-drag electric cars are being developed. Be amazed that some cars built over 80 years ago have better aerodynamic figures than many current cars. See rare concept cars from Mercedes, Ford and Chrysler. Researched on three continents and containing more than 450 photos, diagrams and graphs, this book will forever change how you view car aerodynamics. "Someone once said that to know where you are going you need to know where you have come from. Julian Edgar's new book provides car aerodynamicists with a vivid and detailed understanding of how we got here over the past 100 years." Jeff Howell, Visiting Professor Loughborough University and former head of Aerodynamics at Rover, Jaguar Land Rover and Tata Motors European Technical Centre. "This book takes you on a fascinating and engrossing journey through the history of automotive aerodynamics, highlighting notable milestones in learning and technology, but also bringing real humanity to some of the illustrious names of the field, and adding illuminating context to their work." Rob Palin, lead aerodynamicist on the Tesla Model S "A fascinating and well-researched trip through history that will expand the understanding of anyone interested in vehicle aerodynamics." Jon Young, car aerodynamics enthusiast.

A Century of Car Aerodynamics Capstone

Vehicle Collision Dynamics provides a unified framework and timely collection of up-to-date results on front crash, side crash and car to car crashes. The book is ideal as a reference, with an approach that's simple, clear, and easy to comprehend. As the mathematical and software-based modelling and analysis of vehicle crash scenarios have not been systematically investigated, this is an ideal source for further study. Numerous academic and industry studies have analyzed vehicle safety during physical crash scenarios, thus material responses during crashes serve as one of the most important performance indices for mechanical design problems. In addition to mathematical methodologies, this book provides thorough coverage of computer simulations, software-based modeling, and an analysis of methods capable of providing more flexibility. - Unifies existing and emerging concepts concerning vehicle crash dynamics - Provides a series of latest results in mathematical-based modeling from front and oblique perspectives - Contains almost everything needed to capture the essence of model development and analysis for vehicle crash - Includes both numerical and simulation results given in each chapter - Presents a comprehensive, up-to-date reference that encourages further study

Shaker Mfg Application Consulting Engr

David Macaulay's troupe of curious mammoths lead you through the basics of physics, biology, and chemistry in this unconventional and highly original guide to science. From the interior of an atom to the solar system and beyond, the mammoths seek to understand the science! These intrepid science demonstrators will go to incredible lengths to educate and entertain. They wrestle with magnets to understand their powerful force, make mammoth models of different materials explore what gives them mass, and step into an X-ray machine to reveal the bones beneath their woolly exterior. Observing and recording the mammoth's behavior is bestselling illustrator David Macaulay,

whose How Machines Work won the Royal Society Young People's Book Prize in 2016. Renowned for his ability to explain complex ideas with simple genius, Macaulay captures the oddball humor of his subject matter, making Macaulay's Mammoth Science the perfect introduction to scientific principles for the young and the young-at-heart.

Essentials of Vehicle Dynamics Springer

Popular Science gives our readers the information and tools to improve their technology and their world. The core belief that Popular Science and our readers share: The future is going to be better, and science and technology are the driving forces that will help make it better.

How Car Engine Works? Mason Crest Publishers

Essentials of Vehicle Dynamics explains the essential mathematical basis of vehicle dynamics in a concise and clear way, providing engineers and students with the qualitative understanding of vehicle handling performance needed to underpin chassis-related research and development. Without a sound understanding of the mathematical tools and principles underlying the complex models in vehicle dynamics, engineers can end up with errors in their analyses and assumptions, leading to costly mistakes in design and virtual prototyping activities. Author Joop P. Pauwelussen looks to rectify this by drawing on his 15 years' experience of helping students and professionals understand the vehicle as a dynamic system. He begins as simply as possible before moving on to tackle models of increasing complexity, emphasizing the critical role played by tire-road contact and the different analysis tools required to consider non-linear dynamical systems. Providing a basic mathematical background that is ideal for students or those with practical experience who are struggling with the theory, Essentials of Vehicle Dynamics is also intended to help engineers from different disciplines, such as control and electronic engineering, move into the automotive sector or undertake multi-disciplinary vehicle dynamics work. - Focuses on the underlying mathematical fundamentals of vehicle dynamics, equipping engineers and students to grasp and apply more complex concepts with ease. - Written to help engineers avoid the costly errors in design and simulation brought about by incomplete understanding of modeling tools and approaches. - Includes exercises to help readers test their qualitative understanding and explain results in physical and vehicle dynamics terms.

Car Science Mitchell Beazley

From an engineer and futurist, an impassioned account of technological stagnation since the 1970s and an imaginative blueprint for a richer, more abundant future The science fiction of the 1960s promised us a future remade by technological innovation: we'd vacation in geodesic domes on Mars, have meaningful conversations with computers, and drop our children off at school in flying cars. Fast-forward 60 years, and we're still stuck in traffic in gas-guzzling sedans and boarding the same types of planes we flew in over half a century ago. What happened to the future we were promised? In Where Is My Flying Car?, J. Storrs Hall sets out to answer this deceptively simple question. What starts as an examination of the technical limitations of building flying cars evolves into an investigation of the scientific, technological, and social roots of the economic stagnation that started in the 1970s. From the failure to adopt nuclear energy and the suppression of cold fusion technology to the rise of a counterculture hostile to progress, Hall recounts how our collective ambitions for the future were derailed, with devastating consequences for global wealth creation and distribution. Hall then outlines a framework for a future powered by exponential progress—one in which we build as much in the world of atoms as we do in the world of bits, one rich in abundance and wonder. Drawing on years of original research and personal engineering experience, Where Is My Flying Car?, originally published in 2018, is an urgent, timely analysis of technological progress over the last 50 years and a bold vision for a better future.

Materials, Design and Manufacturing for Lightweight Vehicles John Wiley & Sons

This book is the pocket guide I wish I had when I first became a general manager of a Mitsubishi dealership in New York. Honestly, I am not the brightest star in the sky and made every mistake

anyone could've possibly made. Unfortunately, I see dealer principals/general managers/general sales managers making the same mistakes today. The only difference is the time and consequences of these mistakes. I got my first GM gig in 2004. That was in the beginning days of the Internet, before millennials joined the workforce, and way before any viable disrupters entered the market space. It was a lot easier to get away with mistakes then. I don't think you could get away with making the same mistakes now. The stakes are too high. Automotive retail profit margins are tiny. According to the National Automobile Dealers Association (NADA), automotive net profit margin as of March 31, 2019 was merely 1.38 percent. As a result, every misstep makes it harder to stay in business. The car business desperately needs better leadership skills, understanding of social media, inventory management, fixed operations, and so much more. There is no educational barrier to the entry into car business, and there are only a handful of universities offering a major in car dealership general management, such as Liberty and Keiser. On top of that, only a tiny percentage of dealer principals and general managers attend the National Automobile Dealer Association University. That means that a vast majority of general managers receive training on the job, even if we took business-related classes in college. The auto business is a different animal. General information will only carry you so far. That is exactly why general managers make the same mistakes year after year. My goal is to break this vicious cycle and provide as much information as possible to ensure that automotive retail survives the disruptions we are witnessing today. We need to be ready for the next generation of car buyers, people who are more computer savvy and not afraid to search for better deals. According to surveys, 80 percent of millennials plan to buy a vehicle in the next five years. In fact, millennials worldwide will buy about 40 percent of all vehicles in the next decade. At the same time, they spend an average of 17 hours on line before going to a dealership. Are you ready for them?

CAR Science - For 3rd to 6th Grade Teachers Elsevier

This addition to the visually stimulating Sci-Hi series looks at the application of science and new technologies to cars and motorbikes and how they affect our lives. It looks at new materials, discoveries, inventions, and assesses their environmental impact.

Science and the Detective Elsevier

"The tense, darkly funny, unputdownable debut novel from one of the most successful screenwriters of the past 20 years--the tale of a hit man mistaken for a hero whose sudden, unwanted fame makes him a target for the surprising number of people who want him dead"--

National Geographic Books

"Describes the science concepts involved in several types of car racing"--

The Science of Car Racing Elsevier

The science and technology of materials in automotive engines provides an introductory text on the nature of the materials used in automotive engines. It focuses on reciprocating engines, both four and two stroke, with particular emphasis on their characteristics and the types of materials used in their construction. The book considers the engine in terms of each specific part: the cylinder, piston, camshaft, valves, crankshaft, connecting rod and catalytic converter. The materials used in automotive engines are required to fulfil a multitude of functions. It is a subtle balance between material properties, essential design and high performance characteristics. The science and technology of materials in automotive engines describes the metallurgy, chemical composition, manufacturing, heat treatment and surface modification of these materials. It also includes supplementary notes that support the core text. The book is essential reading for engineers and designers of engines, as well as lecturers and graduate students in the fields of automotive engineering, machine design and materials science looking for a concise, expert analysis of automotive materials. - Provides a detailed introduction to the nature of materials used in automotive engines - Essential reading for engineers, designers, lecturers and students in automotive engineering - Written by a renowned expert in the field

Autonomous Vehicles and Future Mobility Butterworth-Heinemann

The definitive book on tire mechanics by the acknowledged world expert - Covers everything you need to know about pneumatic tires and their impact on vehicle performance, including mathematic modeling and its practical application - Written by the acknowledged world authority on the topic and the name behind the most widely used model, Pacejka's 'Magic Formula' - Updated with the latest information on new and evolving tire models to ensure you can select the right model for your needs, apply it appropriately and understand its limitations In this well-known resource, leading tire model expert Hans Pacejka explains the relationship between operational variables, vehicle variables and tire modeling, taking you on a journey through the effective modeling of complex tire and vehicle dynamics problems. Covering the latest developments to Pacejka's own industry-leading model as well as the widely-used models of other pioneers in the field, the book combines theory, guidance, discussion and insight in one comprehensive reference. While the details of individual tire models are available in technical papers published by SAE, FISITA and other automotive organizations, Tire and Vehicle Dynamics remains the only reliable collection of information on the topic and the standard go-to resource for any engineer or researcher working in the area. - New edition of the definitive book on tire mechanics, by the acknowledged world authority on the topic - Covers everything an automotive engineer needs to know about pneumatic tires and their impact on vehicle performance, including mathematic modelling and its practical application - Most vehicle manufacturers use what is commonly known as Pacejka's 'Magic Formula', the tire model developed and presented in this book

Acoustical Materials Car Science

This book is Car Science for 3rd to 6th Grade Teachers. We see the Science inside the billion cars that are in use on our planet. With Science, people, pour, pound and push to make car parts. Science enables us to work together to make future cars green and fly!

Best Sellers - Books :

- [If He Had Been With Me](#)
- [The Body Keeps The Score: Brain, Mind, And Body In The Healing Of Trauma](#)
- [The Collector: A Novel By Daniel Silva](#)
- [The 48 Laws Of Power By Robert Greene](#)
- [The Boy, The Mole, The Fox And The Horse By Charlie Mackesy](#)
- [Young Forever: The Secrets To Living Your Longest, Healthiest Life \(the Dr. Hyman Library, 11\) By Dr. Mark Hyman Md](#)
- [The Four Agreements: A Practical Guide To Personal Freedom \(a Toltec Wisdom Book\) By Don Miguel Ruiz](#)
- [The Silent Patient](#)
- [Stop Overthinking: 23 Techniques To Relieve Stress, Stop Negative Spirals, Declutter Your Mind, And Focus On The Present \(the Path To Calm\) By Nick Trenton](#)
- [The Housemaid](#)

Tune to Win Haynes Publishing

Trace the evolution of the supercar through the technology that drives it. With an introduction by David Coulthard. This is the definitive story of the science behind the art of supercar design. Featuring bespoke technical illustrations from F1 insider Neil Waterman and contributions from the biggest names in the supercar world, including: Adrian Newey - legend of Formula 1 design Gordon Murray - creator of the McLaren F1 Achim Anscheidt - chief designer of the Bugatti Chiron Tony Hatter - Porsche design guru Horacio Pagani - founder of Pagani Nigel Mansell - Formula 1 world champion Christian von Koenigsegg - founder of Koenigsegg And many, many more. From the earliest supercharged monsters to the complex machines of today, The Science of Supercars traces the evolution of the supercar through the technology that powers it.

Car Science Capstone

If you like cars, but you don't know how they work, then This educational resource contains valuable information destined to those who are passionate about cars. You can easily understand and remember the process and every detail. It tackles: A descriptions about the main car parts Aiming to simplify the mechanical operations inside the vehicle, it's supported with simple 3D or real models...to enhance, visualize and associate the car parts with description in a practical way, and how each part works with the rest. After this, a four stroke engine detailed and well explained will inform you about all what you need to know, we make sure that you will easily grasp the whole process.

The Science of Car Racing Elsevier

From Top Gear's Richard Hammond, Car Science is an intuitive and exciting children's science book on all things cars. In four sections, Car Science includes a timeline of automotive invention; a "how it works" guide to modern cars, with exploded diagrams, cutaways, and computer graphics; key physics concepts, all relating to cars and how they run; and a look into the future of cars, including eco-friendly concept cars. This car book for kids is the perfect resource for curious minds.

Mammoth Science Capstone

Intelligent Road Vehicles examines specific aspects of intelligent vehicles such as enabling technologies, human factors and an analysis of social and economic impacts. The book is an invaluable resource for those pursuing deeper knowledge in the intelligent vehicles field, providing readers with an idea of current and future technologies, current projects and developments and the future of intelligent vehicles. Intelligent road vehicles are becoming a challenging area of research worldwide. Apart from the final applications and systems in vehicles, there are many enabling technologies that should be introduced. Communications and automation are two key areas for future automobiles. This book benefits from collaboration on the Thematic Network on Intelligent Vehicles led by Felipe Jimenez. - Provides a general overview of different aspects related to intelligent road vehicles (sensors, applications, communications, automation, human factors, etc.) - Addresses the different components and building blocks of intelligent vehicles in a single, comprehensive reference - Explains how sensors are interpreted, including how different sensor readings are fused - Addresses issues involved with avoiding collisions and other factors such as pot holes, unclear road lines or markings, and unexpected weather conditions

Cars and Motorcycles Butterworth-Heinemann

Autonomous Vehicles and Future Mobility presents novel methods for examining the long-term effects on individuals, society, and on the environment for a wide range of forthcoming transport scenarios, such as self-driving vehicles, workplace mobility plans, demand responsive transport analysis, mobility as a service, multi-source transport data provision, and door-to-door mobility. With the development and realization of new mobility options comes change in long-term travel behavior and transport policy. This book addresses these impacts, considering such key areas as the attitude of users towards new services, the consequences of introducing new mobility forms, the impacts of changing work related trips, and more. By examining and contextualizing innovative transport solutions in this rapidly evolving field, the book provides insights into the current implementation of these potentially sustainable solutions. It will serve as a resource of general guidelines and best practices for researchers, professionals and policymakers.

Basics of Chimeric Antigen Receptor (CAR) Immunotherapy Capstone

From patient referral to post-therapy management, Chimeric Antigen Receptor (CAR) T-Cell Therapies for Cancer: A Practical Guide presents a comprehensive view of CAR modified T-cells in a concise and practical format. Providing authoritative guidance on the implementation and management of CAR T-cell therapy from Drs. Daniel W. Lee and Nirali N. Shah, this clinical resource keeps you up to date on the latest developments in this rapidly evolving area. - Covers all clinical aspects, including patient referral, toxicities management, comorbidities, bridging therapy, post-CAR monitoring, and multidisciplinary approaches to supportive care. - Includes key topics on associated toxicities such as predictive biomarkers, infections, and multidisciplinary approaches to supportive care. - Presents current knowledge on FDA approved CAR T-cell products as well as developments on the horizon. - Editors and authors represent leading investigators in academia and worldwide pioneers of CAR therapy.

A Solar Car Primer Annick Press

Leading F1 journalist David Tremayne unravels the mysteries of modern Grand Prix car design. The authoritative, extensively illustrated text explains just how an F1 car works, and this revised and updated third edition includes new material about the rules changes introduced for the 2009 season. The philosophy and technology behind the chassis, engine, transmission, electronics, steering, suspension, brakes, tires and aerodynamics are analyzed, and the important question of how these parts and systems interact is explored. This is an absorbing insight into the secretive and technology-driven world of racing car design at its highest level.