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Driverless - Hod Lipson 2016-09-23

When human drivers let intelligent software take the wheel: the beginning of a new era in personal mobility.

Autonomous Driving - Andreas Herrmann 2018-03-26

The technology and engineering behind autonomous driving is advancing at pace. This book presents the latest technical advances and the economic, environmental and social impact driverless cars will have on individuals and the automotive industry.

Products Liability Law - Mark Geistfeld 2021-10-07

Products Liability Law, Second Edition, by prolific tort scholar Mark Geistfeld, represents the “next generation” of casebooks on products liability. Earlier texts focused on the relative merits of strict liability and negligence, embodied in the apparently competing liability frameworks of the consumer expectations test in the Restatement (Second) of Torts and the risk-utility test in the Restatement (Third) of Torts. The majority of courts, however, have incorporated the risk-utility test into the framework of consumer expectations. By providing balanced coverage of both consumer expectations and the risk-utility test, the casebook keeps pace with ongoing developments in the case law and moves beyond the battles that largely defined products liability in the twentieth century. In addition to teaching students how liability rules protect consumer expectations via comprehensive application of the risk-utility test, this innovative casebook underscores the importance of doctrinal history, the psychology of evaluating product risks, and the role of products liability in the modern regulatory state. Students will learn how courts have applied established doctrines to novel problems ranging from the relevance of scientific evidence in toxic-tort cases to the distribution of defective products on the Amazon online marketplace. To further illustrate this dynamic, the casebook has twenty-nine problems with associated analysis involving the liability issues likely to be raised by the emerging technology of autonomous vehicles. Finally, the casebook reinforces students’ knowledge of fundamental tort principles while developing specialized expertise and a deeper understanding of the torts process. New to the Second Edition: A dozen new main cases updating older case law, providing coverage of new issues not addressed in the First Edition, and/or improving upon the analysis provided by the associated case in the First Edition Retention of the majority of main cases from the first edition, with revisions to the ensuing notes incorporating relevant case law developments A reorganized and updated chapter covering the controversy over the relative merits of the consumer expectations and risk-utility tests Comprehensive discussion of the tort version of the implied warranty—the genesis of the consumer expectations test—and its relation to product malfunctions and the risk-utility test A new chapter addressing the existence of the tort duty and identifying the difference between patent dangers and patent defects Reorganization of the chapter on factual causation, emphasizing the continuity of evidentiary problems running across different types of cases, ranging from the heeding presumption in warning cases, to market-share liability, to proof of both general and specific causation in toxic-tort cases Professors and students will benefit from: Classroom-tested materials taught for over 20 years by an award-winning professor Interesting cases that illustrate both the traditional and contemporary character of products liability litigation; cases are followed by extensive notes Each chapter addressing doctrinal issues concludes with problems on autonomous vehicles. The full set of 29 problems provides students with the necessary background for understanding liability issues posed by this emerging technology. Each problem

is followed by the author’s analysis of the associated issues, cross-referenced to the relevant casebook material.

Generation Robot - Terri Favro 2018-02-06

Generation Robot covers a century of science fiction, fact and, speculation—from the 1950 publication of Isaac Asimov’s seminal robot masterpiece, *I, Robot*, to the 2050 Singularity when artificial and human intelligence are predicted to merge. Beginning with a childhood informed by pop-culture robots in movies, in comic books, and on TV in the 1960s to adulthood where the possibilities of self-driving cars and virtual reality are daily conversation, Terri Favro offers a unique perspective on how our relationship with robotics and futuristic technologies has shifted over time. Peppered with pop-culture fun-facts about Superman’s kryptonite, the human-machine relationships in the cult TV show *Firefly*, and the sexual and moral implications of the film *Ex Machina*, *Generation Robot* explores how the techno-triumphs and resulting anxieties of reality bleed into the fantasies of our collective culture. Clever and accessible, *Generation Robot* isn’t just for the serious, scientific reader—it’s for everyone interested in robotics and technology since their science-fiction origins. By looking back at the future she once imagined, analyzing the plugged-in present, and speculating on what is on the horizon, Terri Favro allows readers the chance to consider what was, what is, and what could be. This is a captivating book that looks at the pop-culture of our society to explain how the world works—now and tomorrow.

Design for Inclusion - Pepetto Di Bucchianico 2022-07-24

Design for Inclusion Proceedings of the 13th International Conference on Applied Human Factors and Ergonomics (AHFE 2022), July 24–28, 2022, New York, USA

Self-driving Cars - Michael Fallon 2018-08

"Author Fallon presents a history of how the technology used in self-driving cars has developed, identifies recent technological gains, and surveys recent controversies surrounding the potential mass adoption of self-driving cars."--Provided by publisher.

Advances in Artificial Intelligence, Software and Systems Engineering - Tareq Ahram 2019-06-10

This book addresses emerging issues resulting from the integration of artificial intelligence systems in our daily lives. It focuses on the cognitive, visual, social and analytical aspects of computing and intelligent technologies, highlighting ways to improve the acceptance, effectiveness, and efficiency of said technologies. Topics such as responsibility, integration and training are discussed throughout. The book also reports on the latest advances in systems engineering, with a focus on societal challenges and next-generation systems and applications for meeting them. The book is based on two AHFE 2019 Affiliated Conferences - on Artificial Intelligence and Social Computing, and on Service, Software, and Systems Engineering -, which were jointly held on July 24–28, 2019, in Washington, DC, USA.

Automatic for the City - Riccardo Bobisse 2019-08-20

How will automated vehicles change our lives? Where are the opportunities and challenges? Future streets require planning today. This timely book envisions ways in which changes to urban mobility and technology will transform city streetscapes and, importantly, how cities can prepare. It is a reflection on the relationship between new technologies and urbanism, as well as an agile urban design manual with pictures illustrating potential spatial arrangements enabled by the new technologies. Two case studies in the central urban cores of London and Los Angeles will be presented to show how neighborhoods can be

redesigned for the better and how to apply good urban design principles across towns and cities worldwide.

[Robots: A Reference Handbook](#) - David E. Newton 2018-09-07

Robots: A Reference Handbook differs from most other books on robotics in the variety of resources that it provides to readers of all ages. • Walks the reader through the surprisingly rich history of robotics • Details how robots have developed across the globe • Introduces the reader to a variety of technical, social, political, ethical, and economic issues related to the widespread use of robots today • Provides a variety of resources that can be used in further study of robotics

The SAGE Handbook of Evolutionary Psychology - Todd K. Shackelford 2021-08-04

Evolutionary psychology is an important and rapidly expanding area in the life, social, and behavioral sciences, and this Handbook represents the most comprehensive and up-to-date reference text in the field today. Over three volumes, the Handbook provides a rich overview of the most important theoretical and empirical work in the field. Chapters cover a broad range of topics, including theoretical foundations, the integration of evolutionary psychology with other life, social, and behavioral sciences, as well as with the arts and the humanities, and the increasing power of evolutionary psychology to inform applied fields, including medicine, psychiatry, law, and education. Each of the volumes has been carefully curated to have a strong thematic focus, covering: - The foundations of evolutionary psychology; - The integration of evolutionary psychology with other disciplines, and; - The applications of evolutionary psychology. The SAGE Handbook of Evolutionary Psychology is an essential resource for researchers, graduate students, and advanced undergraduate students in all areas of psychology, and in related disciplines across the life, social, and behavioral sciences.

Artificial Intelligence: 101 Things You Must Know Today About Our Future - Lasse Rouhiainen 2018-01-31

Do you wonder what the coming years hold for Artificial Intelligence? Discover how technological breakthroughs will change your world. Are you worried that AI will steal your job? Do you fear you'll get left behind in the data-driven marketplace? Are you concerned about AI disrupting your life? Digital expert, speaker, and internationally recognized thought leader Lasse Rouhiainen has educated countless future-focused crowds in conferences around the world. Now he's here to demystify the AI revolution and show you how this inevitable technology will help humankind produce cheaper, faster, and better than ever.

Artificial Intelligence: 101 Things You Must Know Today About Our Future is a complete introduction to how emergent technologies impact every aspect of business, society, and humanity. Addressing the hottest topics in AI from self-driving cars, to chatbots and robotic healthcare, Rouhiainen's comprehensive information answers your burning questions and addresses obvious fears. Armed with practical tools and strategies, you'll learn how to best prepare for an extraordinary wave of innovation. In Artificial Intelligence: 101 Things You Must Know Today About Our Future, you'll discover: - Chatbots, robots, other automated functions, and how these will revolutionize society - Which industries will be disrupted and how to forward-plan - How new jobs emerge and what skills you'll need to take advantage of them - Why ethical standards and re-education are crucial for a modern workforce - Charts, visual guides, and infographics to expand your understanding and much, much more! Artificial Intelligence: 101 Things You Must Know Today About Our Future is your essential roadmap to guide you into the next generation. If you like straightforward explanations of complex issues, broad-ranging applications, and real-world examples, then you'll love Lasse Rouhiainen's detailed resource. Buy Artificial Intelligence to examine this major tech upheaval today!

Three Revolutions - Daniel Sperling 2018-03

Front Cover -- About Island Press -- Subscribe -- Title Page -- Copyright Page -- Contents -- Preface -- Acknowledgments -- 1. Will the Transportation Revolutions Improve Our Lives-- or Make Them Worse? -- 2. Electric Vehicles: Approaching the Tipping Point -- 3. Shared Mobility: The Potential of Ridehailing and Pooling -- 4. Vehicle Automation: Our Best Shot at a Transportation Do-Over? -- 5. Upgrading Transit for the Twenty-First Century -- 6. Bridging the Gap between Mobility Haves and Have-Nots -- 7. Remaking the Auto Industry -- 8. The Dark Horse: Will China Win the Electric, Automated, Shared Mobility Race? -- Epilogue -- Notes -- About the Contributors -- Index -- IP Board of Directors

Spaceship in the Desert - Gökçe Günel 2019-02-14

In 2006 Abu Dhabi launched an ambitious project to construct the world's first zero-carbon city: Masdar City. In *Spaceship in the Desert* Gökçe Günel examines the development and construction of Masdar City's renewable energy and clean technology infrastructures, providing an illuminating portrait of an international group of engineers, designers, and students who attempted to build a post-oil future in Abu Dhabi. While many of Masdar's initiatives—such as developing a new energy currency and a driverless rapid transit network—have stalled or not met expectations, Günel analyzes how these initiatives contributed to rendering the future a thinly disguised version of the fossil-fueled present. *Spaceship in the Desert* tells the story of Masdar, at once a “utopia” sponsored by the Emirati government, and a well-resourced company involving different actors who participated in the project, each with their own agendas and desires.

[Disruptive Transport](#) - William Riggs 2018-12-07

With the rise of shared and networked vehicles, autonomous vehicles, and other transportation technologies, technological change is outpacing urban planning and policy. Whether urban planners and policy makers like it or not, these transformations will in turn result in profound changes to streets, land use, and cities. But smarter transportation may not necessarily translate into greater sustainability or equity. There are clear opportunities to shape advances in transportation, and to harness them to reshape cities and improve the socio-economic health of cities and residents. There are opportunities to reduce collisions and improve access to healthcare for those who need it most—particularly high-cost, high-need individuals at the younger and older ends of the age spectrum. There is also potential to connect individuals to jobs and change the way cities organize space and optimize trips. To date, very little discussion has centered around the job and social implications of this technology. Further, policy dialogue on future transport has lagged—particularly in the arenas of sustainability and social justice. Little work has been done on decision-making in this high uncertainty environment—a deficiency that is concerning given that land use and transportation actions have long and lagging timelines. This is one of the first books to explore the impact that emerging transport technology is having on cities and their residents, and how policy is needed to shape the cities that we want to have in the future. The book contains a selection of contributions based on the most advanced empirical research, and case studies for how future transport can be harnessed to improve urban sustainability and justice.

Autonomous Driving - Andreas Herrmann 2018-03-26

The technology and engineering behind autonomous driving is advancing at pace. This book presents the latest technical advances and the economic, environmental and social impact driverless cars will have on individuals and the automotive industry.

Research Anthology on Cross-Disciplinary Designs and Applications of Automation - Management Association, Information Resources 2021-10-29

Throughout human history, technological advancements have been made for the ease of human labor. With our most recent advancements, it has been the work of scholars to discover ways for machines to take over a large part of this labor and reduce human intervention. These advancements may become essential processes to nearly every industry. It is essential to be knowledgeable about automation so that it may be applied. *Research Anthology on Cross-Disciplinary Designs and Applications of Automation* is a comprehensive resource on the emerging designs and application of automation. This collection features a number of authors spanning multiple disciplines such as home automation, healthcare automation, government automation, and more. Covering topics such as human-machine interaction, trust calibration, and sensors, this research anthology is an excellent resource for technologists, IT specialists, computer engineers, systems and software engineers, manufacturers, engineers, government officials, professors, students, healthcare administration, managers, CEOs, researchers, and academicians.

[The Driver in the Driverless Car](#) - Vivek Wadhwa 2017-04-03

Teaching readers to evaluate the potential impact of any new technology, this book presents three simple questions to ask: Does it have the potential to benefit everyone equally? What are its risks and rewards? And does it promote autonomy or dependence? --

Systems, Cybernetics, Control, and Automation - Spyros G. Tzafestas 2022-09-01

Systems, cybernetics, control, and automation (SCCA) are four interrelated and overlapping scientific and

technological fields that have contributed substantially to the development, growth, and progress of human society. A large number of models, methods, and tools were developed that assure high efficiency of SCCA applied to practical situations. The real-life applications of SCCA encompass a wide range of man-made or biological systems, including transportations, power generation, chemical industry, robotics, manufacturing, cybernetics organisms (cyborgs), aviation, economic systems, enterprise, systems, medical/health systems, environmental applications, and so on. The SCCA fields exhibit strong influences on society and rise, during their use and application, many ethical concerns and dilemmas. This book provides a consolidated and concise overview of SCCA, in a single volume for the first time, focusing on ontological, epistemological, social impact, ethical, and general philosophical issues. It is appropriate for use in engineering courses as a convenient tutorial source providing fundamental conceptual and educational material on these issues, or for independent reading by students and scientists. Included in the book is:

- Background material on philosophy and systems theory
- Major ontological, epistemological, societal and ethical/philosophical aspects of the four fields that are considered in the book
- Over 400 references and a list of 130 additional books in the relevant fields
- Over 100 colored photos and 70 line figures that illustrate the text

Pinpoint: How GPS is Changing Technology, Culture, and Our Minds - Greg Milner 2016-05-03

"One of the most mesmerizing and exhilarating, yet alarming modern technology books...an extraordinary tale." —Gillian Tett, Financial Times Pinpoint tells the fascinating story of a hidden system that touches nearly every aspect of modern life. Tracking the development of GPS from its origins as a bomb guidance system to its present ubiquity, Greg Milner examines the technology's double-edged effect on the way we live, work, and travel. Savvy and original, this sweeping scientific history offers startling insight into how humans understand their place in the world.

End of the Road - Riggs, William 2022-05-23

Since the earliest days of civilization, streets have played an important role in shaping society – but what is a street? Is it a living ecosystem, a public space, a social space, an economic space or a combination of these? The focus on automotive travel over the past century has changed the role of streets in cities. This has degraded the quality of urban life and contributed to public health issues. This book offers a unique look at streets as locations that can evolve to support the economic, social, cultural and natural aspects of cities. Using modern urban design examples, it challenges readers to focus not only on the livability and travel benefits of roads, but on how the power of streets can be harnessed. In so doing, it shapes more dynamic spaces for walking, biking and living, and aims to stimulate urban vitality and community regeneration, encouraging policymakers and individuals to make changes in their own communities.

Driverless Cars, Urban Parking and Land Use - Robert A. Simons 2020-02-21

The subject of driverless and even ownerless cars has the potential to be the most disruptive technology for real estate, land use, and parking since the invention of the elevator. This book includes new research and economic analysis, plus a thorough review of the current literature to pose and attempt to answer a number of important questions about the effect that driverless vehicles may have on land use in the United States, especially on parking. Simons outlines the history of disruptive technologies in transport and real estate before examining how the predicted changes brought in by the adoption of driverless technologies and decline in car ownership will affect our urban areas. What could we do with all the parking areas in our cities and our homes and institutional buildings that may no longer be required? Can they be sustainably repurposed? Will self-driving cars become like horses, used only by hobbyists for recreation and sport? While the focus is on parking, the book also contains the views of real estate economists, architects, and policymakers and is essential reading for real estate developers and investors, transport economists, planners, politicians, and policymakers who need to consider the implications of a future with more driverless vehicles. Fasten your seat belt: like it or not, driverless cars will begin to change the way we move about our cities within ten years.

Automated Driving and Driver Assistance Systems - Tom Denton 2019-10-16

Automated vehicles are set to transform the world. Automated driving vehicles are here already and undergoing serious testing in several countries around the world. This book explains the technologies in language that is easy to understand and accessible to all readers. It covers the subject from several angles

but in particular shows the links to existing ADAS technologies already in use in all modern vehicles. There is a lot of hype in the media at the moment about autonomous or driverless cars, and while some manufacturers expect to have vehicles available from 2020, they will not soon take over and it will be some time before they are commonplace. However, it is very important to be ready for the huge change of direction that automated driving will take. This is the first book of its type available and complements Tom Denton's other books.

Autonomous Vehicle Ethics - Ryan Jenkins 2022

"A runaway trolley is speeding down a track" So begins what is perhaps the most fecund thought experiment of the past several decades since its invention by Philippa Foot. Since then, moral philosophers have applied the "trolley problem" as a thought experiment to study many different ethical conflicts - and chief among them is the programming of autonomous vehicles. Nowadays, however, very few philosophers accept that the trolley problem is a perfect analogy for driverless cars or that the situations autonomous vehicles face will resemble the forced choice of the unlucky bystander in the original thought experiment. This book represents a substantial and purposeful effort to move the academic discussion beyond the trolley problem to the broader ethical, legal, and social implications that autonomous vehicles present. There are still urgent questions waiting to be addressed, for example: how AVs might interact with human drivers in mixed or "hybrid" traffic environments; how AVs might reshape our urban landscapes; what unique security or privacy concerns are raised by AVs as connected devices in the "Internet of Things"; how the benefits and burdens of this new technology, including mobility, traffic congestion, and pollution, will be distributed throughout society; and more. An attempt to map the landscape of these next-generation questions and to suggest preliminary answers, this volume draws on the disciplines of philosophy, sociology, economics, urban planning and transportation engineering, business ethics and more, and represents a global range of perspectives.

Unplugging the City - Fábio Duarte 2017-10-16

Modernity has entrusted technology with such power that it is treated as an autonomous entity, with its own manners and morals. Technological disruptions are also socially disruptive: technological failures reveal both the constituents of the technology itself and the social fabric woven by this technology. Cities are the quintessential technological arrangement, not only materially but also as a conceptual framework: the ubiquity of technology makes us think and plan cities mostly in terms of technological arrangements. *Unplugging the City: The Urban Phenomenon and its Sociotechnical Controversies* proposes a conceptual and methodological framework for analyzing certain urban phenomena as a technological assemblage. It demonstrates, through multiple case studies, the sociotechnical complexities involved in the stabilization and disruption of urban technological arrangements. Examples range from the urban phantasmagorias portrayed in science-fiction movies to the urban proposals of Brasilia and Masdar, from the book of bike-sharing systems to pervasive global surveillance systems. Written by Fábio Duarte and Rodrigo Firmino, based on their original research and publications, this is an essential resource for those interested in the theory and study of technology and its inextricable influence on the city.

End of the Road - William Riggs 2022-05-23

This book offers a unique look at streets as locations that can evolve to support the economic, social, cultural and natural aspects of cities. It focuses on how the power of streets can be harnessed to shape more dynamic spaces for walking, biking and living and stimulate urban vitality and community regeneration.

Big Data Transportation Systems - Guanghui Zhao 2021-07-02

This book is designed as a popular science book on big data analytics in intelligent transportation systems. It aims to provide an introduction to big-data transportation starting from an overview on the development of big data transportation in various countries. This is followed by a discussion on the blueprint strategies of big data transportation which include innovative models, planning, transportation logistics, and application case studies. Finally, the book discusses applications of big data transportation platforms.

Technological Breakthroughs and Future Business Opportunities in Education, Health, and Outer Space - Hooke, Angus 2021-04-09

It is widely accepted that the key to rising incomes for workers, for investors, and (indirectly) for welfare

recipients is innovation. New ideas provide opportunities for investment in new products, new processes, and new markets. Exploitation of these opportunities by intrapreneurs and entrepreneurs gives rise to increases in labor productivity, which in turn lead to higher primary incomes for workers and investors and, via government redistributive mechanisms, larger transfers to welfare recipients. Since technology is the driver of innovation and the key to the subsequent economic and distributional benefits of this innovation, there is a need for researchers and businesspersons to have access to up-to-date information on emerging technologies and the business opportunities they provide. *Technological Breakthroughs and Future Business Opportunities in Education, Health, and Outer Space* discusses the economic, social, and cultural benefits that new technologies can provide in multidisciplinary industries with a unique emphasis on looking towards the impacts of these technologies across the next two decades. Within this theme, the book discusses the recent trends, future developments, and business opportunities surrounding new technologies including information technology and biotechnology. Additionally, the book investigates recent demands and disruptions in the health and education sectors as well as recent developments and forthcoming opportunities in the outer space sector and how newer technologies can enable and meet the growing demands of these industries. While covering all these technologies and their applications, this book is an ideal reference work for entrepreneurs and intrapreneurs, teachers, technologists, analysts, IT specialists, engineers, policymakers, medical professionals, government officials, space agencies, financial planners, public officials, and researchers and students working in areas that include but are not limited to technology, education, public health, medicine, business and management, aeronautics, and public policy.

How to Be Human in the Digital Economy - Nicholas Agar 2019-03-12

An argument in favor of finding a place for humans (and humanness) in the future digital economy. In the digital economy, accountants, baristas, and cashiers can be automated out of employment; so can surgeons, airline pilots, and cab drivers. Machines will be able to do these jobs more efficiently, accurately, and inexpensively. But, Nicholas Agar warns in this provocative book, these developments could result in a radically disempowered humanity. The digital revolution has brought us new gadgets and new things to do with them. The digital revolution also brings the digital economy, with machines capable of doing humans' jobs. Agar explains that developments in artificial intelligence enable computers to take over not just routine tasks but also the kind of "mind work" that previously relied on human intellect, and that this threatens human agency. The solution, Agar argues, is a hybrid social-digital economy. The key value of the digital economy is efficiency. The key value of the social economy is humanness. A social economy would be centered on connections between human minds. We should reject some digital automation because machines will always be poor substitutes for humans in roles that involve direct contact with other humans. A machine can count out pills and pour out coffee, but we want our nurses and baristas to have minds like ours. In a hybrid social-digital economy, people do the jobs for which feelings matter and machines take on data-intensive work. But humans will have to insist on their relevance in a digital age.

Computers and Society - Ronald M. Baecker 2019-04-24

The last century has seen enormous leaps in the development of digital technologies, and most aspects of modern life have changed significantly with their widespread availability and use. Technology at various scales - supercomputers, corporate networks, desktop and laptop computers, the internet, tablets, mobile phones, and processors that are hidden in everyday devices and are so small you can barely see them with the naked eye - all pervade our world in a major way. *Computers and Society: Modern Perspectives* is a wide-ranging and comprehensive textbook that critically assesses the global technical achievements in digital technologies and how they are applied in media; education and learning; medicine and health; free speech, democracy, and government; and war and peace. Ronald M. Baecker reviews critical ethical issues raised by computers, such as digital inclusion, security, safety, privacy, automation, and work, and discusses social, political, and ethical controversies and choices now faced by society. Particular attention is paid to new and exciting developments in artificial intelligence and machine learning, and the issues that have arisen from our complex relationship with AI.

Introduction to Self-Driving Vehicle Technology - Hanky Sjafrie 2019-11-21

This book aims to teach the core concepts that make Self-driving vehicles (SDVs) possible. It is aimed at people who want to get their teeth into self-driving vehicle technology, by providing genuine technical

insights where other books just skim the surface. The book tackles everything from sensors and perception to functional safety and cybersecurity. It also passes on some practical know-how and discusses concrete SDV applications, along with a discussion of where this technology is heading. It will serve as a good starting point for software developers or professional engineers who are eager to pursue a career in this exciting field and want to learn more about the basics of SDV algorithms. Likewise, academic researchers, technology enthusiasts, and journalists will also find the book useful. Key Features: Offers a comprehensive technological walk-through of what really matters in SDV development: from hardware, software, to functional safety and cybersecurity Written by an active practitioner with extensive experience in series development and research in the fields of Advanced Driver Assistance Systems (ADAS) and Autonomous Driving Covers theoretical fundamentals of state-of-the-art SLAM, multi-sensor data fusion, and other SDV algorithms. Includes practical information and hands-on material with Robot Operating System (ROS) and Open Source Car Control (OSCC). Provides an overview of the strategies, trends, and applications which companies are pursuing in this field at present as well as other technical insights from the industry.

Driverless - Hod Lipson 2016-09-30

When human drivers let intelligent software take the wheel: the beginning of a new era in personal mobility. "Smart, wide-ranging, [and] nontechnical." —Los Angeles Times "Anyone who wants to understand what's coming must read this fascinating book." —Martin Ford, New York Times bestselling author of *Rise of the Robots* In the year 2014, Google fired a shot heard all the way to Detroit. Google's newest driverless car had no steering wheel and no brakes. The message was clear: cars of the future will be born fully autonomous, with no human driver needed. In the coming decade, self-driving cars will hit the streets, rearranging established industries and reshaping cities, giving us new choices in where we live and how we work and play. In this book, Hod Lipson and Melba Kurman offer readers insight into the risks and benefits of driverless cars and a lucid and engaging explanation of the enabling technology. Recent advances in software and robotics are toppling long-standing technological barriers that for decades have confined self-driving cars to the realm of fantasy. A new kind of artificial intelligence software called deep learning gives cars rapid and accurate visual perception. Human drivers can relax and take their eyes off the road. When human drivers let intelligent software take the wheel, driverless cars will offer billions of people all over the world a safer, cleaner, and more convenient mode of transportation. Although the technology is nearly ready, car companies and policy makers may not be. The authors make a compelling case for why government, industry, and consumers need to work together to make the development of driverless cars our society's next "Apollo moment."

Why We Drive - Matthew B. Crawford 2020-06-09

A brilliant and defiant celebration of driving as a unique pathway of human freedom, by "one of the most influential thinkers of our time" (Sunday Times) "Why We Drive weaves philosophers, thinkers, and scientific research with shade-tree mechanics and racers to defend our right to independence, making the case that freedom of motion is essential to who we are as a species. ... We hope you'll read it." —Road & Track Once we were drivers, the open road alive with autonomy, adventure, danger, trust, and speed. Today we are as likely to be in the back seat of an Uber as behind the wheel ourselves. Tech giants are hurling us toward a shiny, happy "self-driving" future, selling utopia but equally keen to advertise to a captive audience strapped into another expensive device. Are we destined, then, to become passengers, not drivers? Why We Drive reveals that much more may be at stake than we might think. Ten years ago, in the New York Times-bestselling *Shop Class as Soulcraft*, philosopher-mechanic Matthew B. Crawford—a University of Chicago PhD who owned his own motorcycle shop—made a revolutionary case for manual labor, one that ran headlong against the pretensions of white-collar office work. Now, using driving as a window through which to view the broader changes wrought by technology on all aspects of contemporary life, Crawford investigates the driver's seat as one of the few remaining domains of skill, exploration, play—and freedom. Blending philosophy and hands-on storytelling, Crawford grounds the narrative in his own experience in the garage and behind the wheel, recounting his decade-long restoration of a vintage Volkswagen as well as his journeys to thriving automotive subcultures across the country. Crawford leads us on an irreverent but deeply considered inquiry into the power of faceless bureaucracies, the importance of questioning mindless rules, and the battle for democratic self-determination against the surveillance

capitalists. A meditation on the competence of ordinary people, *Why We Drive* explores the genius of our everyday practices on the road, the rewards of “folk engineering,” and the existential value of occasionally being scared shitless. Witty and ingenious throughout, *Why We Drive* is a rebellious and daring celebration of the irrepressible human spirit.

[AI in the Wild](#) - Peter Dauvergne 2020-09-15

Examining the potential benefits and risks of using artificial intelligence to advance global sustainability. Drones with night vision are tracking elephant and rhino poachers in African wildlife parks and sanctuaries; smart submersibles are saving coral from carnivorous starfish on Australia's Great Barrier Reef; recycled cell phones alert Brazilian forest rangers to the sound of illegal logging. The tools of artificial intelligence are being increasingly deployed in the battle for global sustainability. And yet, warns Peter Dauvergne, we should be cautious in declaring AI the planet's savior. In *AI in the Wild*, Dauvergne avoids the AI industry-powered hype and offers a critical view, exploring both the potential benefits and risks of using artificial intelligence to advance global sustainability. Dauvergne finds that corporations and states often use AI in ways that are antithetical to sustainability. The competition to profit from AI is entrenching technocratic management, revving up resource extraction, and turbocharging consumption, as consumers buy new smart devices (and discard their old, less-smart ones). Smart technology is helping farmers grow crops more efficiently, but also empowering the agrifood industry. Moreover, states are weaponizing AI to control citizens, suppress dissent, and aim cyberattacks at rival states. Is there a way to harness the power of AI for environmental and social good? Dauvergne argues for precaution and humility as guiding principles in the deployment of AI.

[Introduction to Driverless Self-Driving Cars](#) - Lance Eliot 2018

Based on his popular AI Insider column and reader feedback, this is Dr. Eliot's highly rated introductory coverage on the emergence and advent of autonomous driverless self-driving cars. Readable for everyone, discover the underlying technology that makes self-driving cars achievable. Furthermore, learn about the key business aspects, economics, and politics that will shape the future of self-driving cars. Essential elements of Artificial Intelligence (AI) and Machine Learning are covered, along with blockchain, bitcoins, genetic algorithms, neural networks, and more.

[No One at the Wheel](#) - Samuel I. Schwartz 2018-11-20

The country's leading transport expert describes how the driverless vehicle revolution will transform highways, cities, workplaces and laws not just here, but across the globe. Our time at the wheel is done. Driving will become illegal, as human drivers will be demonstrably more dangerous than cars that pilot themselves. Is this an impossible future, or a revolution just around the corner? Sam Schwartz, America's most celebrated transportation guru, describes in this book the revolution in self-driving cars. The ramifications will be dramatic, and the transition will be far from seamless. It will overturn the job market for the one in seven Americans who work in the trucking industry. It will cause us to grapple with new ethical dilemmas-if a car will hit a person or a building, endangering the lives of its passengers, who will decide what it does? It will further erode our privacy, since the vehicle can relay our location at any moment. And, like every other computer-controlled device, it can be vulnerable to hacking. Right now, every major car maker here and abroad is working on bringing autonomous vehicles to consumers. The fleets are getting ready to roll and nothing will ever be the same, and this book shows us what the future has in store.

Road Vehicle Automation 5 - Gereon Meyer 2018-06-25

This is the fifth volume of a sub series on Road Vehicle Automation published within the Lecture Notes in Mobility. Like in previous editions, scholars, engineers and analysts from all around the world have contributed chapters covering human factors, ethical, legal, energy and technology aspects related to automated vehicles, as well as transportation infrastructure and public planning. The book is based on the Automated Vehicles Symposium which was hosted by the Transportation Research Board (TRB) and the Association for Unmanned Vehicle Systems International (AUVSI) in San Francisco, California (USA) in July

2017.

Critical Issues Impacting Science, Technology, Society (STS), and Our Future - Lum, Heather Christina 2019-02-15

We are in an ever-changing and fast-paced world that is entrenched in technological innovation. But how is technology and science impacting our society? How does it affect our interactions with these products and ultimately with each other? How is society shaping the types of technologies we are advancing? *Critical Issues Impacting Science, Technology, Society (STS), and Our Future* compiles theory and research from the confluence of a variety of disciplines to discuss how scientific research and technological innovation is shaping society, politics, and culture, and predicts what can be expected in the future. While highlighting topics including political engagement, artificial intelligence, and wearable technology, this book is ideally designed for policymakers, government officials, business managers, computer engineers, IT specialists, scientists, and professionals and researchers in the science, technology, and humanities fields.

Road Vehicle Automation 7 - Gereon Meyer 2020-07-14

This book is the seventh volume of a sub-series on Road Vehicle Automation, published as part of the Lecture Notes in Mobility. Written by researchers, engineers and analysts from around the globe, the contributions are based on oral and poster presentations from the Automated Vehicles Symposium (AVS) 2019, held on July 15–18, 2019, in Orlando, Florida, USA. The book explores public sector activities, human factors aspects, vehicle systems and other related technological developments, as well as transportation infrastructure planning, which are expected to foster and support road vehicle automation.

Ghost Road: Beyond the Driverless Car - Anthony M. Townsend 2020-06-16

A penetrating look at near-future disruption as truly autonomous vehicles arrive. For decades we have dreamed of building an automobile that can drive itself. But as that dream of autonomy draws close, we are discovering that the driverless car is a red herring. When self-driving technology infects buses, bikes, delivery vans, and even buildings...a wild, woollier, future awaits. Technology will transform life behind the wheel into a high-def video game that makes our ride safer, smoother, and more efficient. Meanwhile, autonomous vehicles will turbocharge our appetite for the instant delivery of goods, making the future as much about moving things as it is about moving people. Giant corporations will link the automated machines that move us to the cloud, raising concerns about mobility monopolies and privatization of streets and sidewalks. The pace of our daily lives and the fabric of our cities and towns will change dramatically as automated vehicles reprogram the way we work, shop, and play. *Ghost Road* is both a beacon and a warning; it explains where we might be headed together in driverless vehicles, and the choices we must make as societies and individuals to shape that future.

Fabricated - Hod Lipson 2013-01-22

Fabricated tells the story of 3D printers, humble manufacturing machines that are bursting out of the factory and into schools, kitchens, hospitals, even onto the fashion catwalk. *Fabricated* describes our emerging world of printable products, where people design and 3D print their own creations as easily as they edit an online document. A 3D printer transforms digital information into a physical object by carrying out instructions from an electronic design file, or 'blueprint.' Guided by a design file, a 3D printer lays down layer after layer of a raw material to 'print' out an object. That's not the whole story, however. The magic happens when you plug a 3D printer into today's mind-boggling digital technologies. Add to that the Internet, tiny, low cost electronic circuitry, radical advances in materials science and biotech and voila! The result is an explosion of technological and social innovation. *Fabricated* takes the reader onto a rich and fulfilling journey that explores how 3D printing is poised to impact nearly every part of our lives. Aimed at people who enjoy books on business strategy, popular science and novel technology, *Fabricated* will provide readers with practical and imaginative insights to the question 'how will this technology change my life?' Based on hundreds of hours of research and dozens of interviews with experts from a broad range of industries, *Fabricated* offers readers an informative, engaging and fast-paced introduction to 3D printing now and in the future.