

## T I Initiative Ciuti

### Improving the Interpreter's Voice

Following the completion of the construction of new St. Peter's in the second decade of the seventeenth century, a series of monumental altarpieces was commissioned to decorate its altars. Here for the first time the altarpieces of St. Peter's are considered collectively, within the liturgical and artistic program of the building as a whole. Louise Rice takes a comprehensive approach to this critical chapter in the history of Italian Baroque art, offering insight into the mechanisms, motives, and meanings of papal patronage in the premier church of Catholicism. Designed to help those who are considering a career that enables them to travel or live abroad or to work in an international field, this guide will be especially helpful to college and graduate school students, graduates with advanced degrees, professionals exploring alternative careers, and college-bound high school students, and will also be a useful resource for career counselors, job placement offices, and libraries. Listed are more than 250 sources of employment in international business, banking, finance, international law, journalism, consulting, nonprofit organizations, the United States government, the United Nations, and other international organizations. Each of the listings provides a brief description of the organization, the size of the professional staff, the number of professionals hired in the last year, qualifications for employment, internships where available, application procedures, and address. Also included are introductory essays by outstanding representatives of the different professions described, an annotated bibliography, and a listing of graduate programs. (BZ) For the Yearbook of International Organizations, the most up-to-date and comprehensive reference to international organizations, the UIA has selected the most important 31,086 organizations from its extensive database of current and previous organizations. Yearbook provides profiles of 5,546 intergovernmental and 25,540 international non-governmental organizations active in nearly 300 countries and territories in the world today. Organization descriptions listed in Volume 1 are numbered sequentially to facilitate quick and easy cross-referencing from the other Yearbook Volumes. Users can refer to Volumes 2 and 3 to locate organizations by region or subject respectively, and comprehensive indexes are included. Naturally, the high standards of accuracy, consistency and detail set by previous editions of the Yearbook of International Organizations have been maintained for this edition.

### Mid-infrared Semiconductor Optoelectronics

### Interactive Collaborative Robotics

### Sensing Systems and Pervasive Intelligence

Proceedings of the 8th International Workshop Soft Computing Applications (SOFA 2018), Vol. II

### 21st Century Sports

7th International Conference, Living Machines 2018, Paris, France, July 17 – 20, 2018, Proceedings

### Nano- and Micromechanical Resonators Interacting with Light

*This book covers a diverse cross section of this interdisciplinary research field, with contributions grouped into four categories: laser-induced filamentation; atoms and molecules in a laser field; interaction of solid materials with a coherent light field; and ion acceleration and ionization of atoms in super intense laser fields. This book series presents up-to-date reviews of advances in this interdisciplinary research field, spanning atomic and molecular physics, as well as molecular and optical science, which have been stimulated by the recent developments in ultrafast laser technologies. Each book compiles peer-reviewed articles by researchers at the forefront of their particular subfields. All the chapters include an*

*overview to allow graduate students and researchers unfamiliar with the subfield to grasp the importance and attractions of the topic covered, followed by reports of cutting-edge discoveries.*

*The health impacts of environmental noise are a growing concern. At least one million healthy life years are lost every year from traffic-related noise in the western part of Europe. This publication summarizes the evidence on the relationship between environmental noise and health effects, including cardiovascular disease, cognitive impairment, sleep disturbance, tinnitus, and annoyance. For each one, the environmental burden of disease methodology, based on exposure-response relationship, exposure distribution, background prevalence of disease and disability weights of the outcome, is applied to calculate the burden of disease in terms of disability-adjusted life-years. Data are still lacking for the rest of the WHO European Region. This publication provides policy-makers and their advisers with technical support in their quantitative risk assessment of environmental noise.*

*International, national and local authorities can use the procedure for estimating burdens presented here to prioritize and plan environmental and public health policies.*

*This book presents the proceedings of the 8th International Workshop on Soft Computing Applications, SOFA 2018, held on 13–15 September 2018 in Arad, Romania. The workshop was organized by Aurel Vlaicu University of Arad, in conjunction with the Institute of Computer Science, Iasi Branch of the Romanian Academy, IEEE Romanian Section, Romanian Society of Control Engineering and Technical Informatics – Arad Section, General Association of Engineers in Romania – Arad Section and BTM Resources Arad. The papers included in these proceedings, published post-conference, cover the research including Knowledge-Based Technologies for Web Applications, Cloud Computing, Security Algorithms and Computer Networks, Business Process Management, Computational Intelligence in Education and Modelling and Applications in Textiles and many other areas related to the Soft Computing. The book is directed to professors, researchers, and graduate students in area of soft computing techniques and applications.*

*This book presents the latest research findings, methods and development techniques related to Ubiquitous and Pervasive Computing (UPC) as well as challenges and solutions from both theoretical and practical perspectives with an emphasis on innovative, mobile and internet services. With the proliferation of wireless technologies and electronic devices, there is a rapidly growing interest in Ubiquitous and Pervasive Computing (UPC). UPC makes it possible to create a human-oriented computing environment where computer chips are embedded in everyday objects and interact with physical world. It also allows users to be online even while moving around, providing them with almost permanent access to their preferred services. Along with a great potential to revolutionize our lives, UPC also poses new research challenges.*

*Innovative Mobile and Internet Services in Ubiquitous Computing*

*Quantum Many-Body Physics in Open Systems: Measurement and Strong Correlations*

*The Effects of Noise on Man*

*Yearbook of International Organizations*

*Aerial Robotics in Agriculture*

*18th Pacific Rim International Conference on Artificial Intelligence, PRICAI 2021, Hanoi,*

*Vietnam, November 8–12, 2021, Proceedings, Part I*

*Tropical Conservation*

*The Effects of Noise on Man covers the techniques for the evaluation of environmental noise in terms of its effects on human. The book provides the fundamental definitions of sound, its measurement, and concepts of the basic functioning, and the attributes of the auditory system. The text also presents along with their experimental basis, procedures for estimating from physical measures of noise its effects on man's auditory system and speech communications. The last part of the book is devoted to man's nonauditory system responses and includes information about the effects of noise on work performance, sleep, feelings of pain, vision, and blood circulation.*

*This important volume provides a plethora of information on aerial vehicles and their possible roles in revolutionizing agricultural procedures through spectral analysis of terrains, soils, crops, water resources, diseases, floods, drought, and farm activities. There are several semi-autonomous and autonomous (robotic) aerial vehicles that are examined for their efficiency in offering detailed spectral data about agrarian regions and individual farms. Among them, small drone aircrafts such as fixed-winged and copter models have already caught the imagination of farmers. They are spreading fast in every nook and corner of the farm world. However, there are many more aerial robots that are utilized in greater detail during farming. In this volume, the focus is on aerial vehicles such as parafoils, blimps, aerostats, and kites, and how they are being evaluated for use in experimental farms and fields. A few aerial vehicles, such as robotic parafoils, have been adopted to procure aerial spectral data and visual imagery to aid agronomic procedures. These and other aerial robots are expected to change and improve the use of the sky in agricultural endeavors and the way we conduct agronomic procedures in the very near future. This volume is a timely resource for agricultural researchers, professors and students, and the general public who are interested in aerial vehicles.*

*Optoelectronic devices operating in the mid-infrared wavelength range offer applications in a variety of areas from environmental gas monitoring around oil rigs to the detection of narcotics. They could also be used for free-space optical communications, thermal imaging applications and the development of "homeland security" measures. Mid-infrared Semiconductor Optoelectronics is an overview of the current status and technological development in this rapidly emerging area; the basic physics, some of the problems facing the design engineer and a comparison of possible solutions are laid out; the different lasers used as sources for mid-infrared technology are considered; recent work in detectors is reviewed; the last part of the book is concerned with applications. With a world-wide authorship of experts working in many mid-infrared-related fields this book will be an invaluable reference for researchers and graduate students drawn from physics, electronic and electrical engineering and materials science.*

*This collection brings together new insights around current translation and interpreting practices in national and supranational settings. The book illustrates the importance of further reflection on issues around quality and assessment, given the increased development of resources for translators and interpreters. The first part of the volume focuses on these issues as embodied in case studies from a range of national and regional contexts, including Finland, Switzerland, Italy, Spain and the United States. The second part takes a broader perspective to look at best practices and questions of quality through the lens of international bodies and organizations and the shifting roles of translation and interpreting practitioners in working to manage these issues. Taken together, this collection demonstrates the relevance of critically examining processes, competences and products in current institutional translation and interpreting settings at the national and supranational levels, paving the way for further research and quality assurance strategies in the field. The Introduction of this book is freely available as a downloadable Open Access PDF under a Creative Commons Attribution-Non Commercial-No Derivatives 4.0 license available at [https://tandfbis.s3-us-west-2.amazonaws.com/rt-](https://tandfbis.s3-us-west-2.amazonaws.com/rt-files/docs/Open+Access+Chapters/9780429264894_oaintroduction.pdf)*

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*Sensor Technologies*

*Guide to Careers in World Affairs*

*Proceedings of the 2017 International Conference on Mechanical Design (ICMD2017)*

*Night Noise Guidelines for Europe*

*Cavity Optomechanics*

*Outfitting the Basilica, 1621-1666*

*PRICAI 2021: Trends in Artificial Intelligence*

Ecosystems and their constituent species the world over face a barrage of ongoing, often escalating, threats. Conservation efforts aim to reduce the impact of these threats to ensure that global biodiversity continues to provide essential ecosystem services. In most often the case, these efforts to protect threatened species and their environments are constrained by limited resources. Conservation biologists have therefore had to increase the efficiency of their conservation practices to deliver the greatest benefit at the lowest cost. This requires decision making using the best available knowledge to prioritise actions. A concept that has received considerable

attention in this area is that of conservation triage. This eBook brings together perspectives from researchers and conservation practitioners who share their v results in an effort to extend the discussion on this topic. A number of the pape this eBook tackle the philosophical elements of conservation triage, while others more directed practical approach providing examples from conservation practice globally.

During the last few years cavity-optomechanics has emerged as a new field of r This highly interdisciplinary field studies the interaction between micro and nano mechanical systems and light. Possible applications range from novel high-bandw mechanical sensing devices through the generation of squeezed optical or mecha states to even tests of quantum theory itself. This is one of the first books in t relatively young field. It is aimed at scientists, engineers and students who want obtain a concise introduction to the state of the art in the field of cavity optom It is valuable to researchers in nano science, quantum optics, quantum informati gravitational wave detection and other cutting edge fields. Possible applications biological sensing, frequency comb applications, silicon photonics etc. The techni content will be accessible to those who have familiarity with basic undergradua physics.

This three-volume set, LNAI 13031, LNAI 13032, and LNAI 13033 constitutes th thoroughly refereed proceedings of the 18th Pacific Rim Conference on Artificial Intelligence, PRICAI 2021, held in Hanoi, Vietnam, in November 2021. The 93 full papers and 28 short papers presented in these volumes were carefully reviewed selected from 382 submissions. PRICAI covers a wide range of topics in the area social and economic importance for countries in the Pacific Rim: artificial intellig machine learning, natural language processing, knowledge representation and reasoning, planning and scheduling, computer vision, distributed artificial intellig search methodologies, etc. Part I includes the following topical headings: AI Foundations / Decision Theory, Applications of AI, Data Mining and Knowledge Discovery, Evolutionary Computation / Optimisation, Knowledge Representation a Reasoning.

The purpose of this volume is to explore key issues, approaches and challenges t quality in institutional translation by confronting academics' and practitioners' perspectives. What the reader will find in this book is an interplay of two approa academic contributions providing the conceptual and theoretical background for discussing quality on the one hand, and chapters exploring selected aspects of c and case studies from both academics and practitioners on the other. Our aim is present these two approaches as a breeding ground for testing one vis-à-vis th This book studies institutional translation mostly through the lens of the Europe Union (EU) reality, and, more specifically, of EU institutions and bodies, due to th unprecedented scale of their multilingual operations and the legal and political importance of translation. Thus, it is concerned with the supranational (internat level, deliberately leaving national and other contexts aside. Quality in supranatio institutions is explored both in terms of translation processes and their product

translated texts.

United States Standard for Terminal Instrument Procedures

Cavity Polaritons

New Conservation and Management Challenges in the Human-Wildlife Interaction

Assessing Practices and Managing for Quality

Proceedings of the 12th International Conference on Innovative Mobile and Inter

Services in Ubiquitous Computing (IMIS-2018)

(TERPS)

*This book offers an overview of polariton Bose–Einstein condensation and the emerging field of polaritonics, providing insights into the necessary theoretical basics, technological aspects and experimental studies in this fascinating field of science. Following a summary of theoretical considerations, it guides readers through the rich physics of polariton systems, shedding light on the concept of the polariton laser, polariton microcavities, and the technical realization of optoelectronic devices with polaritonic emissions, before discussing the role of external fields used for the manipulation and control of exciton–polaritons. A glossary provides simplified summaries of the most frequently discussed topics, allowing readers to quickly familiarize themselves with the content. The book pursues an uncomplicated and intuitive approach to the topics covered, while also providing a brief outlook on current and future work. Its straightforward content will make it accessible to a broad readership, ranging from research fellows, lecturers and students to interested science and engineering professionals in the interdisciplinary domains of nanotechnology, photonics, materials sciences and quantum physics.*

*This book features the manuscripts accepted for the Special Issue “Applications in Electronics Pervading Industry, Environment and Society—Sensing Systems and Pervasive Intelligence” of the MDPI journal Sensors. Most of the papers come from a selection of the best papers of the 2019 edition of the “Applications in Electronics Pervading Industry, Environment and Society” (APPLEPIES) Conference, which was held in November 2019. All these papers have been significantly enhanced with novel experimental results. The papers give an overview of the trends in research and development activities concerning the pervasive application of electronics in industry, the environment, and society. The focus of these papers is on cyber physical systems (CPS), with research proposals for new sensor acquisition and ADC (analog to digital converter) methods, high-speed communication systems, cybersecurity, big data management, and data processing including emerging machine learning techniques. Physical implementation aspects are discussed as well as the trade-off found between functional performance and hardware/system costs.*

*Mastering the control of your voice, the main instrument of the simultaneous and consecutive interpreter, is an indispensable skill for acquiring perfection in the art of interpretation.*

*“Improving the Interpreter’s Voice” identifies common destructive habits observed in students and practicing interpreters and explains how these issues can be corrected. This unique collaboration between trained professionals: a professional conference interpreter who teaches simultaneous and consecutive interpretation and a professional actor who teaches public speaking and accent reduction for interpreters summarizes decades of experience in teaching interpretation, improving the voice and mastering vocal techniques.*

*Based on thorough and extensive research, this book examines in detail traditional status signals in the translation profession. It provides case studies of eight European and non-European countries, with further chapters on sociological and economic modelling, and goes on to identify a number of policy options and make recommendations on rectifying problem areas.*

*Vitamin C in Health and Disease*

*Type 2 Diabetes*

*Problematic Wildlife II*

*Polariton Physics*

*Balancing Outcomes and Opportunities*

*Physics and Device Applications I*

*From Dynamic Bose–Einstein Condensates in Strongly-Coupled Light–Matter Systems to Polariton Lasers*

This book is a printed edition of the Special Issue "Vitamin C in Health and Disease" that was published in *Nutrients*

This book presents a compact study on recent concepts and advances in biomedical engineering. The ongoing advancement of civilization and related technological innovations are increasingly affecting many aspects of our lives. These changes are also visible in the development and practical application of new methods for medical diagnosis and treatment, which in turn are closely linked to expanding knowledge of the functions of the human body. This development is possible primarily due to the increasing cooperation of scientists from various disciplines, and related activities are referred to as "biomedical engineering." The combined efforts of doctors, physiotherapists and engineers from various fields of science have helped achieve dynamic advances in medicine that would have been impossible in the past. The reader will find here papers on biomaterials, biomechanics, as well as the use of information technology and engineering modeling methods in medicine. The respective papers will promote the development of biomedical engineering as a vital field of science, based on cooperation between doctors, physiotherapists and engineers. The editors would like to thank all the people who contributed to the creation of this book – both the authors, and those involved in technical aspects.

This book studies the fundamental aspects of many-body physics in quantum systems open to an external world. Recent remarkable developments in the observation and manipulation of quantum matter at the single-quantum level point to a new research area of open many-body systems, where interactions with an external observer and the environment play a major role. The first part of the book elucidates the influence of measurement backaction from an external observer, revealing new types of quantum critical phenomena and out-of-equilibrium dynamics beyond the conventional paradigm of closed systems. In turn, the second part develops a powerful theoretical approach to study the in- and out-of-equilibrium physics of an open quantum system strongly correlated with an external environment, where the entanglement between the system and the environment plays an essential role. The results obtained here offer essential theoretical results for understanding the many-body physics of quantum systems open to an external world, and can be applied to experimental systems in atomic, molecular and optical physics, quantum information science and condensed matter physics.

This book constitutes the proceedings of the 7th International Conference on Biomimetic and Biohybrid Systems, Living Machines 2018, held in Paris, France, in July 2018. The 40 full and 18 short papers presented in this volume were carefully reviewed and selected from 60 submissions. The theme of the conference targeted at the intersection of research on novel life-like technologies inspired by the scientific investigation of biological systems, biomimetics, and research that seeks to interface biological and artificial systems to create biohybrid systems.

The Status of the Translation Profession in the European Union

Burden of Disease from Environmental Noise

Mobile Microrobotics

Perspectives on Local and Global Priorities

Progress in Ultrafast Intense Laser Science XV

Casimir Physics

The Altars and Altarpieces of New St. Peter's

Environmental noise is a threat to public health, having negative impacts on human health and wellbeing. This book reviews the health effects of night time noise exposure, examines dose-effects relations, and presents interim and ultimate guideline values of night noise exposure. It offers guidance to the policy-makers in reducing the health impacts of night noise, based on expert evaluation of scientific evidence in Europe. The review of scientific evidence and the derivation of guideline values were conducted by outstanding scientists. The contents of the document were peer-reviewed and discussed for a consensus among the experts and the stakeholders. We are thankful for those who contributed to the development and presentation of this guidelines and believe that this work will contribute to improving the health of the people in the Region.

Rapid development of microfabrication and assembly of nanostructures has opened up many opportunities to miniaturize structures that confine light, producing unusual and extremely interesting optical properties. This book addresses the large variety of optical phenomena taking place in confined solid state structures: microcavities. Realisations include planar and pillar microcavities, whispering gallery modes, and photonic crystals. The microcavities represent a unique laboratory for quantum optics and photonics. They exhibit a number of beautiful effects including lasing, superfluidity, superradiance, entanglement etc. Written by four practitioners strongly involved in experiments and theories of microcavities, it is addressed to any interested reader having a general physical background, but in particular to undergraduate and graduate students at physics faculties.

Volume 32 of the series addresses one of the most rapidly developing research fields in physics: microcavities.

Microcavities form a base for fabrication of opto-electronic devices of XXI century, in particular polariton lasers based on a new physical principle with respect to conventional

lasers proposed by Einstein in 1917. This book overviews a theory of all major phenomena linked microcavities and exciton-polaritons and is oriented to the reader having no background in solid state theory as well as to the advanced readers interested in theory of exciton-polaritons in microcavities. All major experimental discoveries in the field are addressed as well. · The book is oriented to a general reader and is easy to read for a non-specialist. · Contains an overview of the most essential effects in physics of microcavities experimentally observed and theoretically predicted during the recent decade such as: · Bose-Einstein condensation at room temperature. · Lasers without inversion of population. · Microcavity boom: optics of the XXI century! · Frequently asked questions on microcavities and responses without formulas. · Half-light-half-matter quasi-particles: base for the future optoelectronic devices

Since its inception in 1966, the series of numbered volumes known as Semiconductors and Semimetals has distinguished itself through the careful selection of well-known authors, editors, and contributors. The Willardson and Beer series, as it is widely known, has succeeded in producing numerous landmark volumes and chapters. Not only did many of these volumes make an impact at the time of their publication, but they continue to be well-cited years after their original release. Recently, Professor Eicke R. Weber of the University of California at Berkeley joined as a co-editor of the series. Professor Weber, a well-known expert in the field of semiconductor materials, will further contribute to continuing the series' tradition of publishing timely, highly relevant, and long-impacting volumes. Some of the recent volumes, such as Hydrogen in Semiconductors, Imperfections in III/V Materials, Epitaxial Microstructures, High-Speed Heterostructure Devices, Oxygen in Silicon, and others promise that this tradition will be maintained and even expanded. Reflecting the truly interdisciplinary nature of the field that the series covers, the volumes in Semiconductors and Semimetals have been and will continue to be of great interest to physicists, chemists, materials scientists, and device engineers in modern industry.

4th International Conference, ICR 2019, Istanbul, Turkey, August 20-25, 2019, Proceedings  
Innovations in Biomedical Engineering

Parafoils, Blimps, Aerostats, and Kites

Quality aspects in institutional translation

Ultra-cold Fermi Gases

Intersubband Transitions in Quantum Wells

Applications in Electronics Pervading Industry, Environment and Society

The field of cold atomic gases faced a revolution in 1995 when Bose-Einstein condensation was achieved. Since then, there has been an impressive progress, both experimental and theoretical. The quest for ultra-cold Fermi gases started shortly after the 1995 discovery, and quantum degeneracy in a gas of fermionic atoms was obtained in 1999. The Pauli exclusion principle plays a crucial role in many aspects of ultra-cold Fermi gases, including inhibited interactions with applications to precision measurements, and strong correlations. The path towards strong interactions and pairing of fermions opened up with the discovery in 2003 that molecules formed by fermions near a Feshbach resonance were surprisingly stable against inelastic decay, but featured strong elastic interactions. This remarkable combination was explained by the Pauli exclusion principle and the fact that only inelastic collisions require three fermions to come close to each other. The unexpected stability of strongly interacting fermions and fermion pairs triggered most of the research which was presented at this summer school. It is remarkable foresight (or good luck) that the first steps to organize this summer school were already taken before this discovery. It speaks for the dynamics of the field how dramatically it can change course when new insight is obtained. The contributions in this volume provide a detailed coverage of the experimental techniques for the creation and study of Fermi quantum gases, as well as the theoretical foundation for understanding the properties of these novel systems. This book constitutes the refereed proceedings of the 4th International Conference on Interactive Collaborative Robotics, ICR 2019, held in Istanbul, Turkey, in August 2019. The 32 papers presented in this volume were carefully reviewed and selected from 46 submissions. They deal with challenges of human-robot interaction; robot control and behavior in social robotics and collaborative robotics; and applied robotic and cyber-physical systems.

Tropical Conservation: Perspectives on Local and Global Priorities is intended to be a key resource on the biodiversity conservation crisis in the tropics and subtropics for university professors, university students, researchers, practitioners in grassroots local community organizations, technical staff of non-profit conservation and development organizations, wildlife managers and other technicians in the resource extraction industries, government and policy makers.

Approximately 29 million Americans are diagnosed with Type 2 diabetes annually. Of that number, only about 36 percent (10.44 million diabetes sufferers) achieve satisfactory medical outcomes and would need additional help—rarely available—to reliably control their glucose levels. Contrary to popular belief, although anti-diabetic medications can lower sugar levels, nevertheless they have a poor performance track record because inflammation in the blood vessels persists. This book details recent scientific findings that cardiovascular, kidney, vision, peripheral nervous system, and other body damage caused by chronic high levels of blood sugar (hyperglycemia) in Type 2 diabetes is actually due to excessive generation of unopposed free radicals and

reactive oxygen species (ROS). These, in turn, cause chronic systemic inflammation and dysfunction of the endothelial lining of the arterial blood vessels, jeopardizing the formation of the protective molecule nitric oxide (NO), thus severely impairing the blood supply to every organ and tissue in the body. This book also catalogues the evidence that chronic hyperglycemia causes profound and often irreversible damage—even long before Type 2 diabetes has been diagnosed. In addition, because conventional prescription treatments are, unfortunately, often inadequate, the book details evidence-based complementary means of blood sugar control.

Cardiovascular and Related Complications and Evidence-Based Complementary Treatments

Institutional Translation and Interpreting

How Technologies Will Change Sports in the Digital Age

Responsive Professional Education

Yearbook of International Organizations 2005/2006

Biomimetic and Biohybrid Systems

Microcavities

Sensor Technologies: Healthcare, Wellness and Environmental Applications explores the key aspects of sensor technologies, covering wired, wireless, and discrete sensors for the specific application domains of healthcare, wellness and environmental sensing. It discusses the social, regulatory, and design considerations specific to these domains. The book provides an application-based approach using real-world examples to illustrate the application of sensor technologies in a practical and experiential manner. The book guides the reader from the formulation of the research question, through the design and validation process, to the deployment and management phase of sensor applications. The processes and examples used in the book are primarily based on research carried out by Intel or joint academic research programs. "Sensor Technologies: Healthcare, Wellness and Environmental Applications provides an extensive overview of sensing technologies and their applications in healthcare, wellness, and environmental monitoring. From sensor hardware to system applications and case studies, this book gives readers an in-depth understanding of the technologies and how they can be applied. I would highly recommend it to students or researchers who are interested in wireless sensing technologies and the associated applications." Dr. Benny Lo Lecturer, The Hamlyn Centre, Imperial College of London "This timely addition to the literature on sensors covers the broad complexity of sensing, sensor types, and the vast range of existing and emerging applications in a very clearly written and accessible manner. It is particularly good at capturing the exciting possibilities that will occur as sensor networks merge with cloud-based "big data" analytics to provide a host of new applications that will impact directly on the individual in ways we cannot fully predict at present. It really brings this home through the use of carefully chosen case studies that bring the overwhelming concept of 'big data' down to the personal level of individual life and health." Dermot Diamond Director, National Centre for Sensor Research, Principal Investigator, CLARITY Centre for Sensor Web Technologies, Dublin City University "Sensor Technologies: Healthcare, Wellness and Environmental Applications takes the reader on an end-to-end journey of sensor technologies, covering the fundamentals from an engineering perspective, introducing how the data gleaned can be both processed and visualized, in addition to offering exemplar case studies in a number of application domains. It is a must-read for those studying any undergraduate course that involves sensor technologies. It also provides a thorough foundation for those involved in the research and development of applied sensor systems. I

highly recommend it to any engineer who wishes to broaden their knowledge in this area!" Chris Nugent Professor of Biomedical Engineering, University of Ulster

Casimir effects serve as primary examples of directly observable manifestations of the nontrivial properties of quantum fields, and as such are attracting increasing interest from quantum field theorists, particle physicists, and cosmologists. Furthermore, though very weak except at short distances, Casimir forces are universal in the sense that all material objects are subject to them. They are thus also an increasingly important part of the physics of atom-surface interactions, while in nanotechnology they are being investigated not only as contributors to "stiction" but also as potential mechanisms for actuating micro-electromechanical devices. While the field of Casimir physics is expanding rapidly, it has reached a level of maturity in some important respects: on the experimental side, where most sources of imprecision in force measurements have been identified as well as on the theoretical side, where, for example, semi-analytical and numerical methods for the computation of Casimir forces between bodies of arbitrary shape have been successfully developed. This book is, then, a timely and comprehensive guide to the essence of Casimir (and Casimir-Polder) physics that will have lasting value, serving the dual purpose of an introduction and reference to the field. While this volume is not intended to be a unified textbook, but rather a collection of largely independent chapters written by prominent experts in the field, the detailed and carefully written articles adopt a style that should appeal to non-specialist researchers in the field as well as to a broader audience of graduate students. This book outlines the effects that technology-induced change will have on sport within the next five to ten years, and provides food for thought concerning what lies further ahead. Presented as a collection of essays, the authors are leading academics from renowned institutions such as Massachusetts Institute of Technology, Queensland University of Technology, and the University of Cambridge, and practitioners with extensive technological expertise. In their essays, the authors examine the impacts of emerging technologies like artificial intelligence, the Internet of Things, and robotics on sports and assess how they will change sport itself, consumer behavior, and existing business models. The book will help athletes, entrepreneurs, and innovators working in the sports industry to spot trendsetting technologies, gain deeper insights into how they will affect their activities, and identify the most effective responses to stay ahead of the competition both on and off the pitch.

The first textbook on micron-scale mobile robotics, introducing the fundamentals of design, analysis, fabrication, and control, and drawing on case studies of existing approaches. Progress in micro- and nano-scale science and technology has created a demand for new microsystems for high-impact applications in healthcare, biotechnology, manufacturing, and mobile sensor networks. The new robotics field of microrobotics has emerged to extend our interactions and explorations to sub-millimeter scales. This is the first textbook on micron-scale mobile robotics, introducing the fundamentals of design, analysis, fabrication, and control, and drawing on case studies of existing approaches. The book covers the scaling laws that can be used to determine the dominant forces and effects at the micron scale; models forces acting on microrobots, including surface forces, friction, and viscous drag; and describes such possible microfabrication techniques as photo-lithography, bulk micromachining, and deep reactive ion etching. It presents on-board and remote sensing methods, noting that remote sensors are currently more feasible; studies possible on-board microactuators; discusses self-propulsion methods that use self-generated local gradients and fields or biological cells in liquid environments; and describes remote microrobot actuation methods for use in limited spaces such as inside the human body. It covers possible on-board powering methods, indispensable in future medical and other

applications; locomotion methods for robots on surfaces, in liquids, in air, and on fluid-air interfaces; and the challenges of microrobot localization and control, in particular multi-robot control methods for magnetic microrobots. Finally, the book addresses current and future applications, including noninvasive medical diagnosis and treatment, environmental remediation, and scientific tools.

Triage in Conservation

Soft Computing Applications

Improving the Interpreter's Voice

Quantification of Healthy Life Years Lost in Europe

Advances in Mechanical Design

Healthcare, Wellness and Environmental Applications

*Focusing on innovation, these proceedings present recent advances in the field of mechanical design in China and offer researchers, scholars and scientists an international platform to present their research findings and exchange their ideas. In the context of the "Made in China 2025" development strategy, one central aspect of the ICMD2017 was Innovative Design Pushes "Made in China 2025." The book highlights research hotspots in mechanical design, such as design methodology, green design, robotics and mechanics, and reliability design, while also combining industrial design and mechanical design. In a world where habitats are constantly changing and the impact of anthropization on the environment is increasingly intense, interactions between human and wildlife are becoming more and more complex. Some species pose problems for human activities while many others need to be helped in order to continue to exist. This book follows the first volume called 'Problematic Wildlife', edited by F.M. Angelici and published by Springer in 2016, which has had considerable success with readers and critics. The volume includes 21 chapters divided into 7 parts devoted specific topics which are approached in a multidisciplinary way. There are both review chapters and specific cases, always bearing in mind the interest for an international audience. The book is useful both for scientists, wildlife specialists, conservationists, zoologists, ecologists, university students, nature managers, and for those who live in contact with wildlife and its problems, such as farmers, shepherds, hunters, urban planners, and staff of parks and nature reserves. Its ultimate goal is to offer scientific and pragmatic approaches to manage each categories of problematic species.*