Ethical Issues Electrical Engineering

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Contemporary Ethical Issues in Engineering Pearson College Division
"This book provides a collection of successful designs, defined as communicative relation-building solutions, for individuals and collectives of interlocutors. It includes a longitudinal perspective of past mistakes, current trends and future opportunities, and is a must-have for beginners in the field as well as qualified professionals exploring the full potential of human interactions"--Provided by publisher.
Advances in Phytochemistry, Textile and Renewable Energy Research for Industrial Growth Cambridge University Press
ESourcePrentice Hall's Engineering Sourceprovides a comprehensive, customizable introductory engineering and computing library. Featuring over 25 modules and growing, ESource allows users to fully customize their books through the ESource website. Using the ESource online BookBuild system at www.prenhall.com/esource, users can view and select book chapters, change the sequence, instantly calculate the book's net (bookstore) price, request a free examination copy, and generate an ISBN for placing a bookstore order. Engineering professionalism; Ethical theories; Ethical problem solving techniques; Applications; and Codes of ethics of major engineering societies. For professionals in General Engineering or Computer Science fields.
Handbook of Research on Digital Information Technologies: Innovations, Methods, and Ethical Issues Routledge
Ensuring that their work has a positive influence on society is a responsibility and a privilege for engineers, but also a considerable challenge. This book addresses the ways in which engineers meet this challenge, working from the assumption that for a project to be truly ethical both the undertaking itself and its implementation must be ethically sound. The contributors discuss varied topics from an international and interdisciplinary perspective, including l robot ethics; l outer space; l international development; l internet privacy and security; l green branding; l arms conversion; l green employment; and l deliberate misinformation about climate change Important questions are answered, such as l what is meant by engineering ethics and its practical implications; l how decisions made by engineers in their working lives make an impact at the global as well as the local level; and l what ethics-related questions should be asked before making such decisions. Ethical Engineering for International Development and Environmental Sustainability will be a valuable resource for practising and student engineers as well as all who are interested in professional ethics, especially as it relates to engineering. Researchers and policy makers concerned with the effects of engineering decisions on environmental sustainability and international stability will find this book to be of special interest.
Its Nature, Ethics, and Promise Prentice Hall
Leaders from academia and industry offer guidance for professionals and general readers on ethical questions posed by modern technology.
Medical Assisting Exam Review for CMA, RMA & CMAS Certification Princeton University Press
This anthology focuses on ethical issues confronting individual engineers and the entire engineering profession.
Technoethics and the Evolving Knowledge Society: Ethical Issues in Technological Design, Research, Development, and Innovation Pearson College Division
Engineering EthicsAn Industrial PerspectiveElsevier
Ethical Issues in Engineering Design; Safety and Sustainability Rowman & Littlefield Publishers
We all live our daily lives surrounded by the products of technology that make what we do simpler, faster, and more efficient. These are benefits we often just take for granted. But at the same time, as these products disburden us of unwanted tasks that consumed much time and effort in earlier eras, many of them also leave us more disengaged from our natural and even human surroundings. It is the task of what Gene Moriarty calls focal engineering to create products that will achieve a balance between disburdenment and engagement: &“How much disburdenment will be appropriate while still permitting an engagement that enriches one&’s life, elevates the spirit, and calls forth a good life in a convivial society?&” One of his examples of a focally engineered structure is the Golden Gate Bridge, which &“draws people to it, enlivens and elevates the human spirit, and resonates with the world of its congenial setting. Humans, bridge, and world are in tune.&” These values of engagement, enlivenment, and resonance are key to the normative approach Moriarty brings to the profession of engineering, which traditionally has focused mainly on technical measures of evaluation such as efficiency, productivity, objectivity, and precision. These measures, while important, look at the engineered product in a local and limited sense. But &“from a broader perspective, what is locally benign may present serious moral problems,&” undermining &“social justice, environmental sustainability, and health and safety of affected parties.&” It is this broader perspective that is championed by focal engineering, the subject of Part III of the book, which Moriarty contrasts with &“modern&” engineering in Part I and &“pre-modern&” engineering in Part II.
Challenges and Opportunities McGraw-Hill Science, Engineering & Mathematics
Engineers and ethicists participated in a workshop to discuss the responsible development of new technologies. Presenters examined four areas of engineering--sustainability, nanotechnology, neurotechnology, and energy--in terms of the ethical issues they present to engineers in particular and society as a whole. Approaches to ethical issues include: analyzing the factual, conceptual, application, and moral aspects of an issue; evaluating the risks and responsibilities of a particular course of action; and using theories of ethics or codes of ethics developed by engineering societies as a basis for decision making. Ethics can be built into the education of engineering students and professionals, either as an aspect of courses already being taught or as a component of engineering projects to be examined along with research findings. Engineering practice workshops can also be effective, particularly when they include discussions with experienced engineers. This volume includes papers on all of these topics by experts in many fields. The consensus among workshop participants is that material on ethics should be an ongoing part of engineering education and engineering practice.
Engineering Ethics Cambridge University Press
This compendium gives a comprehensive overview of the advances in fibrillation-defibrillation knowledge — recognition of fibrillation as a unique life threatening cardiac arrhythmia; discovery of the electric discharge in its double role of culprit and savior; and technological improved contributions.The book stands on the well-known philosophy of Education-Based on Problems (or EBP), that is, take fibrillation as a medical daily problem and search for that knowledge, technique or principle trying to solve it.The book is interdisciplinary, multidisciplinary and transdisciplinary. It addresses undergraduate and graduate biomedical engineering students, physicians going into cardiology, clinical engineers and clinical engineering technicians, nurses, paramedics and emergency medical personnel.
At Savoy Place, London, Thursday, 18 June 1998 Jones & Bartlett Learning
Co-published with the Oxford Philosophy Trust, this third volume of collected papers focuses on the moral and ethical concerns and theological reflections encountered in professional training. Essential for those involved in the instruction and training of other professionals.
Ethical Issues in Engineering CRC Press
Science and Technology Ethics re-examines the ethics by which we live and asks the question: do we have in place the ethical guidelines through which we can incorporate these developments with the minimum of disruption and disaffection? It assesses the ethical systems in place and proposes new approaches to our

scientific and engineering processes and products, our social contacts, biology and informatics, the military industry and our environmental responsibilities. The volume is multidisciplinary and reflects the aim of the book to promote a state of the art assessment of these issues. Science and Technology Ethics is a much-needed discussion of the scientific developments that have major effects on the way we live. It will be of interest to all students of science and technology and all professionals involved with administrating laws in these fields.

Proceedings of the International Conference of Phytochemistry, Textile and Renewable Energy for Sustainable development (ICPTRE 2020), August 12-14, Eldoret, Kenya Butterworth-Heinemann

Ethical practice in engineering is critical for ensuring public trust in the field and in its practitioners, especially as engineers increasingly tackle international and socially complex problems that combine technical and ethical challenges. This report aims to raise awareness of the variety of exceptional programs and strategies for improving engineers' understanding of ethical and social issues and provides a resource for those who seek to improve ethical development of engineers at their own institutions. This publication presents 25 activities and programs that are exemplary in their approach to infusing ethics into the development of engineering students. It is intended to serve as a resource for institutions of higher education seeking to enhance their efforts in this area.

Some Ethical and Social Problems of Science and Technology Elsevier

This book aims to cover all aspects of teaching engineering and other technical subjects. It presents both practical matters and educational theories in a format that will be useful for both new and experienced teachers.

Papers from a Workshop World Scientific

This is the first textbook to comprehensively cover the experimental methods used in biomechanics. Designed for graduate students and researchers studying human biomechanics at the whole-body level, the book introduces readers to the theory behind the primary data collection methods and primary methods of data processing and analysis used in biomechanics. Each individual chapter covers a different aspect of data collection or data processing, presenting an overview of the topic at hand and explaining the math required for understanding the topic. A series of appendices provide the specific math that is required for understanding the chapter contents. Each chapter leads readers through the techniques used for data collection and processing, providing sufficient theoretical background to understand both the how and why of these techniques. Chapters end with a set of review questions, and then a bibliography which is divided into three sections (cited references, specific references, and useful references). Provides a comprehensive and in depth presentation on methods in whole-body human biomechanics; First textbook to cover both collection and processing in a single volume; Appendices provide the math needed for the main chapters. .

World Congress on Medical Physics and Biomedical Engineering September 7 - 12, 2009 Munich, Germany IGI Global

The rise of classic Euro-American philosophy of technology in the 1950s originally emphasized the importance of technologies as material entities and their mediating influence within human experience. Recent decades, however, have witnessed a subtle shift toward reflection on the activity from which these distinctly modern artifacts emerge and through which they are engaged and managed, that is, on engineering. What is engineering? What is the meaning of engineering? How is engineering related to other aspects of human existence? Such basic questions readily engage all major branches of philosophy --- ontology, epistemology, ethics, political philosophy, and aesthetics --- although not always to the same degree. The historico-philosophical and critical reflections collected here record a series of halting steps to think through engineering and the engineered way of life that we all increasingly live in what has been called the Anthropocene. The aim is not to promote an ideology for engineering but to stimulate deeper reflection among engineers and non-engineers alike about some basic challenges of our engineered and engineering lifeworld.

Ethics in Engineering Practice and Research IGI Global

Engineering Ethics: Challenges and Opportunities aims to set a new agenda for the engineering profession by developing a key challenge: can the great technical innovation of engineering be matched by a corresponding innovation in the acceptance and expression of ethical responsibility? Central features of this stimulating text include: · An analysis of engineering as a technical and ethical practice providing great opportunities for promoting the wellbeing and agency of individuals and communities. · Elucidation of the ethical opportunities of engineering in three key areas: Engineering for Peace, emphasising practical amelioration of the root causes of conflict rather than military solutions. Engineering for Health, focusing on close collaboration with healthcare professionals for both the promotion and restoration of health. Engineering for Development, providing effective solutions for the reduction of extreme poverty. · Innovative strategies for implementing these ethical opportunities are described: Emphasis on the personal responsibility of every engineer and on the benefits of supporting social structures. Use of language and concepts that are appealing to business managers and political decision makers. · Future prospects for increasing the acceptance and expression of ethical responsibility by engineers are envisaged. · Engineering Ethics: Challenges and Opportunities provides engineers, decision makers and the wider public with new understanding of the potential of engineering for the promotion of human flourishing.

Year 11 Springer Nature

Engineering Ethics is ideal for use in undergraduate engineering programs incorporating ethics topics. Engineering Ethics serves as both a textbook and a resource for the study of engineering ethics. It is written to help future engineers be prepared for confronting and resolving ethical dilemmas that they might encounter during their professional careers.

Teaching Engineering Purdue University Press

A guide to understanding and resolving the knotty ethical issues confronting today's engineering professional Little in an engineer's formal training offers adequate preparation for navigating the murky waters of professional ethics. Engineering and Environmental Ethics fills this critical gap, providing you with a reliable compass to help steer a safe course through the welter of governing laws and regulations, while balancing personal and professional obligations with the more global concerns of the environment and society. This book offers the opportunity to learn directly from your colleagues' experiences through more than 100 absorbing case studies that typify common ethical problems encountered by engineers. Taking a neutral viewpoint for each case, the authors supply helpful commentaries in which they address underlying philosophical issues, weigh the various pros and cons of possible responses, and offer expert opinions on how the problem could have been resolved better or differently. The cases are organized both by engineering specialty (chemical, civil, electrical, and mechanical) and by environmental concerns (air, water, solid waste, domestic, and safety and accident management). Engineering and Environmental Ethics is a valuable professional resource for practitioners in all engineering specialties, as well as corporate policymakers and environmental managers. It can also serve as an excellent primary or secondary text for engineering students enrolled in professional ethics courses.

Next-Generation Ethics National Academies Press

Most people intuitively understand the nature of morality; this tends to belie the fact that morality is more complex, controversial and interesting than generally appreciated. This book provides a comprehensive overview of morality from various disciplines and perspectives. These include ethics and evolution, moral psychology, morality and culture, morality and religion and morality and the law. A chapter on evil illustrates the vulnerability of morality. The book also provides a description and critique of various ethical theories, the difference between a moral obligation and a moral ideal and the views of venerable moral philosophers who argue over issues such as whether objective moral truth exists. A number of practical ethical dilemmas are discussed. The book is written in language accessible to the general reader and will be of interest to members of organizational, governmental, and professional ethics committees, students in ethics fellowships or ethics degree programs, philosophers, and others who want to learn more about morality.

The Elements of Electrical Engineering Springer

An exploration of the ethics of practical engineering through analyses of eighteen rich case studies The Ethical Engineer explores ethical issues that arise in engineering practice, from technology transfer to privacy protection to whistle-blowing. Presenting key ethics concepts and real-life examples of engineering work, Robert McGinn illuminates the ethical dimension of engineering practice and helps students and professionals determine engineers' context-specific ethical responsibilities. McGinn highlights the "ethics gap" in contemporary engineering—the disconnect between the meager exposure to ethical issues in engineering education and the ethical challenges frequently faced by engineers. He elaborates four "fundamental ethical responsibilities of engineers" (FEREs) and uses them to shed light on the ethical dimensions of diverse case studies, including ones from emerging engineering fields. The cases range from the Union Carbide pesticide plant disaster in India to the Google Street View project. After examining the extent to which the actions of engineers in the cases align with the FEREs, McGinn recapitulates key ideas used in analyzing the cases and spells out the main lessons they suggest. He identifies technical, social, and personal factors that induce or press engineers to engage in misconduct and discusses organizational, legal, and individual resources available to those interested in ethically responsible engineering practice. Combining probing analysis and nuanced ethical evaluation of engineering conduct in its social and technical contexts, The Ethical Engineer will be invaluable to engineering students and professionals. Meets the need for engineering-related ethics study Elaborates four fundamental ethical responsibilities of engineers Discusses diverse, global cases of ethical issues in established and emerging engineering fields Identifies resources and options for ethically responsible engineering practice Provides discussion questions for each case