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Titolo	Ethics in Computing, Science, and Engineering [[electronic resource]] : A Student's Guide to Doing Things Right / / by Barry G. Blundell
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ISBN	3-030-27126-9
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Descrizione fisica	1 online resource (935 pages)
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Soggetti	Engineering ethics Engineering—Vocational guidance Computers Law and legislation Philosophy Environmental law Environmental policy Engineering Ethics Job Careers in Science and Engineering Legal Aspects of Computing The Computing Profession Philosophy of Technology Environmental Law/Policy/Ecojustice
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Dedication -- About the Author -- Foreword -- 1 Professional Ethics: A Hallmark of Best Practice -- 2 Ethics and the Organisation: Pervasive Best Practice -- 3 Privacy: An Outdated Concept? -- 4 Surveillance: Technologies, Techniques and Ramifications -- 5 The Internet, Censorship, Empowerment and Repression -- 6 Ethics and the Environment -- 7 Empowering Technology: Drones -- 8 Robotic Systems -- 9 Ethics and Education -- 10 Ethics and Research -- 11 Reflections -- Appendices -- Index.
Sommario/riassunto	This comprehensive textbook introduces students to the wide-ranging

responsibilities of computing, science and engineering professionals by laying strong transdisciplinary foundations and by highlighting ethical issues that may arise during their careers. The work is well illustrated, and makes extensive use of activities, ethical dilemmas and case studies designed to stimulate discussion and engagement. A broad range of technologies are introduced and examined within an ethical framework. These include biometrics, surveillance systems (including facial recognition), radio frequency identification devices, drone technologies, the Internet of Things, and robotic systems. The application and potential societal ramifications of such systems are examined in detail, not only in their current context but also in terms of their ongoing evolution. The reader is asked to consider whether we can afford to allow ongoing developments to be primarily driven by market forces, or whether a more cautious approach is needed. Further chapters examine the benefits of ethical leadership, environmental issues relating to the technology product lifecycle (from inception to e-waste), ethical considerations in research (including medical experimentation), and the need to develop educational programs which will better prepare students for a more fluid employment landscape. The final chapter introduces a structured approach to ethical issue resolution, providing a valuable, long-term reference. In addition, it emphasises the ethical responsibilities of the professional, and considers issues that can arise when we endeavour to effect ethically sound change within organisations. Examples are provided which highlight the possible ramifications of exercising ethical valour. The author has created an extensively referenced textbook that catalyses student interest, is internationally relevant, and which is multicultural in both its scope and outlook. .