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Autore	Speight James G
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Nota di contenuto	Ethics in Science and Engineering; Contents; Preface; 1. Explaining Ethics; 1.1 Introduction; 1.2 The Impact of Science and Engineering; 1.3 The Framework of Ethics; 1.4 Ethics in Professional Life; References; 2. Scientists and Engineers; 2.1 Introduction; 2.2 Definitions; 2.3 Scientific Disciplines; 2.4 Engineering Disciplines; 2.5 Expert Witness; 2.6 Professionalism; References; 3. The Psychology and Philosophy of Ethics; 3.1 Introduction; 3.2 Ethical Responsibilities in Research; 3.3 Ethics in Science and Engineering; 3.4 A Phenomenological Theory of Ethics; 3.5 Conflicts of Interest References4. Education of Scientists and Engineers; 4.1 Introduction; 4.2 The High School Experience; 4.3 The Baccalaureate Experience; 4.4 The Graduate Degree Experience; 4.5 Postdoctoral Education; 4.6 Morals and Values; 4.7 Evaluating Scientists and Engineers; 4.8 Intellectual Property; References; 5. Scientific and Engineering Societies; 5.1 Introduction; 5.2 Scientific Societies; 5.3 Engineering Societies; 5.4 Codes of Ethics and Ethical Standards; 5.5 Promoting Research Integrity; 5.6 The Effectiveness of Society Activities; 5.7 Academic

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6. Codes of Ethics and Ethical Standards6.1 Introduction; 6.2 Ethics; 6.3 Codes of Ethics; 6.4 The Premise Behind Codes of Ethics; 6.5 Codes of Ethics and Peer Reviews; References; 7. Integrity in Research; 7.1 Introduction; 7.2 The Nature and Conduct of Research; 7.2.1 Single Investigators; 7.2.2 Team Investigators; 7.2.3 Misrepresenting Credentials; 7.2.4 Misleading Listing of Authorship; 7.3 Collecting Research Data; 7.3.1 Bias in Analytical Methods; 7.3.2 Misuse of the Data; 7.3.3 Falsification and Fabrication of the Data; 7.3.4 Plagiarism and Theft; 7.4 The Controls; References

8. Publication and Communication8.1 Introduction; 8.2 The Scientific and Engineering Literature; 8.3 The Journals; 8.4 Data Manipulation for Publication; 8.5 Detecting Falsified Data; 8.6 Peer Reviewers and Their Duties; 8.7 Duties and Responsibilities of a Journal Editor; References;

9. Enforcement of Codes of Ethics; 9.1 Introduction; 9.2 Following a Code of Ethics; 9.3 Enforcing a Code of Ethics; 9.4 Reporting Misconduct; 9.5 Published Examples of Unethical Behavior; References; Glossary; Index

Sommario/riassunto

For engineering and scientific endeavors to progress there must be generally accepted ethical guidelines in place to which engineers and scientists must adhere. This book explores the various scientific and engineering disciplines, examining the potential for unethical behavior by professionals. Documented examples are presented to show where unethical behavior could have been halted before it became an issue. The authors also look to the future to see what is in store for professionals in the scientific and engineering disciplines and how the potential for unethical behavior can be negated.
