Forensic Science A To Z Challenge Key

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Beyond the Molecular Frontier National Research Council 2003-03-19 Chemistry and chemical engineering have changed significantly in the last decade. They have broadened their scopeâ€"into biology, nanotechnology, materials science, computation, and advanced methods of process systems engineering and controlâ€"so much that the programs in most chemistry and chemical engineering departments now barely resemble the classical notion of chemistry. Beyond the Molecular Frontier brings together research, discovery, and invention across the entire spectrum of the chemical sciencesâ€"from fundamental, molecular-level chemistry to large-scale chemical processing technology. This reflects the way the field has evolved, the synergy at universities between research and education in chemistry and chemical engineering, and the way chemists and chemical engineers work together in industry. The astonishing developments in science and engineering during the 20th century have made it possible to dream of new goals that might previously have been considered unthinkable. This book identifies the key opportunities and challenges for the chemical sciences, from basic research to societal needs and from terrorism defense to environmental protection, and it looks at the ways in which chemists and chemical engineers can work together to contribute to an improved future.

The Phoenix Project Gene Kim 2018-02-06 ***Over a half-million sold! The sequel, The Unicorn Project, is coming Nov 26*** "Every person involved in a failed IT project should be forced to read this book."—TIM O'REILLY, Founder & CEO of O'Reilly Media "The Phoenix Project is a must read for business and IT executives who are struggling with the growing complexity of IT."—JIM WHITEHURST, President and CEO, Red Hat, Inc. Five years after this sleeper hit took on the world of IT and flipped it on it's head, the 5th Anniversary Edition of The Phoenix Project continues to guide IT in the DevOps revolution. In this newly updated and expanded edition of the bestselling The Phoenix Project, co-author Gene Kim includes a new afterword and a deeper delve into the Three Ways as described in The DevOps Handbook. Bill, an IT manager at Parts Unlimited, has been tasked with taking on a project critical to the future of the business, code named Phoenix Project. But the project is massively over budget and behind schedule. The CEO demands Bill must fix the mess in ninety days or else Bill's entire department will be outsourced. With the help of a prospective board member and his mysterious philosophy of The Three Ways, Bill starts to see that IT work has more in common with a manufacturing plant work than he ever imagined. With the clock ticking, Bill must organize work flow streamline interdepartmental communications, and effectively serve the other business functions at Parts Unlimited. In a fast-paced and entertaining style, three luminaries of the DevOps movement deliver a story that anyone who works in IT will recognize. Readers will not only learn how to improve their own IT organizations, they'll never view IT the same way again. "This book is a gripping read that captures brilliantly the dilemmas that face companies which depend on IT, and offers real-world solutions."—JEZ HUMBLE, Co-author of Continuous Delivery, Lean Enterprise, Accelerate, and The DevOps Handbook ———— "I'm delighted at how The Phoenix Project has reshaped so many conversations in technology. My goal in writing The Unicorn Project was to explore and reveal the necessary but invisible structures required to make developers (and all engineers) productive, and reveal the devastating effects of technical debt and complexity. I hope this book can create common ground for technology and business leaders to leave the past behind, and co-create a better future together."—Gene Kim, November 2019

Essential Mathematics and Statistics for Forensic Science Craig Adam 2011-09-20 This text is an accessible, student-friendly introduction to the wide range of mathematical and statistical tools needed by the forensic scientist in the analysis, interpretation and presentation of experimental measurements. From a basis of high school mathematics, the book develops essential quantitative analysis techniques within the context of a broad range of forensic applications. This clearly structured text focuses on developing core mathematical skills together with an understanding of the calculations associated with the analysis of experimental work, including an emphasis on the use of graphs and the evaluation of uncertainties. Through a broad study of probability and statistics, the reader is led ultimately to the use of Bayesian approaches to the evaluation of evidence within the court. In every section, forensic applications such as ballistics trajectories, post-mortem cooling, aspects of forensic pharmacokinetics, the matching of glass evidence, the formation of bloodstains and the interpretation of DNA profiles are discussed and examples of calculations are worked through. In every chapter there are numerous self-assessment problems to aid student learning. Its broad scope and forensically focused coverage make this book an essential text for students embarking on any degree course in forensic science or forensic analysis, as well as an invaluable reference for post-graduate students and forensic professionals. Key features: Offers a unique mix of mathematics and statistics topics, specifically tailored to a forensic science undergraduate degree. All topics illustrated with examples from the forensic science discipline. Written in an accessible, student-friendly way to engage interest and enhance learning and confidence. Assumes only a basic high-school level prior mathematical knowledge.

Stimulant Use and Addictive Disorder Qi Wang 2022-02-02

Recovery, Analysis, and Identification of Commingled Human Remains Bradley J. Adams 2008-02-23 Commingling of human remains presents an added challenge to all phases of the forensic process. This book brings together tools from diverse sources within forensic science to offer a set of comprehensive approaches to handling commingled remains. It details the recovery of commingled remains in the field, the use of triage in the assessment of commingling, various analytical techniques for sorting and determining the number of individuals, the role of DNA in the overall process, ethical considerations, and data management. In addition, the book includes case examples that illustrate techniques found to be successful and those that proved problematic.

Introduction to Biopsychology Andrew P. Wickens 2021-10-13 Explores both the foundations and the history of biological psychology, including stories behind important discoveries in the field. Includes over 250 colour diagrams, the latest research and MCQs to provide psychology students with everything they need to know.

College Algebra Cynthia Y. Young 2012-10-02 The third edition of Cynthia Young's College Algebra brings together all the elements that have allowed instructors and learners to successfully "bridge the gap" between classroom instruction and independent homework by overcoming common learning barriers and building confidence in students' ability to do mathematics. Written in a clear, single voice that speaks to students and mirrors how instructors communicate in lecture, Young's hallmark pedagogy enables students to become independent, successful learners. Varied exercise types and modeling projects keep the learning fresh and motivating. Young continues her tradition of fostering a love for succeeding in mathematics by introducing inquiry-based learning projects in this edition, providing learners an opportunity to master the material with more freedom while reinforcing mathematical skills and intuition. The seamless integration of Cynthia Young's College Algebra 3rd edition with WileyPLUS, a research-based, online environment for effective teaching and learning, continues Young's vision of building student confidence in mathematics because it takes the guesswork out of studying by providing them with a clear roadmap: what to do, how to do it, and whether they did it right. WileyPLUS sold separately from text.

Crime, Criminal Justice, and the Evolving Science of Criminology

in South Asia Shahid M. Shahidullah 2017-03-30 Written by some of the most notable criminologists of South Asia, this book examines advances in law, criminal justice, and criminology in South Asia with particular reference to India, Pakistan, and Bangladesh. The edited collection explores, on the basis of surveys, interviews, court records, and legislative documents, a wide range of timely issues such as: the impacts of modernization and globalization on laws combating violence against women and children, evolution of rape laws and the issues of gender justice, laws for combating online child sexual abuse, transformation in juvenile justice, integration of women into policing, the dynamics of violence and civility, and the birth of colonial criminology in South Asia. Students of criminology and criminal justice, practitioners, policy-makers, and human rights advocates will find this distinctive volume highly valuable.

Forensic Toxicology Max M. Houck 2018-01-02 Forensic Toxicology, the latest release in the Advanced Forensic Science Series that grew out of recommendations from the 2009 NAS Report, Strengthening Forensic Science: A Path Forward will serve as a graduate level text for those studying and teaching forensic toxicology. It is also an excellent reference for the forensic practitioner's library or for use in their casework. Coverage includes a wide variety of methods used, along with pharmacology and drugs and professional issues they may encounter. Edited by a world-renowned, leading forensic expert, this updated edition is a long overdue solution for the forensic science community. Provides basic principles of forensic science and an overview of forensic toxicology Contains information on a wide variety of methods Covers pharmacology and drugs, matrices and interpretation Includes a section on professional issues, such as crime scene to court, lab reports, health and safety, post-mortem and drug facilitated crimes Incorporates effective pedagogy, key terms, review questions, discussion questions and additional reading suggestions

Subsystem and Transaction Monitoring and Tuning with DB2 11 for z/OS Paolo Bruni 2015-07-29 This IBM® Redbooks® publication discusses in detail the facilities of DB2® for z/OS®, which allow complete monitoring of a DB2 environment. It focuses on the use of the DB2 instrumentation facility component (IFC) to provide monitoring of DB2 data and events and includes suggestions for related tuning. We discuss the collection of statistics for the verification of performance of the various components of the DB2 system and accounting for tracking the behavior of the applications. We have intentionally omitted considerations for query optimization; they are worth a separate document. Use this book to activate the right traces to help you monitor the performance of your DB2 system and to tune the various aspects of subsystem and application performance.

Using 21st Century Science to Improve Risk-Related Evaluations National Academies of Sciences, Engineering, and Medicine 2017-03-16 Over the last decade, several large-scale United States and international programs have been initiated to incorporate advances in molecular and cellular biology, -omics technologies, analytical methods, bioinformatics, and computational tools and methods into the field of toxicology. Similar efforts are being pursued in the field of exposure science with the goals of obtaining more accurate and complete exposure data on individuals and populations for thousands of chemicals over the lifespan; predicting exposures from use data and chemical-property information; and translating exposures between test systems and humans. Using 21st Century Science to Improve Risk-Related Evaluations makes recommendations for integrating new scientific approaches into risk-based evaluations. This study considers the scientific advances that have occurred following the publication of the NRC reports Toxicity Testing in the 21st Century: A Vision and a Strategy and Exposure Science in the 21st Century: A Vision and a Strategy. Given the various ongoing lines of investigation and new data streams that have emerged, this publication proposes how best to integrate and use the emerging results in evaluating chemical risk. Using 21st Century Science to Improve Risk-Related Evaluations considers whether a new paradigm is needed for data validation, how to integrate the divergent data streams, how uncertainty might need to be characterized, and how best to communicate the new approaches so that they are understandable to various stakeholders.

Forensic Scientist Trainee National Learning Corporation 2019-02 The Forensic Scientist Trainee Passbook(R) prepares you for your test by allowing you to take practice exams in the subjects you need to study. It provides hundreds of questions and answers in the areas that will likely be covered on your upcoming exam, including but not limited to: principles of biology, biochemistry, genetics, and molecular biology;

general laboratory principles and practices; evaluating information and evidence; record keeping; and other related areas.

Criminology: The Key Concepts Martin O'Brien 2008-06-23 Criminology: The Key Concepts is an authoritative and comprehensive study guide and reference resource that will take you through all the concepts, approaches, issues and institutions central to the study of crime in contemporary society. Topics covered in this easy to use A-Z guide include: policing, sentencing and the justice system types of crime, including corporate crime, cybercrime, sex and hate crimes feminist, marxist and cultural approaches to criminology terrorism, state crime, war crimes and human rights social issues such as anti-social behaviour, domestic violence and pornography criminal psychology and deviance Fully cross-referenced, with extensive suggestions for further reading and in-depth study of the topics discussed, this is an essential reference guide for students of Criminology at all levels.

Forensics Val McDermid 2015-07-07 Bestselling author of Broken Ground "offers fascinating glimpses" into the real world of criminal forensics from its beginnings to the modern day (The Boston Globe). The dead can tell us all about themselves: where they came from, how they lived, how they died, and, of course, who killed them. Using the messages left by a corpse, a crime scene, or the faintest of human traces, forensic scientists unlock the mysteries of the past and serve justice. In Forensics, international bestselling crime author Val McDermid guides readers through this field, drawing on interviews with top-level professionals, ground-breaking research, and her own experiences on the scene. Along the way, McDermid discovers how maggots collected from a corpse can help determine one's time of death; how a DNA trace a millionth the size of a grain of salt can be used to convict a killer; and how a team of young Argentine scientists led by a maverick American anthropologist were able to uncover the victims of a genocide. Prepare to travel to war zones, fire scenes, and autopsy suites as McDermid comes into contact with both extraordinary bravery and wickedness, tracing the history of forensics from its earliest beginnings to the cutting-edge science of the modern day.

Technology in Forensic Science Deepak Rawtani 2020-11-02 The book "Technology in Forensic Science" provides an integrated approach by reviewing the usage of modern forensic tools as well as the methods for interpretation of the results. Starting with best practices on sample taking, the book then reviews analytical methods such as high-resolution microscopy and chromatography, biometric approaches, and advanced sensor technology as well as emerging technologies such as nanotechnology and taggant technology. It concludes with an outlook to emerging methods such as AI-based approaches to forensic investigations.

Encyclopedia of Forensic Sciences Jay A. Siegel 2013
A Genetic Perspective on Asian Populations Wibhu Kutanan 2022-06-30
Teaching Chemistry with Forensic Science Amanda S. Harper-Leatherman 2020-09-22 Introduction to teaching chemistry with forensic science -- Chemistry and crime : investigating chemistry from a forensic science perspective -- Incorporating forensic science throughout the undergraduate analytical curriculum : from nonmajors through instrumental analysis -- Using forensic science to engage nontraditional learners -- Teaching introductory forensic chemistry using open educational and digital resources -- On utilizing forensic science to motivate students in a first-semester general chemistry laboratory -- Interdisciplinary learning communities : bridging the gap between the sciences and the humanities through forensic science -- Interdisciplinary learning activity incorporating forensic science and forensic nursing -- Drugs and DNA : forensic topics ideal for the analytical chemistry curriculum -- From DUIs to stolen treasure : using real-world sample analysis to increase engagement and critical thinking in analytical chemistry courses -- Integration of forensic themes in teaching instrumental analysis at Pace University -- Using expert witness testimony with an illicit substance analysis to increase student engagement in learning the GC/MS technique -- Generative learning strategies and prelecture assignments in a flipped forensic chemistry classroom.

War, Peace, and Human Nature Douglas P. Fry 2015-02 "The chapters in this book [posit] that humans clearly have the capacity to make war, but since war is absent in some cultures, it cannot be viewed as a human universal. And counter to frequent presumption, the actual archaeological record reveals the recent emergence of war. It does not typify the ancestral type of human society, the nomadic forager band, and contrary to widespread assumptions, there is little support for the

idea that war is ancient or an evolved adaptation. Views of human nature as inherently warlike stem not from the facts but from cultural views embedded in Western thinking"--Amazon.com.

IBM Tivoli Directory Server for z/OS Karan Singh 2011-07-07 This IBM® Redbooks® publication examines the IBM Tivoli® Directory Server for z/OS®. IBM Tivoli Directory Server is a powerful Lightweight Directory Access Protocol (LDAP) infrastructure that provides a foundation for deploying comprehensive identity management applications and advanced software architectures. This publication provides an introduction to the IBM Tivoli Directory Server for z/OS that provides a brief summary of its features and a examination of the possible deployment topologies. It discusses planning a deployment of IBM Tivoli Directory Server for z/OS, which includes prerequisites, planning considerations, and data stores, and provides a brief overview of the configuration process. Additional chapters provide a detailed discussion of the IBM Tivoli Directory Server for z/OS architecture that examines the supported back ends, discusses in what scenarios they are best used, and provides usage examples for each back end. The discussion of schemas breaks down the schema and provides guidance on extending it. A broad discussion of authentication, authorization, and security examines the various access protections, bind mechanisms, and transport security available with IBM Tivoli Directory Server for z/OS. This chapter also provides an examination of the new Password Policy feature. Basic and advanced replication topologies are also covered. A discussion on plug-ins provides details on the various types of plug-ins, the plug-in architecture, and creating a plug-in, and provides an example plug-in. Integration of IBM Tivoli Directory Server for z/OS into the IBM Workload Manager environment is also covered. This publication also provides detailed information about the configuration of IBM Tivoli Directory Server for z/OS. It discusses deploying IBM Tivoli Directory Server for z/OS on a single system, with examples of configuring the available back ends. Configuration examples are also provided for deploying the server in a Sysplex, and for both basic and advanced replication topologies. Finally it provides guidance on monitoring and debugging IBM Tivoli Directory Server for z/OS.

Who to Release? Nicola Padfield 2013-03-07 This book is concerned to explore the changing role of the Parole Board across the range of its responsibilities, including the prediction of risk and deciding on the release (or continued detention) of the growing number of recalled prisoners and of those subject to indeterminate sentences. In doing so it aims to rectify the lack of attention that has been given by lawyers, academics and practitioners to back door sentencing (where the real length of a sentence is decided by those who take the decision to release) compared to front door sentencing' (decisions taken by judges or magistrates in court). Particular attention is given in this book to the important changes made to the role and working of the Parole Board as a result of the impact of the early release scheme of the Criminal Justice Act 2005, with the Parole Board now deciding in Panels concerned with determinate sentence prisoners, lifers and recalled prisoners. A wide range of significant issues, and case law, has arisen as a result of these changes, which the contributors to this book, leading authorities in the field, aim to explore.

Forensic Chemistry Max M. Houck 2015-01-26 Forensic Chemistry is the first publication to provide coordinated expert content from world-renowned leading authorities in forensic chemistry. Covering the range of forensic chemistry, this volume in the Advanced Forensic Science Series provides up-to-date scientific learning on drugs, fire debris, explosives, instrumental methods, interpretation, and more. Technical information, written with the degreed professional in mind, brings established methods together with newer approaches to build a comprehensive knowledge base for the student and practitioner alike. Like each volume in the Advanced Forensic Science Series, review and discussion questions allow the text to be used in classrooms, training programs, and numerous other applications. Sections on fundamentals of forensic science, history, safety, and professional issues provide context and consistency in support of the forensic enterprise. Forensic Chemistry sets a new standard for reference and learning texts in modern forensic science. Advanced articles written by international forensic chemistry experts Covers the range of forensic chemistry, including methods and interpretation Includes entries on history, safety, and professional issues Useful as a professional reference, advanced textbook, or training review

Forensic Analysis B Suresh Shetty 2016-09-07 It is my pleasure to place before you the book ''Forensic Analysis - From Death to Justice'' which presents one of the major portions of the broad specialty of Forensic Science comprising mainly of Thanatology and Criminalistics. This book

has been designed to incorporate a wide range of new ideas and unique works from all authors from topics like Forensic Engineering, Forensic Entomology and Crime Scene Investigation. I hope that it will be useful to practitioners of forensic medicine, experts, pathologists, law makers, investigating authorities, undergraduate and postgraduate medical school graduates of medicine.

PROBING INTO COLD CASES: A Guide for Investigators Ronald L. Mendell 2014-05-14 The investigative experience offers many challenges in reconstructing past events and in discovering the persons, entities, and organizations involved in a crime or a civil wrong. The discussion begins with explaining the nature of cold cases and the major problems associated with these investigations. A cold case investigation progresses from the internal (the caseOCOs center), proximal (contact evidence), distal (immediate vicinity) to the limbic (the world at large) realms of information. The text stresses the importance of gathering basic identifiers about the victim, suspect, product, or object that constitutes the OC centerOCO of the case. Fifteen keys exist that act as collection points for evidence, and these keys are discussed, including the role they play in the evolution of an investigation. The following topics are featured: identifying the differences between physical evidence, traceable evidence, and information resources; the differences between the goals in criminal cases and in civil investigations; working with the medical examiner; the importance of visiting the locus or crime scene even after a considerable period of time has elapsed; the basics of computer forensics and tips on cyberprofiling; technical assistance and how to locate expert help; tools for uncovering witnesses; locating OC hiddenOCO information archives relevant to a particular case; financial evidence; managing a case; and response when using a combination of traditional and forensic techniques, which constitutes a modern synthesis of investigative methods. Despite analytical methods, it is necessary to understand when to stop an investigation. The text covers this issue and makes recommendations regarding the writing of reports on a case. The Appendix contains a Master Checklist that provides a wealth of information and expertise. This book will be a valuable resource for police investigators, private investigators, and governmental/regulatory investigators."

Canadian Society of Forensic Science journal 1992

Innovations and Challenges in Language Learning Motivation Zoltán Dörnyei 2020 "Innovations and Challenges in Language Learning Motivation provides a cutting-edge perspective on the latest challenges and innovations in language learning motivation, incorporating numerous examples and cases in mainstream psychology and in the field of second language acquisition. Drawing on over three decades of research experience as well as an extensive review of the latest psychological and SLA literature, Dèornyei provides an accessible overview of these cutting-edge areas and covers novel topics that have not yet been addressed in L2 motivation research, such as: fundamental theoretical questions such as mental time travel, ego depletion, psychological momentum and passion, and how the temporal dimension of motivation can be made consistent with a learner attribute; key challenges concerning the notion of L2 motivation, ranging from issues about the nature of motivation (e.g. trait, state or a process?) and questions surrounding unconscious versus conscious motivation, the motivational capacity of vision, and long-term motivation and persistence; highly practical classroom-specific challenges such as how technological advances could be better integrated in teachers' repertoires of motivational strategies. This distinctive book from one of the key voices in the field will be essential reading for students in the field of TESOL and Applied Linguistics, as well as language teachers and teacher educators"--

Contemporary Digital Forensic Investigations of Cloud and Mobile Applications Kim-Kwang Raymond Choo 2016-10-12 Contemporary Digital Forensic Investigations of Cloud and Mobile Applications comprehensively discusses the implications of cloud (storage) services and mobile applications on digital forensic investigations. The book provides both digital forensic practitioners and researchers with an up-to-date and advanced knowledge of collecting and preserving electronic evidence from different types of cloud services, such as digital remnants of cloud applications accessed through mobile devices. This is the first book that covers the investigation of a wide range of cloud services. Dr. Kim-Kwang Raymond Choo and Dr. Ali Dehghantanha are leading researchers in cloud and mobile security and forensics, having organized research, led research, and been published widely in the field. Users will gain a deep overview of seminal research in the field while also identifying prospective future research topics and open challenges.

Presents the most current, leading edge research on cloud and mobile application forensics, featuring a panel of top experts in the field Introduces the first book to provide an in-depth overview of the issues surrounding digital forensic investigations in cloud and associated mobile apps Covers key technical topics and provides readers with a complete understanding of the most current research findings Includes discussions on future research directions and challenges

Nuclear Forensic Analysis, Second Edition Kenton J. Moody 2014-12-10 Now in its second edition, Nuclear Forensic Analysis provides a multidisciplinary reference for forensic scientists, analytical and nuclear chemists, and nuclear physicists in one convenient source. The authors focus particularly on the chemical, physical, and nuclear aspects associated with the production or interrogation of a radioactive sample. They consolidate fundamental principles of nuclear forensic analysis, all pertinent protocols and procedures, computer modeling development, interpretational insights, and attribution considerations. The principles and techniques detailed are then demonstrated and discussed in their applications to real-world investigations and casework conducted over the past several years. Highlights of the Second Edition include: A new section on sample analysis considerations and interpretation following a post-detonation nuclear forensic collection New case studies, including the most wide-ranging and multidisciplinary nuclear forensic investigation conducted by Lawrence Livermore National Laboratory to date Expanded treatments of radiologic dispersal devices (RDDs) and statistical analysis methodologies The material is presented with minimal mathematical formality, using consistent terminology with limited jargon, making it a reliable, accessible reference. The broad-based coverage provides important insight into the multifaceted changes facing this recently developed science.

Hands-On Network Forensics Nipun Jaswal 2019-03-30 Gain basic skills in network forensics and learn how to apply them effectively Key FeaturesInvestigate network threats with easePractice forensics tasks such as intrusion detection, network analysis, and scanningLearn forensics investigation at the network levelBook Description Network forensics is a subset of digital forensics that deals with network attacks and their investigation. In the era of network attacks and malware threat, it's now more important than ever to have skills to investigate network attacks and vulnerabilities. Hands-On Network Forensics starts with the core concepts within network forensics, including coding, networking, forensics tools, and methodologies for forensic investigations. You'll then explore the tools used for network forensics, followed by understanding how to apply those tools to a PCAP file and write the accompanying report. In addition to this, you will understand how statistical flow analysis, network enumeration, tunneling and encryption, and malware detection can be used to investigate your network. Towards the end of this book, you will discover how network correlation works and how to bring all the information from different types of network devices together. By the end of this book, you will have gained hands-on experience of performing forensics analysis tasks. What you will learnDiscover and interpret encrypted trafficLearn about various protocolsUnderstand the malware language over wireGain insights into the most widely used malwareCorrelate data collected from attacksDevelop tools and custom scripts for network forensics automationWho this book is for The book targets incident responders, network engineers, analysts, forensic engineers and network administrators who want to extend their knowledge from the surface to the deep levels of understanding the science behind network protocols, critical indicators in an incident and conducting a forensic search over the wire.

The 13 Critical Tasks: An Inside-Out Approach to Solving More Gun Crime Peter Gagliardi 2019-10-08 This book describes the people, processes, and technologies needed to extract actionable intelligence from the inside, and outside, of crime guns.

Injustice Clive Stafford Smith 2012-07-12 Shortlisted for the 2013 Orwell Prize. THE STORY CONTINUES: TWO NEW CHAPTERS FOR THE PAPERBACK EDITION In 1986, Kris Maharaj, a British businessman living in Miami, was arrested for the brutal murder of two ex-business associates. His lawyer did not present a strong alibi; Kris was found guilty and sentenced to death in the electric chair. It wasn't until a young lawyer working for nothing, Clive Stafford Smith, took on his case that strong evidence began to emerge that the state of Florida had got the wrong man on Death Row. So far, so good - except that, as Stafford Smith argues here so compellingly, the American justice system is actually designed to ignore innocence. Twenty-six years later, Maharaj is still in jail. Step by step, Stafford Smith untangles the Maharaj case and

the system that makes disasters like this inevitable. His conclusions will act as a wake-up call for those who condone legislation which threatens basic human rights and, at the same time, the personal story he tells demonstrates that determination can challenge the institutions that surreptitiously threaten our freedom.

Artificial Neural Networks and Machine Learning – ICANN 2018 Věra Kůrková 2018-09-26 This three-volume set LNCS 11139-11141 constitutes the refereed proceedings of the 27th International Conference on Artificial Neural Networks, ICANN 2018, held in Rhodes, Greece, in October 2018. The papers presented in these volumes was carefully reviewed and selected from total of 360 submissions. They are related to the following thematic topics: AI and Bioinformatics, Bayesian and Echo State Networks, Brain Inspired Computing, Chaotic Complex Models, Clustering, Mining, Exploratory Analysis, Coding Architectures, Complex Firing Patterns, Convolutional Neural Networks, Deep Learning (DL), DL in Real Time Systems, DL and Big Data Analytics, DL and Big Data, DL and Forensics, DL and Cybersecurity, DL and Social Networks, Evolving Systems – Optimization, Extreme Learning Machines, From Neurons to Neuromorphism, From Sensation to Perception, From Single Neurons to Networks, Fuzzy Modeling, Hierarchical ANN, Inference and Recognition, Information and Optimization, Interacting with The Brain, Machine Learning (ML), ML for Bio Medical systems, ML and Video-Image Processing, ML and Forensics, ML and Cybersecurity, ML and Social Media, ML in Engineering, Movement and Motion Detection, Multilayer Perceptrons and Kernel Networks, Natural Language, Object and Face Recognition, Recurrent Neural Networks and Reservoir Computing, Reinforcement Learning, Reservoir Computing, Self-Organizing Maps, Spiking Dynamics/Spiking ANN, Support Vector Machines, Swarm Intelligence and Decision-Making, Text Mining, Theoretical Neural Computation, Time Series and Forecasting, Training and Learning.

Unleashing the Art of Digital Forensics Keshav Kaushik 2022-08-11 Unleashing the Art of Digital Forensics is intended to describe and explain the steps taken during a forensic examination, with the intent of making the reader aware of the constraints and considerations that apply during a forensic examination in law enforcement and in the private sector. Key Features: • Discusses the recent advancements in Digital Forensics and Cybersecurity • Reviews detailed applications of Digital Forensics for real-life problems • Addresses the challenges related to implementation of Digital Forensics and Anti-Forensic approaches • Includes case studies that will be helpful for researchers • Offers both quantitative and qualitative research articles, conceptual papers, review papers, etc. • Identifies the future scope of research in the field of Digital Forensics and Cybersecurity. This book is aimed primarily at and will be beneficial to graduates, postgraduates, and researchers in Digital Forensics and Cybersecurity.

The Slippery Slope to Genocide Mark Anstey 2012-01-17 In this volume, noted thinkers and practitioners of conflict management present ideas on how to prevent identity issues from causing fear and escalating into genocide. They focus on measures for handling the internal dynamics of parties facing identity conflicts, as well as considerations for arranging external assistance.

Smartphone-Based Detection Devices Chaudhery Mustansar Hussain 2021-08-21 Smartphone usage has created a new means for detection, analysis, diagnosis and monitoring through the use of new apps and attachments. These breakthrough analytical methods offer ways to overcome the drawbacks of more conventional methods, such as the expensive instrumentation that is often needed, complex sample pre-treatment steps, or time-consuming procedures. Smartphone-Based Detection Devices: Emerging Trends in Analytical Techniques gathers these modern developments in smartphone analytical methods into one comprehensive source, covering recent advancements in analytical tools while paying special attention to the most accurate, highly efficient approaches. Serving as a guide not only to analytical chemists but also to environmentalists, biotechnologists, pharmacists, forensic scientists and toxicologists, Smartphone-Based Detection Devices: Emerging Trends in Analytical Techniques is an important source for researchers who require accurate analysis of their on- and off-site samples. Students in these fields at the graduate and post-graduate level will also benefit from this topical and comprehensive book. Provides an integrated approach for advanced analytical methods and techniques using smartphones Covers the usage of smartphones in sample prep, integration and detection stages of analytical chemistry Applicable for researchers of all levels, from graduate students to professionals

The Evaluation of Forensic DNA Evidence National Research Council

1996-12-12 In 1992 the National Research Council issued DNA Technology in Forensic Science, a book that documented the state of the art in this emerging field. Recently, this volume was brought to worldwide attention in the murder trial of celebrity O. J. Simpson. The Evaluation of Forensic DNA Evidence reports on developments in population genetics and statistics since the original volume was published. The committee comments on statements in the original book that proved controversial or that have been misapplied in the courts. This volume offers recommendations for handling DNA samples, performing calculations, and other aspects of using DNA as a forensic toolâ€"modifying some recommendations presented in the 1992 volume. The update addresses two major areas: Determination of DNA profiles. The committee considers how laboratory errors (particularly false matches) can arise, how errors might be reduced, and how to take into account the fact that the error rate can never be reduced to zero. Interpretation of a finding that the DNA profile of a suspect or victim matches the evidence DNA. The committee addresses controversies in population genetics, exploring the problems that arise from the mixture of groups and subgroups in the American population and how this substructure can be accounted for in calculating frequencies. This volume examines statistical issues in interpreting frequencies as probabilities, including adjustments when a suspect is found through a database search. The committee includes a detailed discussion of what its recommendations would mean in the courtroom, with numerous case citations. By resolving several remaining issues in the evaluation of this increasingly important area of forensic evidence, this technical update will be important to forensic scientists and population geneticistsâ€"and helpful to attorneys, judges, and others who need to understand DNA and the law. Anyone working in laboratories and in the courts or anyone studying this issue should own this book.

Science and the Detective Brian H. Kaye 1996-12-16 Who killed Napoleon? Were the witches of Salem high on LSD? What do maggots on a body tell us about the time of death? In his unique, engaging style, Brian Kaye tells the story of some spectacular cases in which forensic evidence played a key role. You'll also read about the fascinating ways in which scientific evidence can be used to establish guilt or innocence in today's courtroom. The use of voice analysis, methods for developing fingerprints and for uncovering art forgeries, and the examination of bullet wounds are just a few topics considered. In a special section on fraud, the author takes you into the world of counterfeit money. There's no solving crime without science. Written for everyone interested in whodunnits, this book explains the basis of the analytical techniques available for studying evidence in offenses ranging from doping in sports to first-degree murder.

Strengthening Forensic Science in the United States National Research Council 2009-07-29 Scores of talented and dedicated people serve the forensic science community, performing vitally important work. However, they are often constrained by lack of adequate resources, sound policies, and national support. It is clear that change and advancements, both systematic and scientific, are needed in a number of forensic science disciplines to ensure the reliability of work, establish enforceable standards, and promote best practices with consistent application. Strengthening Forensic Science in the United States: A Path Forward provides a detailed plan for addressing these needs and suggests the creation of a new government entity, the National Institute of Forensic Science, to establish and enforce standards within the forensic science community. The benefits of improving and regulating the forensic science disciplines are clear: assisting law enforcement officials, enhancing homeland security, and reducing the risk of wrongful conviction and exoneration. Strengthening Forensic Science in the United States gives a full account of what is needed to advance the forensic science disciplines, including upgrading of systems and organizational structures, better training, widespread adoption of uniform and enforceable best practices, and mandatory certification and accreditation programs. While this book provides an essential call-to-action for congress and policy makers, it also serves as a vital tool for law enforcement agencies, criminal prosecutors and attorneys, and forensic science educators.

The Cadaver King and the Country Dentist Radley Balko 2018-02-27 A shocking and deeply reported account of the persistent plague of institutional racism and junk forensic science in our criminal justice system, and its devastating effect on innocent lives After two three-year-old girls were raped and murdered in rural Mississippi, law enforcement pursued and convicted two innocent men: Kennedy Brewer and Levon Brooks. Together they spent a combined thirty years in prison before finally being exonerated in 2008. Meanwhile, the real killer remained free. The Cadaver King and the Country Dentist recounts the story of how the criminal justice system allowed this to happen, and of how two men, Dr. Steven Hayne and Dr. Michael West, built successful careers on the back of that structure. For nearly two decades, Hayne, a medical examiner, performed the vast majority of Mississippi's autopsies, while his friend Dr. West, a local dentist, pitched himself as a forensic jack-of-all-trades. Together they became the go-to experts for prosecutors and helped put countless Mississippians in prison. But then some of those convictions began to fall apart. Here, Radley Balko and Tucker Carrington tell the haunting story of how the courts and Mississippi's death investigation system -- a relic of the Jim Crow era -- failed to deliver justice for its citizens. The authors argue that bad forensics, structural racism, and institutional failures are at fault, raising sobering questions about our ability and willingness to address these crucial issues.

Forensic Gait Analysis Ivan Birch 2020-07-07 Gait analysis is the systematic study of human walking, using the eye and brain of experienced observers, augmented by instrumentation for measuring body movements, body mechanics, and the activity of the muscles. Since Aristotle's work on gait analysis more than 2000 years ago, it has become an established clinical science used extensively in the healthcare and rehabilitation fields for diagnosis and treatment. Forensic Gait Analysis details the more recent, and rapidly developing, use of gait analysis in the forensic sciences. The book considers the use of observational gait analysis, based on video recordings, to assist in the process of identification or exclusion. With the increase in use of CCTV and surveillance systems over the last 20 to 30 years, there has been a steady and rapid increase in the use of gait as evidence. Currently, gait analysis is widely used in the UK in criminal investigations, with increasing awareness of its potential use in the US, Europe, and globally. The book details the history of the science, current practices, and of the emergent application to establish best-practice standards that conform to those of other forensic science disciplines. Engagement with the Forensic Science Regulator, and the Chartered Society of Forensic Sciences in the UK, and the International Association for Identification has helped to ensure and enhance the quality assurance of forensic gait analysis. However, there remains a fundamental lack of standardized training and methodology for use in evidentiary and investigative casework. This book fills that void, serving as one of the first to describe the current state of practice, capabilities and limitations, and to outline methods, standards of practice and expectations of the gait analyst as a forensic practitioner. Forensic Gait Analysis reflects current research and forensic practice and will serve as a state-of-the-art guide to the use of gait analysis in the forensic context—for both education and training purposes. It will be a welcome addition to the libraries of professionals in the areas of podiatry, gait analysis, forensic video analysis, law enforcement, and legal practice.