The Emerging Technology Collection At Carleton University

"Applying Library Values to Emerging Technology: Decision-Making in the Age of Open Access, Maker Spaces, and the Ever-Changing Library offers a wide range of perspectives on how to interpret and apply library values in the context of emerging technologies. Authors include academic librarians, public librarians, and professors, and contributors from the Library Freedom Project, the Institute of Museum and Library Services (IMLS), the Free Ebook Foundation, Creative Commons, the Electronic Frontier Foundation, the Tor Project, the Center for Information Policy Research, and the Institute for the Study of Knowledge Management in Education. Divided into two sections--Contemplating Library Values and using the ALA's Core Values of Librarianship as the primary reference point, chapters emphasize the underlying frameworks that guide librarian practice and capture practical, real-world applications that can ideally serve as a starting point for other librarians encountering similar issues, even if the specific technology or set of values may differ"--website description.

The recent digital and mobile revolutions are a minor blip compared to the next wave of technological change, as everything from robot swarms to skin-top embeddable computers and bio printable organs start appearing in coming years. In this collection of inspiring essays, designers, engineers, and researchers discuss their approaches to experience design for groundbreaking technologies. Design not only provides the framework for how technology works and how it's used, but also places it in a broader context that includes the total ecosystem with which it interacts and the possibility of unintended consequences. If you're a UX designer or engineer open to complexity and dissonant ideas, this book is a revelation. Contributors include: Stephen Anderson, PoetPainter, LLC Lisa Caldwell, Brazen UX Martin Charlier, Independent Design Consultant Jeff Faneuff, Carbonite Andy Goodman, Fjord US Camille Goudeseune, Beckman Institute, University of Illinois at Urbana-Champaign Bill Hartman, Essential Design Steven Keating, MIT Media Lab, Mediated Matter Group Brook Kennedy, Virginia Tech Dirk Knemeyer, Involution Studios Barry Kudrowitz, University of Minnesota Gershom Kutliroff, Omek Studio at Intel Michal Levin, Google Matt Nish-Lapidus, Normative Erin Rae Hoffer, Autodesk Marco Righetto, SumAll Juhan Sonin, Involution Studios Scott Stropkay, Essential Design Scott Sullivan, Adaptive Path Hunter Whitney, Hunter Whitney and Associates, Inc. Yaron Yanai, Omek Studio at Intel

The Emerging Technology Reader collects the best student writing about emerging technologies in relation to current and future use cases. From virtual reality to artificial intelligence, from STEM education to hockey goalie reaction times, the essays in this collection capture the transformational and critical range of these new modes of knowledge and practice.

The ways in which humans communicate with one another is constantly evolving. Technology plays a large role in this evolution via new methods and avenues of social and business interaction. Optimizing Human-Computer Interaction With Emerging Technologies is a primary reference source featuring the latest scholarly perspectives on technological breakthroughs in user operation and the processes of communication in the digital era. Including a number of topics such as health information technology, multimedia, and social media, this publication is ideally designed for professionals, technology developers, and researchers seeking current research on technology's role in communication.

"Best Practices for Teaching with Emerging Technologies is a practical, easy-to-use guide that provides both 2- and 4-year college educators seeking to refresh or transform their instruction"--

The book presents recent trends and solutions to help healthcare sectors and medical staff protect themselves and others and limit the spread of the COVID-19. The book also presents the problems and challenges researchers and academics face in tackling this monumental task. Topics include: Unmanned Aerial Vehicle (UAV) or drones that can be used to detect infected people in different areas: robots used in fighting the COVID-19 by protecting workers and staff dealing with infected people: blockchain technology that secures sensitive transactions in strict confidentiality. With contributions from experts from around the world, this book aims to help those creating and honing technology to help with this global threat.

This book addresses challenges that new technologies and the big data revolution pose to existing regulatory and legal frameworks. The volume discusses issues such as blockchain and its implications for property transactions and taxes, three (or four) dimensional title registration, land use and urban planning in the age of big data, and the future of property rights in light of these changes. The book brings together an interdisciplinary collection of chapters that revolve around the potential influence of disruptive technologies on existing legal norms and the future development of real estate markets. The book is divided into five parts. Part I presents a survey of the current available research on blockchain and real estate. Part II provides a background on property law for the volume, grounding it in fundamental theory. Part III discusses the changing landscapes of property rights while Part IV debates the potential effects of blockchain on land registration. Finally the book concludes with Part V, which is devoted to new technological applications relevant to real estate. Providing an interdisciplinary perspective on emerging technologies that have the potential to disrupt the real estate industry and the regulation of it, this book will appeal to a broad audience, consisting of scholars, policy-makers, practitioners, and students, interested in real estate, law, economics, blockchain, and technology policy.

Advances in web technology and the proliferation of sensors and mobile devices connected to the internet have resulted in the generation of immense data sets available on the web that need to be represented, saved, and exchanged. Massive data can be managed effectively and efficiently to support various problem-solving and decision-making techniques. Emerging Technologies and Applications in Data Processing and Management is a critical scholarly publication that examines the importance of data management strategies that coincide with advancements in web technologies. Highlighting topics such as geospatial coverages, data analysis, and keyword query, this book is ideal for professionals, researchers, academicians, data analysts, web developers, and web engineers.

Advancing technologies are rapidly modifying the current state of business and society causing an expansion of possible career opportunities. In order to stay competitive, institutions of education must provide an emphasis on the wide-range of skills and experiences needed to contribute to a 21st century workforce. As new technologies emerge and even disrupt, there will be a demand for new forms of education and deeper learning. Disruptive and Emerging Technology Trends Across Education and the Workplace is a collection of innovative research on the latest instructive methods being utilized in classrooms and organizations as well as the benefits and challenges of adopting these technologies. While highlighting topics including mobile learning, augmented reality, and cryptocurrencies, this book is ideally designed for developers, professionals, educators, managers, researchers, scientists, stakeholders, strategists, practitioners, and students seeking current research on new forms of educational techniques in relation to the continued application of new technologies in the workplace.

Emerging Library Technologies, is written for librarians/information professionals, teachers, administrators, researchers, undergraduate/graduate students, and others who are interested in learning about some of the most popular emerging technologies in the media today such as artificial intelligence, robotics, drones, driverless vehicles, big data, virtual/augmented reality, 3D printing, and wearable technologies. This valuable resourse shows how they can be used in libraries and resource centers, and how to get stakeholder buy in for implementing these technologies. Covers innovative insights on how these emerging technologies can be used in all types libraries and resource centers. Discusses how to get key stakeholders on board before implementing emerging technologies including a checklist to complete before presenting your technology proposal to senior management. Brings unique perspective for assisting people who will be displaced by these emerging technologies. Includes resources at the end of every chapter on keeping abreast and building expertise on the emerging technology topic. Contains tips on how professionals can forge strategic relationships to collaborate on emerging technology projects such as preparing students for STEM and STEAM careers. Poses engaging questions for further discussion after each chapter. Includes comprehensive glossary at the end of each chapter.

The wealth of information accessible on the Internet has grown exponentially since its advent. This mass of content must be systemically sifted to glean pertinent data, and the utilization of the collective intelligence of other users, or social information retrieval, is an innovative, emerging technique. Social Information Retrieval Systems: Emerging Technologies & Applications for Searching the Web Effectively provides relevant content in the areas of information retrieval systems, services, and research; covering topics such as social tagging, collaborative querying, social network analysis, subjective relevance judgments, and collaborative filtering. Answering the increasing demand for authoritative resources on Internet technologies, this Premier Reference Source will make an indispensable addition to any library collection.

Brachytherapy is continuously advancing. Years of accumulated experience have led to clinical evidence of its benefit in numerous clinical sites such as gynecological, prostate, breast, rectum, ocular, and many other cancers. Brachytherapy continues to expand in its scope of practice and complexity, driven by strong academic and commercial research, by advances in competing modalities, and due to the diversity in the political and economic landscape. It is a true challenge for practicing professionals and students to readily grasp the overarching trends of the field, especially of those technologies and innovative practices that are not yet established but are certainly on the rise. Addressing this challenge, Emerging Technologies in Brachytherapy presents a comprehensive collection of chapters on the latest trending/emerging technologies and expert opinions. It is divided into four broad sections: Section I: Physics of Brachytherapy Section II: Imaging for Brachytherapy Guidance Section III: Brachytherapy Suites Section IV: Is Brachytherapy a Competitive Modality? Section V: Vision 20/20: Industry Perspective Each section has a carefully selected collection of chapters, which covers the spectrum of topics in comprehensive detail. By drawing on recognized experts and key opinion leaders from academia and commercial sectors worldwide (100+ contributors), Emerging Technologies in Brachytherapy provides readers with a wealth of relevant information needed to comprehend the rapidly advancing technologies and trends of today and the prospects for the future.

Driven by such tools as big data, cognitive computing, new business models, and the internet of things, the overall demand for innovation is becoming more critical for competitiveness and emerging technologies. These technologies have become real alternatives for the market and offer new perspectives for modern project management applications. The Handbook of Research on Emerging Technologies for Effective Project Management is an essential research publication that proposes innovations for firms and markets through the exploration of project management principles and methods and the effective integration of knowledge and innovation. It encompasses academic and scientific propositions, reviews for conceptual bases, applications of theories in new market solutions, and cases of successful insertion of disruptive technologies and business models in new competitive market offers. Featuring a range of topics such as innovation management, sustainability, and marketing, this book is ideal for project managers, IT specialists, software developers, executives, practitioners, managers, marketers, researchers, and industry professionals.

Inevitable/Human - Volume 1 is a collection of essays based on emerging technologies and concepts we found intriguing from the end of 2017 to late 2018. Each essay provides readers with an in-depth analysis of a technology trend and presents a future application of the technology while keeping the information easily accessible to everyone. The essays vary in length and are presented as they appear on the Inevitable/Human website. Although we've curated the order for flow, it is important to note that we didn't design this to be read sequentially and readers can browse the essays in any order they wish. Inevitable/Human is a futuristic newsletter and online support network for Futurists, Technologists, and Business Professionals who want to anticipate the future and foresee transformative changes. We publish exclusive content on emerging technology and other Future(s) Studies concepts to spark conversation among our community members. Our community spans five continents, encompasses a plethora of backgrounds, and brings together vastly different perspectives of technological change. However, one thing remains consistent across each member - the desire to enhance their strategic foresight and better understand the future that's unfolding before them.

"This book presents case studies, literature reviews, ethnographies, and frameworks supporting the emerging technologies of RFID implants while also highlighting the current and predicted social implications of human-centric technologies"--Provided by publisher.

This book is written to promote academic strategic management and envision future innovations for academic library resources, services and instructions in the digital age. It provides academic executives, consultants, instructors, IT specialists, librarians, LIS students, managers, trainers and other professionals with the latest information for developing trends of emerging technologies applied to student-centred and service-oriented academic learning environments. This book explores various fields where key emerging technologies may have great implications on academic library information technologies, academic library management, academic library information services, and academic library internal operations. Reflects most recent emerging technologies which might impact on library administrations, resources, services and instructions Draws a clear roadmap how and where to monitor emerging technologies which began to emerge under academic library environments Provides practical and realistic suggestions and solutions how to utilize emerging technologies in academic learning environments

Emerging Technologies for Librarians: A Practical Approach to Innovation focuses on the practical applications of emerging technologies in libraries, defining the technologies in the context of their use in real situations. Each chapter includes an overview of the use of emerging technologies in a particular work area that is followed by a list of relevant applications. Chapters cover work areas such as advertising, distance learning, metadata, and digital libraries, and also focus on applications, including mobile computing and web conferencing, followed by a conclusion. This book serves as a guide for those interested in learning about, and implementing, the available technologies that enhance library services, and also lists and discusses the types of emerging technologies that are available for a specific area of work. Discusses and reviews practical applications of emerging technologies for librarians Explores what emerging technologies are available in particular areas of library services Describes and evaluates applications Connects library work to innovations

Advances in technology and media have fundamentally changed the way people perceive research, how research studies are conducted, and the ways data are analyzed/how the findings are presented. Emerging internet-enabled technological tools have enhanced and transformed research in education and the way educators must adapt to conduct future studies. Advancing Educational Research With Emerging Technology provides innovative insights into cutting-edge and long-standing digital tools in educational research and addresses theoretical, methodological, and ethical dimensions in doing research in the digital world. The content within this publication examines such topics as computational linguistics, individualized learning, and mobile technologies. The design of this publication is suited for students, professors, higher education faculty, deans, academicians, researchers, and practitioners looking to expand their research through the use of a broad range of digital tools and resources.

How will law, regulation and ethics govern a future of fast-changing technologies? Bringing together cutting-edge authors from academia, legal practice and the technology industry, Future Law explores and leverages the power of human imagination in understanding, critiquing and improving the legal responses to technological change. It focuses on the practical difficulties of applying law, policy and ethical structures to emergent technologies both now and in the future. It covers crucial current issues such as big data ethics, ubiquitous surveillance and the Internet of Things, and disruptive technologies such as autonomous vehicles, DIY genetics and robot agents. By using examples from popular culture such as books, films, TV and Instagram - including 'Black Mirror', 'Disney Princesses', 'Star Wars', 'Doctor Who' and 'Rick and Morty' - it brings hypothetical examples to life. And it asks where law might go next in regulating new-phase technology such as artificial intelligence, 'smart homes' and automated emotion recognition.

The field of forensic DNA analysis has grown immensely in the past two decades and genotyping of biological samples is now routinely performed in human identification (HID) laboratories. Application areas include paternity testing, forensic casework, family lineage studies, identification of human remains, and DNA databasing. Forensic DNA Analysis:

The unique characteristics of emerging technologies _ their diverse applications, the myriad concerns raised by new technologies, the need for public engagement, and the issue of effective coordination between governance players _ create the need for n

The emergent phenomena of virtual reality, augmented reality, and mixed reality is having an impact on ways people communicate with technology and with each other. Schools and higher education institutions are embracing these emerging technologies and challenge, however, is to identify well-defined problems where these innovative technologies can support successful solutions and subsequently determine the efficacy of effective virtual learning environments. Emerging Technologies in Virtual Learning Environments is a pivotal publication that provides a deeper look into 3D virtual environments and how they can be developed and applied for the benefit of student learning and teacher training. This book features a wide range of topics in the areas of science, technology, engineering, science and humanities research. Therefore, it is ideal for curriculum developers, instructional designers, teachers, school administrators, higher education faculty, professionals, researchers, and students studying across all academic disciplines.

The more integrated technology becomes in our everyday lives and businesses, the more vital it grows that its applications are utilized in an ethical and appropriate way. Ethical Governance of Emerging Technologies Development combines multiple perspectives, management approaches when implementing new technologies into an environment. Understanding the ethical implications associated with utilizing new advancements in technology is useful for professionals, researchers, and graduate students interested in 3D printing poses many challenges to the traditional law of intellectual property (IP). This book develops a technical method to help overcome some of these legal challenges and difficulties. This is a collection of materials from empirical interviews, workshops in one of the world's leading research projects into the legal impact of 3D printing. The project was designed to establish what legal challenges 3D printing companies thought they faced, and having done that, to establish a technical framework for a solution. "This book provides a good grounding of the main concepts and terminology for Augmented Reality (AR), with an emphasis on practical AR techniques (from tracking-algorithms to design principles for AR interfaces). The targeted audience is computer-literate understanding of this exciting and emerging technology"--Provided by publisher.

The convergence of blockchain and Internet of things (IoT) powered by data and artificial intelligence (AI) is on the agenda of several big companies and some of them have already started using its implementations, initiatives, and solutions in various projects. The convergence of these three technologies: the blockchain of intelligent things. This book is targeted to help a broad audience, including anyone interested in and responsible for vision, projects, and implementations of blockchain, IoT, and AI in medium-sized companies include business and technology managers, IT professionals, and last but not least, business or technology students, looking to broadening their knowledge and expertise. This book is number two in a series of four books. The first chapters of the book take via an overview of the most important blockchain of things projects such as IOTA, and the industries, which are heavily being disrupted, into the blockchain of intelligent things, which essentially adds the business value of data science and AI. Further topics as required skills, jobs and future, industrial IoT (IIoT) platforms, and opportunities, challenges, and trends of the blockchain of intelligent things. Readers looking for a methodology to engage in blockchain, IoT, and/or AI projects, can find a comprehensive description. Technologies: 2020 and Beyond.

Image and Video Processing is an active area of research due to its potential applications for solving real-world problems. Integrating computational intelligence to analyze and interpret information from image and video technologies is an essential step to processing. Emerging Technologies in Intelligent Applications for Image and Video Processing presents the most current research relating to multimedia technologies including video and image restoration and enhancement as well as algorithms used for image and video processes, and security concerns. Featuring insight from researchers from around the world, this publication is designed for use by engineers, IT specialists, researchers, and graduate level students.

Drive powerful profits from new social marketing tools and techniques — including mobile media, Tumblr, Foursquare, and "SMO"! Five great mini-guides show you how to drive maximum profits from today's most exciting emerging social media technologies. First, Jamie Turner and Reshma Shah's How to Make Money with Mobile Media, Jamie Turner explains why mobile media is right for your business — and offers quick, easy, low-cost ways to get started right now. In How to Make Money with Mobile Marketing 2D Codes, Turner presents 25 new ways 2D codes can supercharge your business. Scott Bishop's How to Make Money Marketing Your Business with Tumblr reveals how to use Tumblr to extend your reach, deepen customer trust, and jump into social marketing now, with minimal investment. In How to Make Money Marketing Your Business with Foursquare, Robert Scott Corbett shows how to get immediate, measurable bottom-line results with foursquare location-based social marketing — all in less than an hour's work per week. Finally, Robert Scott Corbett's How to Make Money with Social Media Optimization (SMO) walks you through every stage of SMO — helping you use social media tools to engagement to supercharge your brand, influence conversations, build market share, and make more money! From world-renowned leaders in social media marketing, including Robert Scott Corbett, Jamie Turner and Scott Bishop

"This book offers historical perspectives on mobile computing, as well as new frameworks and methodologies for mobile networks, intelligent mobile applications, and mobile computing applications"--Provided by publisher.

Big Data is now highly regarded and accepted as a useful tool to help organizations manage their data and information effectively and efficiently. This new volume, The Emerging Technology of Big Data: Its Impact as a Tool for ICT Development, looks at the new technology that has emerged to meet the growing need and demand and studies the impact of Big Data in several areas of today's society, including social media, business process re-engineering, science, e-learning, higher education, business intelligence, and green computing. In today's modern society, information system (IS) through Big Data contributes to the success of organizations because it provides a solid foundation for increasing both efficiency and productivity. Many business organizations and educational institutions realize that compliance with Big Data will affect their prospects for success. Everyday, the amount of data collected from digital tools grows tremendously. As the amount of data increases, the use of IS becomes more and more essential. The book looks at how large datasets and analytics have slowly crept into the world of education and discusses methods of teaching and learning and the collection of student-learning data. The final chapter of the book considers the environmental impacts of ICT and emphasizes green ICT awareness as a corporate strategy through information systems. The global ICT industry accounts for approximately 2 percent of global carbon dioxide (CO_2) emissions, and the manufacture, shipping, and disposal of ICT equipment also contributes environmentally. This chapter addresses these issues. The information provided here will be valuable information for education professionals, businesses, faculty, scientists and researchers, and others.

Over the years, new IT approaches have manifested, including digital transformation, cloud computing, and the internet of things (IoT). They have had a profound impact on the population, including libraries. Many organizations can save on their IT budget by adopting these new approaches because they provide technology in easier ways, often at lower costs and to the benefit of users. Emerging Trends and Impacts of the Internet of Things in Libraries is a critical research publication that explores advancing technologies, specifically the internet of things, and their applications within library settings. Moreover, the book will provide insights and explore case studies on smart libraries. Featuring a wide range of topics such as smart technology, automation, and robotics, this book is ideal for librarians, professionals, academicians, computer scientists, researchers, and students working in the fields of library science, information and communication sciences, and information technology.