

Virtual Reality Filmmaking: Techniques Best Practices For VR Filmmakers

This book features the latest research in the area of immersive technologies, presented at the 5th International Augmented and Virtual Reality Conference, held in Munich, Germany in 2019. Bridging the gap between academia and industry, it presents the state of the art in augmented reality (AR) and virtual reality (VR) technologies and their applications in various industries such as marketing, education, healthcare, tourism, events, fashion, entertainment, retail and the gaming industry. The volume is a collection of research papers by prominent AR and VR scholars from around the globe. Covering the most significant topics in the field of augmented and virtual reality and providing the latest findings, it is of interest to academics and practitioners alike.

A Dictionary of Film Studies covers all aspects of its discipline as it is currently taught at undergraduate level. Offering exhaustive and authoritative coverage, this A-Z is written by experts in the field, and covers terms, concepts, debates, and movements in film theory and criticism; national, international, and transnational cinemas; film history, movements, and genres; film industry organizations and practices; and key technical terms and concepts. Since its first publication in 2012, the dictionary has been updated to incorporate over 40 new entries, including computer games and film, disability, ecocinema, identity, portmanteau film, Practice as Research, and film in Vietnam. Moreover, numerous revisions have been made to existing entries to account for developments in the discipline, and changes to film institutions more generally.

Indices of films and filmmakers mentioned in the text are included for easy access to relevant entries. The dictionary also has 13 feature articles on popular topics and terms, revised and informative bibliographies for most entries, and more than 100 web links to supplement the text.

With reference to traditional film theory and frameworks drawn from fields such as screenwriting studies and anthropology, this book explores the challenges and opportunities for both practitioners and viewers offered by the 360-degree storytelling form. It focuses on cinematic virtual reality (CVR), a format that involves immersive, high quality, live action or computer-generated imagery (CGI) that can be viewed through head mounted display (HMD) goggles or via online platforms such as YouTube. This format has surged in popularity in recent years due to the release of affordable high quality omnidirectional (360-degree) cameras and consumer grade HMDs. The book interrogates four key concepts for this emerging medium: immersion, presence, embodiment and proximity through an analysis of innovative case studies and with reference to practitioner interviews. In doing so, it highlights the specificity of the format and provides a critical account of practitioner approaches to the concept development, writing and realisation of short narrative CVR works. The book concludes with an account of the author ' s practice-led research into the form, providing a valuable example of creative practice in the field of immersive media.

The world is witnessing a media revolution similar to the birth of the film industry from the early 20th Century. New forms of media are expanding the human experience from passive viewership to active participants, surrounding and enveloping us in ways film or television never could. New immersive media forms include virtual reality (VR), augmented reality (AR), mixed reality (XR), fulldome, CAVEs, holographic characters, projection mapping, and mixed experimental combinations of old and new, live, and generated media. With the continued expansion beyond the traditional frame, practitioners are crafting these new media to see how they can influence and shape the world. The Handbook of Research on the Global Impacts and Roles of Immersive Media is a collection of innovative research that provides insights on the latest in existing and emerging immersive technologies through descriptions of case studies, new business models, philosophical viewpoints, and scientific findings. While highlighting topics including augmented reality, interactive media, and spatial computing, this book is ideally designed for media technologists, storytellers, artists, journalists, designers, programmers, developers, manufacturers, entertainment executives, content creators, industry professionals, academicians, researchers, and media students.

Virtual Reality for Beginners!

Virtual Reality Cinema

New Realities in Audio

Handbook of Research on the Global Impacts and Roles of Immersive Media

The Filmmaker's Guide to Visual Effects

Interface, Application, and Design

Filmmaking on the Digital Backlot

Virtual Reality for Beginners! How to Understand, Use & Create with VR Are You Ready To Learn All About VR? If So You've Come To The Right Place... Here's A Preview Of What This Virtual Reality Book Contains... An Introduction To Virtual Reality VR Through Time - The History And Growth Of Virtual Reality Getting Started With VR - What You'll Need To Get Going The Science of VR Trends In The VR Industry Google Cardboard Explored Sony PlayStation VR Explored HTC Vive Explored Oculus Rift Explored Samsung Gear VR Explored Bonus: Google Daydream View Explored VR And Beyond! 2016+ Verdict The Next Big Thing And Much, Much More! Download Your Copy Now And Get Started Now!

Despite widespread interest in virtual reality, research and development efforts in synthetic environments (SE)â€"the field encompassing virtual environments, teleoperation, and hybridsâ€"have remained fragmented. Virtual Reality is the first integrated treatment of the topic, presenting current knowledge along with thought-provoking vignettes about a future where SE is commonplace. This volume discusses all aspects of creating a system that will allow human operators to see, hear, smell, taste, move about, give commands, respond to conditions, and manipulate objects effectively in a real or virtual environment. The committee of computer scientists, engineers, and psychologists on the leading edge of SE development explores the potential applications of SE in the areas of manufacturing, medicine, education, training, scientific visualization, and teleoperation in hazardous environments. The committee also offers recommendations for development of improved SE technology, needed studies of human behavior and evaluation of SE systems, and government policy and infrastructure.

Cinematic Virtual Reality brings a combination of documentary, narrative and game design principles to the medical profession and, in the healthcare arena, collaboration is a key component for creating intellectually- and emotionally- rich immersive experiences. The Power of Virtual Reality Cinema for Healthcare Training gathers more than a dozen experts from both the production and healthcare fields to break down best practices for creating successful cine-VR projects. Designed for multi-disciplinary teams interested in integrating cine-VR production into their healthcare training and educational programs, this book has been written for two audiences: the healthcare professional interested in what production experts consider when approaching a project, and the media expert curious about how this new technology can be used in the medical field. Highlights include: Cutting edge medical education techniques developed by Ohio University's GRID Lab, including: PREality (creating a forced sense of deja-vu to increase acclimation time), a unique approach to eye-tracking to enhance team performance, and the low-CRIS technique (a low-cost rapid implementation strategy to capture patient care for rapid graduate student training). Insightful production techniques that will enhance your cine-VR projects including advanced plating methods to hide lighting set-ups, immersive audio considerations, and new ways to consider 360 storytelling including the Lovrick montage and the Christmas Carol continuum for story development. Detailed explanations of the production considerations and results of specific cine-VR productions (from funding approaches to distribution) including access to more than five hours of cine-VR examples of the actual productions available for download. Details on a wide variety of medical cine-VR projects, including 100 images that illustrate best practices for topics such as recording in active medical facilities, building successful multi-disciplinary teams, working within HIPAA regulations, conceptualizing cine-VR libraries for graduate education, and implementing innovative distribution models.

The Filmmaker's Guide to Visual Effects offers a practical, detailed guide to visual effects for non-VFX specialists working in film and television. In contemporary filmmaking and television production, visual effects are used extensively in a wide variety of genres and formats to contribute to visual storytelling, help deal with production limitations, and reduce budget costs. Yet for many directors, producers, editors, and cinematographers, visual effects remain an often misunderstood aspect of media production. In this book, award-winning VFX supervisor and instructor Eran Dinur introduces readers to visual effects from the filmmaker's perspective, providing a comprehensive guide to conceiving, designing, planning, shooting, and reviewing VFX, from pre-production through post-production. The book will help readers: Learn what it takes for editors, cinematographers, directors, producers, gaffers, and other filmmakers to work more effectively with the visual effects team during pre-production, on the set and in post, use visual effects as a narrative aid, reduce production costs, and solve problems on location; Achieve a deeper understanding of 3D, 2D, and 2.5D workflows; the various VFX crafts from matchmove to compositing; essential concepts like photorealism, parallax, roto, and extraction; become familiar with the most common types of VFX, their role in filmmaking, and learn how to plan effectively for the cost and complexity of VFX shots; See visual effects concepts brought to life in practical, highly illustrated examples drawn from the real-world experiences of industry professionals, and discover how to better integrate visual effects into your own projects.

Understanding Virtual Reality

Mixed Reality

Film Music: A Very Short Introduction

Unreal Engine 4 Virtual Reality Projects

Build immersive, real-world VR applications using UE4, C++, and Unreal Blueprints

How Today's Popular Culture Is Actually Making Us Smarter

A Critical Study of 21st Century Approaches and Practices

Cinematic Virtual Reality brings a combination of documentary, narrative and game design principles to the medical profession and, in the healthcare arena, collaboration is a key component for creating intellectually- and emotionally- rich immersive experiences. "The Power of Virtual Reality Cinema for Healthcare Training" gathers more than a dozen experts from both the production and healthcare fields to break down best practices for creating successful cine-VR projects. Designed for multi-disciplinary teams interested in integrating cine-VR production into their healthcare training and educational programs, this book has been written for two audiences: the healthcare professional interested in what production experts consider when approaching a project, and the media expert curious about how this new technology can be used in the medical field. Highlights include: Cutting edge medical education techniques developed by Ohio University's GRID Lab, including: PREality (creating a forced sense of deja-vu to increase acclimation time), a unique approach to eye-tracking to enhance team performance, and the low-CRIS technique (a low-cost rapid implementation strategy to capture patient care for rapid graduate student training). Insightful production techniques that will enhance your cine-VR projects including advanced plating methods to hide lighting set-ups, immersive audio considerations, and new ways to consider 360 storytelling including the Lovrick montage and the Christmas Carol continuum for story development. Detailed explanations of the production considerations and results of specific cine-VR productions (from funding approaches to distribution) including access to more than five hours of cine-VR examples of the actual productions available for download. Details on a wide variety of medical cine-VR projects, including 100 images that illustrate best practices for topics such as recording in active medical facilities, building successful multi-disciplinary teams, working within HIPAA regulations, conceptualizing cine-VR libraries for graduate education, and implementing innovative distribution models.

Virtual reality techniques are increasingly becoming indispensable in many areas. This book looks at how to generate advanced virtual reality worlds. It covers principles, techniques, devices and mathematical foundations, beginning with basic definitions, and then moving on to the latest results from current research and exploring the social implications of these. Very practical in its approach, the book is fully illustrated in colour and contains numerous examples, exercises and case studies. This textbook will allow students and practitioners alike to gain a practical understanding of virtual reality concepts, devices and possible applications.

Award-winning cine-maVRicks Eric R. Williams, Carrie Love and Matt Love introduce virtual reality cinema (also known as 360° video or cine-VR) in this comprehensive guide filled with insider tips and tested techniques for writing, directing and producing effectively in the new medium. Join these veteran cine-VR storytellers as they break down fundamental concepts from traditional media to demonstrate how cine-VR can connect with audiences in new ways. Examples from their professional work are provided to illustrate basic, intermediate and advanced approaches to crafting modern story in this unique narrative space where there's no screen to contain an image and no specific stage upon which to perform. Virtual Reality Cinema will prepare you to approach your own cine-VR projects via: Tips and techniques for writing, directing and producing bleeding-edge narrative cine-VR projects; More than a hundred photos and illustrations to explain complex concepts; Access to more than two hours of on-line cine-VR examples that you can download to watch on your own HMD; New techniques developed at Ohio University's Game Research and Immersive Design (GRID) Lab, including how to work with actors to embrace Gravity and avoid the Persona Gap, how to develop stories with the Story Engagement Matrix and how to balance directorial control and audience agency in this new medium. This book is an absolute must read for any student of filmmaking, media production, transmedia storytelling and game design, as well as anyone already working in these industries that wants to understand the new challenges and opportunities of virtual reality cinema.

*With the shift from film to digital, today's filmmakers are empowered by an arsenal of powerful, creative options with which to tell their story. Modern Post examines and demystifies these tools and workflows and demonstrates how these decisions can empower your storytelling. Using non-technical language, authors Scott Arundale and Tashi Trieu guide you through everything you should consider before you start shooting. They begin with a look to past methodologies starting with traditional film techniques and how they impact current trends. Next they offer a look at the latest generation of digital camera and capture systems. The authors move on to cover: * Preproduction- what camera is best for telling your story and why, budgeting for post * Production- on-set data management, dailies, green screen, digital cinematography * Postproduction- RAW vs. compressed footage, editing, visual effects, color correction, sound and deliverables including DCP creation The book features cutting-edge discussion about the role of the digital imaging technician (DIT), how you can best use the Cloud, motion graphics, sound design, and much more. Case studies show you these solutions being applied in real-world situations, and the companion website features videos of techniques discussed in the book, as well as timely updates about technological changes in the landscape. www.focalpress.com/cw/arundale*

A Step-By-step Guide to Creating Video for Virtual Reality (VR

Communication Technology Update and Fundamentals

Interactive Storytelling

Interactivity, Game Creation, Design, Learning, and Innovation

A History of Three-Dimensional Cinema

Changing Realities in a Dynamic World

Techniques & Best Practices for VR Filmmakers

Storytelling for Virtual Reality serves as a bridge between students of new media and professionals working between the emerging world of VR technology and the art form of classical storytelling. Rather than examining purely the technical, the text focuses on the narrative and how stories can best be structured, created, and then told in virtual immersive spaces. Author John Bucher examines the timeless principles of storytelling and how they are being applied, transformed, and transcended in Virtual Reality. Interviews, conversations, and case studies with both pioneers and innovators in VR storytelling are featured, including industry leaders at LucasFilm, 20th Century Fox, Oculus, Insomniac Games, and Google. For more information about story, Virtual Reality, this book, and its author, please visit StorytellingforVR.com

*Don't waste valuable time and budget fixing your footage in post! Shoot the effects you want effectively and creatively the first time. This full-color step-by step guide to visual effects cinematography empowers you to plan out and execute visual effects shots on a budget, without falling into the common pitfall of using high-end computer graphics to "fix it in post.?" Learn how to effectively photograph foreground miniatures, matte paintings, green screen set ups, miniatures, crowd replication, explosions, and so much more to create elements that will composite together flawlessly. Filming the Fantastic focuses on the art and craft of visual effects using real case scenarios from a visual effects cameraman. These lessons from the front line will give you ideas and insight so you can translate your skills into any situation, no matter what camera or software package you are using and no matter if you are using film or digital technology. Learn how to film your fantastic visual effects with this book! * Hundreds of full-color set photographs show you exactly how it's done * Includes step-by-step information on green screen setup * Real-world examples and exercises throughout*

Learn to design and build Virtual Reality experiences, applications, and games in Unreal Engine 4 through a series of practical, hands-on projects that teach you to create controllable avatars, user interfaces, and more. Key Features Learn about effective VR design and develop virtual reality games and applications for every VR platform Build essential features for VR such as player locomotion and interaction, 3D user interfaces, and 360 media players Learn about multiplayer networking and how to extend the engine using plugins and asset packs Book Description Unreal Engine 4 (UE4) is a powerful tool for developing VR games and applications. With its visual scripting language, Blueprint, and built-in support for all major VR headsets, it's a perfect tool for designers, artists, and engineers to realize their visions in VR. This book will guide you step-by-step through a series of projects that teach essential concepts and techniques for VR development in UE4. You will begin by learning how to think about (and design for) VR and then proceed to set up a development environment. A series of practical projects follows, taking you through essential VR concepts. Through these exercises, you'll learn how to set up UE4 projects that run effectively in VR, how to build player locomotion schemes, and how to use hand controllers to interact with the world. You'll then move on to create user interfaces in 3D space, use the editor's VR mode to build environments directly in VR, and profile/optimize worlds you've built. Finally, you'll explore more advanced topics, such as displaying stereo media in VR, networking in Unreal, and using plugins to extend the engine. Throughout, this book focuses on creating a deeper understanding of why the relevant tools and techniques work as they do, so you can use the techniques and concepts learned here as a springboard for further learning and exploration in VR. What you will learn Understand design principles and concepts for building VR applications Set up your development environment with Unreal Blueprints and C++ Create a player character with several locomotion schemes Evaluate and solve performance problems in VR to maintain high frame rates Display mono and stereo videos in VR Extend Unreal Engine's capabilities using various plugins Who this book is for This book is for anyone interested in learning to develop Virtual Reality games and applications using UE4. Developers new to UE4 will benefit from hands-on projects that guide readers through clearly-explained steps, while both new and experienced developers will learn crucial principles and techniques for VR development in UE4.

Understanding Virtual Reality: Interface, Application, and Design, Second Edition, arrives at a time when the technologies behind virtual reality have advanced dramatically in their development and deployment, providing meaningful and productive virtual reality applications. The aim of this book is to help users take advantage of ways they can identify and prepare for the applications of VR in their field, whatever it may be. The included information counters both exaggerated claims for VR, citing dozens of real-world examples. By approaching VR as a communications medium, the authors have created a resource that will remain relevant even as the underlying technologies evolve. You get a history of VR, along with a good look at systems currently in use. However, the focus remains squarely on the application of VR and the many issues that arise in application design and implementation, including hardware requirements, system integration, interaction techniques and usability. Features substantive, illuminating coverage designed for technical or business readers and the classroom Examines VR's constituent technologies, drawn from visualization, representation, graphics, human-computer interaction and other fields Provides (via a companion website) additional case studies, tutorials, instructional materials and a link to an open-source VR programming system Includes updated perception material and new sections on game engines, optical tracking, VR visual interface software and a new glossary with pictures

How to Understand, Use & Create With Vr

Workflows and Techniques for Digital Filmmakers

Facilitating Real-Time Sketch-Based Storyboards for Stereoscopic and Virtual Reality Environments

The Art and Techniques of VFX for Directors, Producers, Editors and Cinematographers

How to Read a Film

A Collaborative Guide for Medical Experts and Media Professionals

Experience on Demand: What Virtual Reality Is, How It Works, and What It Can Do

This book constitutes the refereed proceedings of the 11th International Conference on Interactive Digital Storytelling, ICIDS 2018, held in Dublin, Ireland, in December 2018. The 20 revised full papers and 16 short papers presented together with 17 posters, 11 demos, and 4 workshops were carefully reviewed and selected from 56, respectively 29, submissions. The papers are organized in the following topical sections: the future of the discipline; theory and analysis; practices and games; virtual reality; theater and performance; generative and assistive tools and techniques; development and analysis of authoring tools; and impact in culture and society.

The idea of virtual realities has a long and complex historical trajectory, spanning from Plato's concept of the cave and the simulacrum, to artistic styles such as Trompe L'oeil, and more recently developments in 3D film, television and gaming. However, this book will pay particular attention to the time between the 1980s to the 1990s when virtual reality and cyberspace were represented, particularly in fiction, as a wondrous technology that enabled transcendence from the limitations of physical embodiment. The purpose of this critical historical analysis of representations of virtual reality is to examine how they might deny, repress or overlook embodied experience. Specifically, the author will contend that embodiment is a fundamental aspect of immersion in virtual reality, rather than something which is to be transcended. In this way, the book aims to challenge distorted ideas about transcendence and productively contribute to debates about embodiment and technology.

The golden age of virtual reality is here: take the first step into V.R. programming and development with Jeff W. MurrayBuilding Virtual Reality with Unity and SteamVR. Murray explores some of the topical issues surrounding virtual reality; including V.R. sickness, telepresence, performance issues and practical ways to diminish these detrimental effects to make a more comprehensive experience. Building Virtual Reality also grants readers a hands-on approach with the Unity game engine and programming. The example projects and sample C# code found in the text are compatible with all SteamVR supported virtual reality head mounted displays that are currently available. This text is the essential survival guide to VR and VR development for any reader. Author Bio: Jeff W. Murray has written two books: Game Development for iOS with Unity3D, C# Game Programming Cookbook for Unity3D, both published by CRC Press. In his game development career spanning over 14 years, he has worked with some of the world Murray Key features: Discusses some of the key issues facing virtual reality and provides helpful tips for making better V.R. experiences. Develop V.R. applications with practical examples geared to work with both the Oculus Rift and HTC Vive, as well as open source virtual reality (OSVR) headsets like the HDK. Find out how to build both standing and seated experiences. Tips on optimizing performance with the Unity Profilers. Explore examples specifically for HTC Vive Controllers and picking up and throwing physics objects, including haptic feedback. Discover how to build user interfaces for virtual reality, as well as discussing some best practices for V.R. based user interface design. Written by a games industry veteran who has been a V.R. developer since the first Oculus development kit.

A practical hands-on guidebook for producers, directors, cinematographers, sound recordists, and editors interested in creating 360-degree video. Coursing an easy-to-follow trail through the thicket of technobabble and jargon, The book provides nuts-and-bolts recommendations on everything from the selection of cameras, microphones and editing tools to aesthetic and creative decisions such as camera placement and blocking, as well as editing, incorporating titles, transitions, and other effects.

Stepping into Virtual Reality

Direct Your Movie from Script to Screen Using Proven Hollywood Techniques

Modern Post

From Illusion to Immersion

Virtual Reality Filmmaking

The Cinematic VR Field Guide

Building Virtual Reality with Unity and Steam VR

The new realities are here. Virtual and Augmented realities and 360 video technologies are rapidly entering our homes and office spaces. Good quality audio has always been important to the user experience, but in the new realities, it is more than important, it's essential. If the audio doesn't work, the immersion of the experience fails and the cracks in the new reality start to show. This practical guide helps you navigate the challenges and pitfalls of designing audio for these new realities. This technology is different from anything we've seen before and requires an entirely new approach; this book will introduce the broad concepts you need to know before delving into the practical detail you need.

This book constitutes the refereed post-conference proceedings of two conferences: The 7th EAI International Conference on ArtsIT, Interactivity and Game Creation (ArtsIT 2018), and the 3rd EAI International Conference on Design, Learning, and Innovation (DLI 2018). Both conferences were hosed in Braga, Portugal, and took place October 24-26, 2018. The 51 revised full papers presented were carefully selected from 106 submissions. ArtsIT , Interactivity and Game Creation is meant to be a place where people in arts, with a keen interest in modern IT technologies, meet with people in IT, having strong ties to art in their works. The event also reflects the advances seen in the open related topics Interactivity (Interaction Design, Virtual Reality, Augmented Reality, Robotics) and Game Creation (Gamification, Leisure Gaming, Gameplay). ArtsIT has been successfully co-located with DLI as the design, learning and innovation frame the world of IT, opening doors into an increasingly playful worlds. So the DLI conference is driven by the belief that tools, techniques and environments can spark and nature a passion for learning, transformation domains such as education, rehabilitation/therapy, work places and cultural institutions.

Filmmaking the definitive resource for filmmakers, blows the doors off the secretive film industry and shows you how to adapt the Hollywood system for your production. Full of thousands of tips, tricks, and techniques from Emmy-winning director Jason Tomaric, Filmmaking systematically takes you through every step of how to produce a successful movie - from developing a marketable idea through selling your completed movie. Whether you're on a budget of \$500 or \$50 million, Filmmaking reveals some of Hollywood's best-kept secrets. Make your movie and do it right. The companion site includes: Over 30 minutes of high-quality video tutorials featuring over a dozen working Hollywood professionals. Industry-standard forms and contracts you can use for your production Sample scripts, storyboards, schedules, call sheets, contracts, letters from the producer, camera logs, and press kits 45-minute video that takes you inside the movie that launched Jason's career. 3,000 extras, 48 locations, 650 visual effects-all made from his parent's basement for \$25,000.

From the New York Times bestselling author of How We Got To Now and Farsighted Forget everything you've ever read about the age of dumbed-down, instant-gratification culture. In this provocative, unfailingly intelligent, thoroughly researched, and surprisingly convincing big idea book, Steven Johnson draws from fields as diverse as neuroscience, economics, and media theory to argue that the pop culture we soak in every day—from Lord of the Rings to Grand Theft Auto to The Simpsons—has been growing more sophisticated with each passing year, and, far from rotting our brains, is actually posing new cognitive challenges that are actually making our minds measurably sharper. After reading Everything Bad is Good for You, you will never regard the glow of the video game or television screen the same way again. With a new afterword by the author.

The 360° Video Handbook

16th Edition

A Dictionary of Film Studies

Complete Guide to VR & 360 Degree photography

The Art, Technology, Language, History, and Theory of Film and Media

Storytelling for Virtual Reality

Augmented and Virtual Reality

A reference book on the art and techniques of virtual reality photography by one of the pioneers in the field, Scott Highton.The book includes sections on Photography Basics, Panoramic VR Imaging, Object VR Imaging, and Business Practices.Intended audience includes both professional and amateur photographers, as well as multimedia authors and designers.

Recently, we have seen a resurgence in stereoscopic movies, and an explosion of interest with stories for virtual reality (VR). Though these art forms share many similarities with traditional film, there are numerous differences. Some differences result in aspects that are more challenging to discuss, and are therefore often ignored, frequently resulting in bad decisions. This latest resurgence with stereoscopic cinema has resulted in a better understanding of the artistic challenges and opportunities provided by this form of storytelling. There has been a realization that creating stereoscopic movies does not mean simply adding depth, but rather involves a complex set of considerations to lead the audience through a pleasant viewing experience; one that engages them as consumers of the visual story, rather than using stereopsis as a gimmick that disconnects the viewer from the show. To facilitate these differences, the stereoscopic community encourages directors and producers to think of projects in stereo as early as possible, to make good design decisions. However, there are few early stage design tools to help support this design process. Likewise, with the consumerization of VR through devices such as Oculus Rift, Samsung GearVR, and Google Cardboard, directors have the ability to connect with audiences in new ways, and have started creating stories for virtual reality. However, directors are unsure how to direct a VR movie, or plan for these experiences. Due to factors such as the stereoscopic nature, 360° surrounding view, and uncertainty of how to perform transitions, directors have difficulty planning for this environment using traditional means. This work explores different approaches, and feedback to allow artists to sketch on tablets, leveraging existing drawing skills, yet allowing for quick creation of stereoscopic and virtual reality storyboards in real-time. The presented approaches allow artists to create stereoscopic and VR storyboards with minimal pre-planning, and almost no increase to the exerted effort by the artist. These techniques when applied to VR, allow artists to work in more immersive environments, and collaborate more easily. These techniques can help directors and producers plan films more effectively and easily with these new, unexplored stereoscopic and virtual sketched worlds.

“If you want to understand the most immersive new communications medium to come along since cinema... I’d suggest starting with Mr. Bailenson’s [book].” —Wall Street Journal Virtual reality is able to effectively blur the line between reality and illusion, granting us access to any experience imaginable. These experiences, ones that the brain is convinced are real, will soon be available everywhere. In Experience on Demand, Jeremy Bailenson draws upon two decades spent researching the psychological effects of VR to help readers understand its upsides and possible downsides. He offers expert guidelines for interacting with VR, and describes the profound ways this technology can be put to use to hone our performance, help us recover from trauma, improve our learning, and even enhance our empathic and imaginative capacities so that we treat others and ourselves better.

How augmented reality and virtual reality are taking their places in contemporary media culture alongside film and television. T This book positions augmented reality (AR) and virtual reality (VR) firmly in contemporary media culture. The authors view AR and VR not as the latest hyped technologies but as media—the latest in a series of what they term “reality media,” taking their places alongside film and television. Reality media inserts a layer of media between us and our perception of the world; AR and VR do not replace reality but refashion a reality for us. Each reality medium mediates and remediates; each offers a new representation that we implicitly compare to our experience of the world in itself but also through other media. The authors show that as forms of reality media emerge, they not only chart a future path for media culture, but also redefine media past. With AR and VR in mind, then, we can recognize their precursors in eighteenth-century panoramas and the Broadway lights of the 1930s. A digital version of Reality Media, available through the book’s website, invites readers to visit a series of virtual rooms featuring interactivity, 3-D models, videos, images, and texts that explore the themes of the book.

Virtual Reality

Filming the Fantastic with Virtual Technology

Scientific and Technological Challenges

Cinematic Virtual Reality

11th International Conference on Interactive Digital Storytelling, ICIDS 2018, Dublin, Ireland, December 5–8, 2018, Proceedings

The Power of Virtual Reality Cinema for Healthcare Training

Tips And Techniques For Filmmakers: Approach To 3D Filmmaking

Film music is as old as cinema itself. Years before synchronized sound became the norm, projected moving images were shown to musical accompaniment, whether performed by a lone piano player or a hundred-piece orchestra. Today film music has become its own industry, indispensable to the marketability of movies around the world. Film Music: A Very Short Introduction is a compact, lucid, and thoroughly engaging overview written by one of the leading authorities on the subject. After opening with a fascinating analysis of the music from a key sequence in Quentin Tarantino's Reservoir Dogs, Kathryn Kalinak introduces readers not only to important composers and musical styles but also to modern theoretical concepts about how and why film music works. Throughout the book she embraces a global perspective, examining film music in Asia and the Middle East as well as in Europe and the United States. Key collaborations between directors and composers--Alfred Hitchcock and Bernard Herrmann, Akira Kurosawa and Fumio Hayasaka, Federico Fellini and Nino Rota, to name only a few--come under scrutiny, as do the oft-neglected practices of the silent film era. She also explores differences between original film scores and compilation soundtracks that cull music from pre-existing sources. As Kalinak points out, film music can do many things, from establishing mood and setting to clarifying plot points and creating emotions that are only dimly realized in the images. This book illuminates the many ways it accomplishes those tasks and will have its readers thinking a bit more deeply and critically the next time they sit in a darkened movie theater and music suddenly swells as the action unfolds onscreen. About the Series: Combining authority with wit, accessibility, and style, Very Short Introductions offer an introduction to some of life's most interesting topics. Written by experts for the newcomer, they demonstrate the finest contemporary thinking about the central problems and issues in hundreds of key topics, from philosophy to Freud, quantum theory to Islam.

This book brings fantasy storytelling to a whole new level by providing an in-depth insight into the tools used for virtual reality, augmented reality, 360 cinema and motion capture in order to repurpose them to create a virtual studio for filmmaking. Gone are the long days and months of post before seeing your final product. Composites and CG characters can now be shot together as fast as a live-action show. Using off-the-shelf software and tools, authors Mark Sawicki and Juniko Moody document the set-up and production pipelines of the modern virtual/mocap studio. They reveal the procedures and secrets for making movies in virtual sets. The high-end technology that enabled the creation of films such as The Lord of the Rings, Avatar and The Jungle Book is now accessible for smaller, independent production companies. Do you want your actors to perform inside of an Unreal® Game Engine set and interact with the environment? Do you want to be able to put your live-action camera on a jib or dolly and move effortlessly through both a live-action and virtual space together? Do you want live performers interacting with giants, elves and other creatures manipulated by motion capture in real time? This book discusses all of these scenarios and more, showing readers how to create high-quality virtual content using alternative, cost-effective technology. Tutorials, case studies, and project breakdowns provide essential tips on how to avoid and overcome common pitfalls, making this book an indispensable guide for both beginners to create virtual backlog content and more advanced VFX users wanting to adopt best practices when planning and directing virtual productions with Reality™ software and performance capture equipment such as Qualysis.

Now thoroughly revised and updated, the book discusses recent breakthroughs in media technology, including such exciting advances as video discs and cassettes, two-way television, satellites, cable and much more.

For three decades, Communication Technology Update and Fundamentals has set the standard as the single best resource for students and professionals looking to brush up on how communication technologies have developed, grown, and converged, as well as what’s in store for the future. The secret to the longevity is simple—every two years, the book is completely rewritten to ensure that it contains the latest developments in mass media, computers, consumer electronics, networking, and telephony. Plus, the book includes the Fundamentals: the first five chapters explain the communication technology ecosystem, the history, structure, and regulations. The chapters are written by experts who provide snapshots of the state of each individual field. Together, these updates provide a broad overview of these industries, as well as the role communication technologies play in our everyday lives. In addition to substantial updates to each chapter, the 16th edition includes: First-ever chapters on Virtual/Augmented Reality and eSports. Updated user data in every chapter. Overview of industry structure, including recent and proposed mergers and acquisitions Suggestions on how to get a job working with the technologies discussed. The companion website, www.tfi.com/ctu, offers updated information on the technologies covered in this text, as well as links to other resources.

Merging Real and Virtual Worlds

Pygmalion's Spectacles

Creating Panoramic and Object Images

Augmented Reality and Virtual Reality

Filmmaking

7th EAI International Conference, ArtsIT 2018, and 3rd EAI International Conference, DLI 2018, ICTCC 2018, Braga, Portugal, October 24–26, 2018, Proceedings

Virtual Aesthetics in Architecture

Here is the story that presented virtual reality to the world. Dan Berk meets an Elfin professor who has invented a pair of goggles that allow the wearer to enter completely into the action of a story. Sometimes it can be hard to remember that it isn't real, or is it?

A History of Three-Dimensional Cinema chronicles 3-D cinema as a single, continuous and coherent medium, proceeding from 19th-century experiments in stereoscopic photography and lantern projection (1839–1892) to stereoscopic cinema’s “long novelty period” (1893–1952). It proceeds to examine the first Hollywood boom in anaglyphic stereo (1953–1955), when the mainstream industry produced 69 features in 3-D, mostly action films that could exploit the depth illusion, but also a handful of big-budget films—for example, Kiss Me Kate (George Sidney, 1953) and Dial M for Murder (Alfred Hitchcock, 1954)—until audiences tired of the process; the anaglyphic revival of 1970–1985, when 3-D was sustained as a novelty feature in sensational genres like soft-core pornography and horror; the age of IMAX 3-D (1986–2008); the current era of digital 3-D cinema, which began in 2009 when James Cameron’s Avatar became the highest-grossing feature of all time and the studios once again stampeded into 3-D production; and finally the future promise of Virtual Reality.

An overview of the art historical antecedents to virtual reality and the impact of virtual reality on contemporary conceptions of art. Although many people view virtual reality as a totally new phenomenon, it has its foundations in an unrecognized history of immersive images. Indeed, the search for illusionary visual space can be traced back to antiquity. In this book, Oliver Grau shows how virtual art fits into the art history of illusion and immersion. He describes the metamorphosis of the concepts of art and the image and relates those concepts to interactive art, interface design, agents, telepresence, and image evolution. Grau retells art history as media history, helping us to understand the phenomenon of virtual reality beyond the hype. Grau shows how each epoch used the technical means available to produce maximum illusion. He discusses frescoes such as those in the Villa dei Misteri in Pompeii and the gardens of the Villa Livia near Primaporta, Renaissance and Baroque illusion spaces, and panoramas, which were the most developed form of illusion achieved through traditional methods of painting and the mass image medium before film. Through a detailed analysis of perhaps the most important German panorama, Anton von Werner’s 1883 The Battle of Sedan, Grau shows how immersion produced emotional responses. He traces immersive cinema through Cinerama, Sensorama, Expanded Cinema, 3-D, Omnimax and IMAX, and the head mounted display with its military origins. He also examines those characteristics of virtual reality that distinguish it from earlier forms

