Autodesk 123d Design

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Zero to Maker - David Lang 2013-08-26
Are you possessed by the urge to invent, design, and make something that others enjoy, but don't know how to plug into the Maker movement? In this book, you'll follow author David Lang's headfirst dive into the Maker world and how he grew to be a successful entrepreneur. You'll discover how to navigate this new community, and find the best resources for learning the tools and skills you need to be a dynamic maker in your own right. Lang reveals how he became a pro maker after losing his job, and how the experience helped him start OpenROV—a DIY community and product line focused on open source undersea exploration. It all happened once he became an active member of the Maker culture. Ready to take the plunge into the next Industrial Revolution? This guide provides a clear and inspiring roadmap. Take an eye-opening journey from unskilled observer to engaged maker-entrepreneur Enter the Maker community to connect with experts and pick up new skills Use a template for building a maker-based entrepreneurial lifestyle Learn from the organizer of the first-ever Maker Startup Weekend Be prepared for exciting careers of the future

Beginning Design for 3D Printing - Joe Micallef 2015-10-13
Beginning Design for 3D Printing is the full color go-to-guide for creating just about anything on a 3D printer. This book will demystify the design process for 3D printing, providing the proper workflows for those new to 3D printing, eager artists, seasoned engineers, 3D printing entrepreneurs, and first-time owners of 3D printers to ensure original ideas can be 3D printed. Beginning Design for 3D Printing explores a variety of 3D printing projects. Focus is on the use of freely available 3D design applications with step-by-step techniques that will demonstrate how to create a wide variety of 3D printable objects and illustrate the differences between splines, polygons, and solids. Users will get a deep understanding of a wide range modeling applications. They'll learn the differences between organic modeling tools, hard edge modeling, and precision, CAD-based techniques used to make 3D printable designs, practical products, and personalized works of art. Whether you are a student on a budget or a company exploring R & D options for 3D printing, Beginning Design for 3D Printing will provide the right tools and techniques to ensure 3D printing success.

Integrating 3D Modeling, Photogrammetry and Design - Shaun Foster 2014-01-28
This book looks at the convergent nature of technology and its relationship to the field of photogrammetry and 3D design. This is a facet of a broader discussion of the nature of technology itself and the relationship of technology to art, as well as an examination of the educational process. In the field of technology-influenced design-based education it is natural to push for advanced technology, yet within a

larger institution the constraints of budget and adherence to tradition must be accepted. These opposing forces create a natural balance; in some cases constraints lead to greater creativity than freedom ever can – but in other cases the opposite is true. This work offers insights into ways to integrate new technologies into the field of design, and from a broader standpoint it also looks ahead, raising further questions and looking to the near future as to what additional technologies might cause further disruptions to 3D design as well as wonderful creative opportunities.

Envolve Your 3D Printing - XYZprinting Studio 2015-05-31

This manual shall provide readers with a glimpse at the secrets of 3D printing, using simple layman's terms and contents to teach the readers about most commonly used 3D printing techniques. Additionally, this manual can also be used as an operating manual of Nobel 3D printers. XYZprinting, Inc. developed the Nobel 3D printers. After releasing the da Vinci 3D printers, XYZprinting started working on a more advanced 3D printer solution to satisfy users who wants to create more intricate and detailed projects while keeping the price tag within acceptable ranges. Technological advancements were developed and improved upon continuously in testing facilities in order to keep the printers up-to-date with the latest developments. This book is mainly divided into several units, including 3D printing technology, the structure of the 3D printer, operation procedure of 3D printing (model building, slicing, and printing) as well as relevant information on the corresponding software, maintenance of the 3D printer and introduction of online resources. For information that is associated with online resources, we also offer links that can be used to open a page in the web browser at any time for you to peruse.

3D 프린팅을 위한 Autodesk 123D design - 2016

3D Modeling and Printing with Tinkercad - James Floyd Kelly 2014-05-29

The First Complete Guide to Tinkercad: 3D Modeling That’s Powerful, Friendly, & Free! Want to master 3D modeling and printing? Tinkercad is the perfect software for you: It’s friendly, web-based, and free. Even better, you don’t have to rely on Tinkercad’s technical documentation to use it. This easy, full-color guide is packed with photos and projects that bring 3D modeling to life! No 3D or CAD experience? No problem: Best-selling author James Floyd Kelly teaches you step-by-step through simple examples and hands-on activities. You’ll learn all the concepts and techniques you need...build your skills, comfort, and confidence...and create exciting projects that show off Tinkercad’s full power. Learning 3D with your kids? You’ll even find projects you can work on together! Quickly master the basic 3D concepts you need to understand Navigate Tinkercad’s Dashboard and tool set Create your first 3D model and control its properties Save time by incorporating publicly available elements Import hand sketches or SVG graphics into your models Use the Shape Generator to create custom shapes Add raised text and other embellishments Assemble multiple pieces into a more sophisticated model Make realistic prototypes Output molds for creating items from soft materials Transform models into STL files for printing Get great results from an online 3D printing service Move your 3D objects into the Minecraft virtual world Find answers to your most important Tinkercad questions Discover tools for tasks Tinkercad can’t handle Learn from others! Explore projects at Thingiverse and the Gallery

Make It Here: Inciting Creativity and Innovation in Your Library - Matthew Hamilton 2014-12-04

This is an ideal resource for joining the maker movement, no matter the size of your public library or resource level. • Explains why the maker movement and libraries are a perfect match • Includes makerspace ideas and programs for all ages, not just teens • Written by authors with personal experience creating maker programming in a short amount of time with a limited budget • Supplies ideas and anecdotes from makerspaces and innovators across the United States that will inspire staff at all levels

Getting Started with MakerBot - Bre Pettis 2013

Provides information on using the MakerBot printer to creat a wide variety of 3D objects.

3D Printing with Autodesk 123D, Tinkercad, and MakerBot - Lydia Cline 2014-11-27

Master the art of 3D printing with step-by-step tutorials and DIY projects Are you ready to join the new industrial revolution? 3D Printing with Autodesk 123D, Tinkercad, and MakerBot reveals how to turn your ideas into physical products that you can use or sell! You'll learn how to operate powerful, free software from Autodesk and bring your creations to life with the MakerBot--a leading consumer printer--or an online service bureau. Practical examples take you through the Design, Catch, Meshmixer, Tinkercad, Make, and CNC Utility apps, and the MakerBot Desktop. Fun projects, easy-to-follow instructions, and clear screenshots progress from installing the software to printing the design. Videos and digital files accompany this hands-on guide. Make your own creations with Design and Tinkercad Download editable, premade content Generate construction documents with the LayOut feature Create and edit a reality capture model with Catch Edit and mash up .stl files with Meshmixer Navigate the MakerBot Desktop Print the model on your own machine or with a service bureau

A Beginner's Guide to 3D Printing - 2014-10-01

In recent years, 3D printers have revolutionized the worlds of manufacturing, design, and art. As the price of printers drop and their availability increases, more people will have access to these remarkable machines. A Beginner's Guide to 3D Printing is written for those who would like to experiment with 3D design and manufacturing, but have little or no technical experience with the standard software. Professional engineer Mike Rigsby leads readers step-by-step through fifteen simple toy projects, each illustrated with screen caps of Autodesk 123D Design, the most common free 3D software available. The projects are later described using Sketchup, another free popular software package. The toy projects in A Beginner's Guide to 3D Printing start simple-a domino, nothing more than an extruded rectangle, a rectangular block-that will take longer to print than design. But soon the reader will be creating jewel boxes with lids, a baking-powder submarine, interchangeable panels for a design-it-yourself dollhouse, a simple train with expandable track, a multipiece airplane, a working paddleboat, and a rubber band-powered car. Finally, readers will design, print, and assemble a Little Clicker, a noise-making push toy with froggy eyes. Once trained in the basics of CAD design, readers will be able to embark on even more elaborate designs of their own creation. Mike Rigsby is a professional electrical engineer and author of Doable Renewables, Amazing Rubber Band Cars and Haywired. He has written for Popular Science, Robotics Age, Modern Electronics, Circuit Cellar, Byte, and other magazines.

Fusion 360 for Makers - Lydia Sloan Cline 2018-05-11

Learn how to use Autodesk Fusion 360 to digitally model your own original projects for a 3D printer or a CNC device. Fusion 360 software lets you design, analyze, and print your ideas. Free to students and small businesses alike, it offers solid, surface, organic, direct, and parametric modeling capabilities. Fusion 360 for Makers is written for beginners to 3D modeling software by an experienced teacher. It will get you up and running quickly with the goal of creating models for 3D printing and CNC fabrication. Inside Fusion 360 for Makers, you'll find: Eight easy-to-understand tutorials that provide a solid foundation in Fusion 360 fundamentals DIY projects that are explained with step-by-step instructions and color photos Projects that have been real-world tested, covering the most common problems and solutions Stand-alone projects, allowing you to skip to ones of interest without having to work through all the preceding projects first Design from scratch or edit downloaded designs. Fusion 360 is an appropriate tool for beginners and experienced makers.

3D Printer Projects for Makerspaces - Lydia Sloan Cline 2017-08-18

Learn to model, print, and fabricate your own 3D designs—all with no prior experience! This easy-to-follow, fun guide is full of hands-on 3D printing projects that will inspire makers of all types, ages, and skill levels. The book features highly illustrated, DIY examples that show, step-by-step, how to put 3D printing technology to work in your own designs. 3D Printer Projects for Makerspaces starts with simple one-piece items and then gradually introduces more complex techniques to make solid, flexible, and multi-piece snap-together creations.

Screenshots, diagrams, and source code are provided throughout. Projects include a key charm, topo map, Spirograph game, polygon hat, phone case—even a realistic model plane! • Covers Autodesk Fusion, AutoCAD, Inkscape, SketchUp, Vetric Cut 2D, and more • Shows how to use 3D analysis tools to save time and cut waste • Written by a dedicated maker and college instructor

Fusion 360 for Makers - Lydia Sloan Cline 2021-05-27

Learn how to use Autodesk Fusion 360 to digitally model your own original projects for a 3D printer or a CNC device.

Parametric Modeling with Autodesk Fusion 360 (Spring 2019 Edition) - Randy Shih

Parametric Modeling with Autodesk Fusion 360 contains a series of thirteen tutorial style lessons designed to introduce Autodesk Fusion 360, solid modeling and parametric modeling techniques and concepts. This book introduces Autodesk Fusion 360 on a step-by-step basis, starting with constructing basic shapes, all the way through to the creation of assembly drawings and 3D printing your own designs. This book takes a hands on, exercise intensive approach to all the important parametric modeling techniques and concepts. Each lesson introduces a new set of commands and concepts, building on previous lessons. The lessons guide you from constructing basic shapes to building intelligent solid models, assemblies and creating multi-view drawings. This book also introduces you to the general principles of 3D printing including a brief history of 3D printing, the types of 3D printing technologies, commonly used filaments, and the basic procedure for printing a 3D model. 3D printing makes it easier than ever for anyone to start turning their designs into physical objects, and by the end of this book you will be ready to start printing out your own designs. Spring 2019 Edition Autodesk Fusion 360 is an entirely cloud based CAD, CAM, and CAE platform that is constantly evolving. This edition of Parametric Modeling with Autodesk Fusion 360 was written using Autodesk Fusion 360 in March of 2019. Fusion 360 is a stable product and all the major tools and features of Fusion 360 used in this edition should continue to operate the same way for the foreseeable future. SDC Publications is committed to updating this book on a regular interval to incorporate new features and changes made to the software. Should a major change to Autodesk Fusion 360 require a newer edition be made available sooner, we will publish a new edition as soon as possible. Older editions will stop being available once newer editions are released.

3D Modeling and Printing with Tinkercad - James Floyd Kelly 2014

Want to master 3D modeling and printing? Tinkercad is the perfect software for you: it's friendly, web-based, and free. Even better, you don't have to rely on Tinkercad's technical documentation to use it. This guide is packed with photos and projects that bring 3D modeling to life!

Computer-Aided Architectural Design. Future Trajectories - Gülen Çağdaş 2017-06-20

This book constitutes selected papers of the 17th International Conference on Computer-Aided Architectural Design Futures, CAAD Futures 2017, held in Istanbul, Turkey, in July 2017. The 22 revised full papers presented were carefully reviewed and selected from numerous submissions. The papers are organized in topical sections on modeling urban design; support systems for design decisions; studying design behavior in digital environments; materials, fabrication, computation; shape studies.

Simplifying Solution Space - Hari Suman Naik 2017-04-26

Hari Suman Naik takes the perspective of modular systems and investigates how to enable non-expert users to innovate and design, by simplifying toolkit solution space. New production technologies like digital fabrication and modular electronics along with appropriate toolkits can offer users a significant design flexibility to innovate solutions that meet their heterogeneous and sticky needs. The author contributes towards understanding and designing toolkit solution space, first using qualitative studies to explore mechanisms for simplifying the use and structure of toolkit solution space, and then using a design study of an innovative toolkit. The findings are relevant to innovation and product managers eager to incorporate user ideas with toolkits.

Autodesk Inventor 2018: Presenting Designs with Image and Animation Tools - ASCENT - Center for Technical Knowledge

2018-03-01

The Autodesk® Inventor® 2018: Presenting Designs with Image and Animation Tools student guide teaches you how to present your Autodesk® Inventor® designs using tools that are available with the software. You begin in the modeling environment, learning how to customize visual styles, include reflections and shadows in a display, set up and control lighting, and create and assign unique material appearances with the aim of enhancing how the model is presented. The student guide also discusses the Presentation and Inventor Studio environments, which can be used to create compelling still images or animations of a design. The Presentation environment enables you to create snapshot views (still images) and animations to help document an assembly. A presentation file can be used to indicate how parts relate to each other and create an exploded view for a drawing. Animating the exploded view enables you to further show how components fit together in an assembly. Inventor Studio is an alternate tool that can also be used to create realistic renderings or animations of models that can be used in model presentations. The topics covered in this student guide are also covered in the following ASCENT student guides, which include a broader range of advanced topics: - Autodesk® Inventor® 2018: Advanced Assembly Modeling - Autodesk® Inventor® 2018: Advanced Part Modeling - Autodesk® Inventor® 2018: Introduction to Solid Modeling Topics covered: - Enhance the appearance of surfaces and edges of a model by assigning visual styles, ray tracing, reflections, shadows, and a ground plane. - Customize and assign lighting styles to control the number, color, and intensity of light sources in a model. - Manipulate the visual appearance of a material using the in-canvas appearance and texture tools. - Create, assign, and edit existing appearances in the model using the Appearance Browser. - Understand how presentation files can be used to document an assembly model. - Create a presentation file with animations or Snapshot views. - Publish a presentation file to create images and videos. - Render a realistic image of a model that has had appearance, lighting, and camera customizations. - Create a realistic animation of a model by applying parameters, constraints, and actions. - Create a composite video by combining camera shots, animations, and transitions using the Video Producer. - Create a custom environment for use when rendering models. Prerequisites: The material covered in this training guide assumes a mastery of Autodesk Inventor basics as taught in Autodesk® Inventor®: Introduction to Solid Modeling. Enhancements that were introduced in the Presentation environment in the R2 release have been included in this version of the student guide. It is recommended that you use the R2 or R3 release of Autodesk Inventor 2018 with this student guide.

Autodesk 123D Design + 3D 모델링 & 3D 프린팅 - 김차희 2016-02-15

[Autodesk 123D Design + 3D 모델링 & 3D 프린팅]은 아이디어 구상부터 상품개발까지 다루고 있으며, 3D 모델링 작업과정의 이해도 향상에 도움을 준다. 5단계로 배우는 기초 3D 모델링 교육, 누구나 쉽게 디자인할 수 있는 교육용 캐드(CAD), 3D 프린팅 교육에서 가장 많이 쓰이는 123D DESIGN, 아이들의 창의력 다지인 사고능력 향상시킬 수 있을 것이다.

The Future of Pharmaceutical Product Development and Research - 2020-09-02

The Future of Pharmaceutical Product Development and Research examines the latest developments in the pharmaceutical sciences, also highlighting key developments, research and future opportunities. Written by experts in the field, this volume in the Advances in Pharmaceutical Product Development and Research series deepens our understanding of the product development phase of drug discovery and drug development. Each chapter covers fundamental principles, advanced methodologies and technologies employed by pharmaceutical scientists, researchers and the pharmaceutical industry. The book focuses on excipients, radiopharmaceuticals, and how manufacturing should be conducted in an environment that follows Good Manufacturing Practice (GMP) guidelines. Researchers and students will find this book to be a comprehensive resource for those working in, and studying, pharmaceuticals, cosmetics, biotechnology, foods and related industries. Provides an overview of practical information for clinical trials Outlines how to ensure an environment that follows Good Manufacturing Practice (GMP) Examines recent developments and suggests future directions for drug production methods and techniques

3D Technology in Fine Art and Craft - Bridgette Mongeon 2015-07-30
The possibilities for creation are endless with 3D printing, sculpting, scanning, and milling, and new opportunities are popping up faster than artists can keep up with them. 3D Technology in Fine Art and Craft takes the mystery out of these exciting new processes by demonstrating how to navigate their digital components and showing their real world applications. Artists will learn to incorporate these new technologies into their studio work and see their creations come to life in a physical form never before possible. Featuring a primer on 3D basics for beginners,interviews, tutorials, and artwork from over 80 artists, intellectual property rights information, and a comprehensive companion website, this book is your field guide to exploring the exhilarating new world of 3D. Follow step-by-step photos and tutorials outlining the techniques, methodologies, and finished products of master artists who have employed 3D technology in new and inventive ways Learn how to enlarge, reduce, and repurpose existing artwork and create virtual pieces in physical forms through a variety of mediums Research your options with an accessible list of pros and cons of the various software, 3D printers, scanners, milling machines, and vendors that provide services in 3D technology Listen to podcasts with the artists and learn more tips and tricks through the book's website at www.digitalsculpting.net

Biomanufacturing - Chander Prakash 2019-03-20
Current Trends in Biomanufacturing focuses on cutting-edge research regarding the design, fabrication, assembly, and measurement of bio-elements into structures, devices, and systems. The field of biomaterial and biomanufacturing is growing exponentially in order to meet the increasing demands of for artificial joints, organs and bone-fixation devices. Rapid advances in the biological sciences and engineering are leading to newer and viable resources, methods and techniques that may providing better quality of life and more affordable health care services. The book covers the broad aspects of biomanufacturing, including: synthesis of biomaterials; implant coating techniques; spark plasma sintering; microwave processing; and cladding, powder metallurgy and electrospinning. The contributors illustrate the recent trends of biomanufacturing, highlighting the important aspects of biomaterial synthesis, and their use as feedstock of fabrication technologies and their characterization, along with their clinical practices. Current Trends in Biomanufacturing updates researchers and scientists the novelties and techniques of the field, as it summarises numerous aspects of biomanufacturing, including synthesis of biomaterials, fabrication of biomedical structures, their in-vivo/ in-vitro, mechanical analysis and associated ISO standards.

3D Printing with Autodesk 123D - John Biehler 2014
A guide on creating and printing 3D objects with Autodesk 123D, including basic principles of 3D printing, pro techniques for creating models, 123D key features, and exporting models to a 3D printer, with exercises to practice 3D design.

3D CAD with Autodesk 123D - Jesse Au 2016
Design and create real-world objects with 3D printers, laser cutters, or common materials that you assemble yourself. It's easy with Autodesk's free 123D tools. In this full-color book, Jesse Harrington Au--Autodesk's Maker Advocate--shows you how to design objects from scratch, work with existing models, or scan real-world objects.

3D Printing Blueprints - Joseph Larson 2013-01-01
"3D Printing Blueprints" is not about how to just make a ball or a cup. It includes fun-to-make and engaging projects. Readers don't need to be 3D printing experts, as there are examples related to stuff people would enjoy making. "3D Printing Blueprints" is for anyone with an interest in the 3D printing revolution and the slightest bit of computer skills. Whether you own a 3D printer or not you can design for them. All it takes is Blender, a free 3D modeling tool. Couple this book with a little creativity and someday you'll be able to hold something you designed on the computer in your hands.

3D Printing with Autodesk 123D, Tinkercad, and MakerBot - Lydia Sloan Cline 2014-12-05
Master the art of 3D printing with step-by-step tutorials and DIY projects Are you ready to join the new industrial revolution? 3D Printing with

Autodesk 123D, Tinkercad, and MakerBot reveals how to turn your ideas into physical products that you can use or sell! You'll learn how to operate powerful, free software from Autodesk and bring your creations to life with the MakerBot--a leading consumer printer--or an online service bureau. Practical examples take you through the Design, Catch, Meshmixer, Tinkercad, Make, and CNC Utility apps, and the MakerBot Desktop. Fun projects, easy-to-follow instructions, and clear screenshots progress from installing the software to printing the design. Videos and digital files accompany this hands-on guide. Make your own creations with Design and Tinkercad Download editable, premade content Generate construction documents with the LayOut feature Create and edit a reality capture model with Catch Edit and mash up .stl files with Meshmixer Navigate the MakerBot Desktop Print the model on your own machine or with a service bureau

Apps for Librarians: Using the Best Mobile Technology to Educate, Create, and Engage - Nicole Hennig 2014-09-24

How can your library—and your patrons—benefit from mobile apps? This guidebook offers a solid foundation in "app-literacy," supplying librarians with the knowledge to review and recommend apps, offer workshops, and become the app expert for their communities. • Describes the most important, high-quality mobile apps in specific topic areas of interest to librarians • Provides examples of how these apps are useful for education, creativity, and productivity for all types of users, including those with special needs • Supplies a detailed checklist of what information to include when reviewing apps • Includes an extensive resource guide to books, blogs, websites, courses, and other sources for keeping up with mobile apps • Provides notes on app functionality, features, price, and developer as well as any pertinent limitations

Practical Autodesk AutoCAD 2021 and AutoCAD LT 2021 - Yasser Shoukry 2020-05-15

Learn 2D drawing and 3D modeling from scratch using AutoCAD 2021 and its more affordable LT version to become a CAD professional Key FeaturesExplore the AutoCAD GUI, file format, and drawing tools to get started with CAD projectsLearn to use drawing management tools for working efficiently on large projectsDiscover techniques for creating, modifying, and managing 3D models and converting 2D plans into 3D modelsBook Description AutoCAD and AutoCAD LT are one of the most versatile software applications for architectural and engineering designs and the most popular computer-aided design (CAD) platform for 2D drafting and 3D modeling. This hands-on guide will take you through everything you need to know to make the most out of this powerful tool, starting from a simple tour of the user interface through to using advanced tools. Starting with basic drawing shapes and functions, you'll get to grips with the fundamentals of CAD designs. You’ll then learn about effective drawing management using layers, dynamic blocks, and groups and discover how to add annotations and plot like professionals. The book delves into 3D modeling and helps you convert your 2D drawings into 3D models and shapes. As you progress, you’ll cover advanced tools and features such as isometric drawings, drawing utilities for managing and recovering complex files, quantity surveying, and multidisciplinary drawing files using xRefs, and you'll learn how to implement them with the help of practical exercises at the end of each chapter. Finally, you’ll get to grips with rendering and visualizing your designs in AutoCAD. By the end of the book, you’ll have developed a solid understanding of CAD principles and be able to work with AutoCAD software confidently to build impressive 2D and 3D drawings. What you will learnUnderstand CAD fundamentals using AutoCAD’s basic functions, navigation, and componentsCreate complex 3d solid objects starting from the primitive shapes using the solid editing toolsWorking with reusable objects like Blocks and collaborating using xRefExplore some advanced features like external references and dynamic blockGet to grips with surface and mesh modeling tools such as Fillet, Trim, and ExtendUse the paper space layout in AutoCAD for creating professional plots for 2D and 3D modelsConvert your 2D drawings into 3D modelsWho this book is for The book is for design engineers, mechanical engineers, architects, and anyone working in construction, manufacturing, or similar fields. Whether you’re an absolute beginner, student, or professional looking to upgrade your engineering design skills, you’ll find this AutoCAD book useful. No prior knowledge of CAD or AutoCAD is necessary.

Java Coding Problems - Anghel Leonard 2019-09-20
Develop your coding skills by exploring Java concepts and techniques such as Strings, Objects and Types, Data Structures and Algorithms, Concurrency, and Functional programming Key Features Solve Java programming challenges and get interview-ready by using the power of modern Java 11 Test your Java skills using language features, algorithms, data structures, and design patterns Explore areas such as web development, mobile development, and GUI programming Book Description The super-fast evolution of the JDK between versions 8 and 12 has increased the learning curve of modern Java, therefore has increased the time needed for placing developers in the Plateau of Productivity. Its new features and concepts can be adopted to solve a variety of modern-day problems. This book enables you to adopt an objective approach to common problems by explaining the correct practices and decisions with respect to complexity, performance, readability, and more. Java Coding Problems will help you complete your daily tasks and meet deadlines. You can count on the 300+ applications containing 1,000+ examples in this book to cover the common and fundamental areas of interest: strings, numbers, arrays, collections, data structures, date and time, immutability, type inference, Optional, Java I/O, Java Reflection, functional programming, concurrency and the HTTP Client API. Put your skills on steroids with problems that have been carefully crafted to highlight and cover the core knowledge that is accessed in daily work. In other words (no matter if your task is easy, medium or complex) having this knowledge under your tool belt is a must, not an option. By the end of this book, you will have gained a strong understanding of Java concepts and have the confidence to develop and choose the right solutions to your problems. What you will learn Adopt the latest JDK 11 and JDK 12 features in your applications Solve cutting-edge problems relating to collections and data structures Get to grips with functional-style programming using lambdas Perform asynchronous communication and parallel data processing Solve strings and number problems using the latest Java APIs Become familiar with different aspects of object immutability in Java Implement the correct practices and clean code techniques Who this book is for If you are a Java developer who wants to level-up by solving real-world problems, then this book is for you. Working knowledge of Java is required to get the most out of this book.

Designing the Internet of Things - Adrian McEwen 2013-11-07
Take your idea from concept to production with this unique guide Whether it's called physical computing, ubiquitous computing, or the Internet of Things, it's a hot topic in technology: how to channel your inner Steve Jobs and successfully combine hardware, embedded software, web services, electronics, and cool design to create cutting-edge devices that are fun, interactive, and practical. If you'd like to create the next must-have product, this unique book is the perfect place to start. Both a creative and practical primer, it explores the platforms you can use to develop hardware or software, discusses design concepts that will make your products eye-catching and appealing, and shows you ways to scale up from a single prototype to mass production. Helps software engineers, web designers, product designers, and electronics engineers start designing products using the Internet-of-Things approach Explains how to combine sensors, servos, robotics, Arduino chips, and more with various networks or the Internet, to create interactive, cutting-edge devices Provides an overview of the necessary steps to take your idea from concept through production If you'd like to design for the future, Designing the Internet of Things is a great place to start.

Autodesk AutoCAD 2013 Practical 3D Drafting and Design - Jo„ao Santos 2013-04-25
This book is written in a practical and friendly style with practical tutorials, exercises, and detailed images which will help you master the third dimension. This book is intended for everyone who wants to create accurate 3D models in AutoCAD, like architecture, engineering, or design professionals, and students. Only basic understanding of 2D AutoCAD is needed.

3D Printing For Dummies - Richard Horne 2017-05-22

The bestselling book on 3D printing 3D printing is one of the coolest inventions we've seen in our lifetime, and now you can join the ranks of businesspeople, entrepreneurs, and hobbyists who use it to do everything from printing foods and candles to replacement parts for older technologies—and tons of mind-blowing stuff in between! With 3D Printing For Dummies at the helm, you'll find all the fast and easy-to-follow guidance you need to grasp the methods available to create 3D printable objects using software, 3D scanners, and even photographs through open source software applications like 123D Catch. Thanks to the growing availability of 3D printers, this remarkable technology is coming to the masses, and there's no time like the present to let your imagination run wild and actually create whatever you dream up—quickly and inexpensively. When it comes to 3D printing, the sky's the limit! Covers each type of 3D printing technology available today: stereolithology, selective sintering, used deposition, and granular binding Provides information on the potential for the transformation of production and manufacturing, reuse and recycling, intellectual property design controls, and the commoditization of products Walks you through the process of creating a RepRap printer using open source designs, software, and hardware Offers strategies for improved success in 3D printing On your marks, get set, innovate!

3D Printing with Autodesk - John Biehler 2014-05-09

3D Printing with Autodesk Create and Print 3D Objects with 123D, AutoCAD, and Inventor Create amazing 3D-printable objects fast with Autodesk 123D! Imagine it. Then print it! Autodesk 123D gives you all the tools you need and it’s free. This easy, full-color guide will help you fully master 3D printing with Autodesk 123D even if you’ve never done any of this before. Authors John Biehler and Bill Fane have helped thousands of people join the 3D printing revolution—now it’s your turn. With step-by-step photos and simple projects, they teach you how to make the most of the whole 123D suite on Windows, Mac, and iPad. New to 3D printing? You’ll learn pro techniques for creating models that print perfectly the first time. Want to start fast? Discover how to scan photos straight into your models. Don’t have a 3D printer? Learn how to work with today’s most popular 3D printing services. John Biehler discovered 3D printing several years ago and built his first 3D printer shortly thereafter. Since then, he’s shared his 3D printing knowledge with thousands of people at live events throughout Canada and the Pacific Northwest and through online and broadcast media. He co-founded Vancouver’s fastest-growing group of 3D printing enthusiasts. Bill Fane, an Autodesk Authorized Training Centre (ATC) certified instructor, has designed with AutoCAD since 1986. Fane has lectured on AutoCAD and Inventor at Autodesk University since 1995, and at Destination Desktop since 2003. He has written 220 The Learning Curve AutoCAD tutorials for CADalyst and holds 12 patents. From start to finish, 3D Printing with Autodesk 123D covers all you need to know. So stop waiting and start creating! Quickly get comfortable with the 123D workspace and key features Learn the essentials of effective 3D object design Practice 3D design hands-on with simple guided exercises Generate detailed models from photos with 123D Catch Create new 3D character “monsters” with 123D Creature Prepare any 3D model for successful printing Move from existing 3D CAD tools (if you’ve ever used them) Design parts that are easy to print, and multi-part models that can be printed “pre-assembled” Print through leading 3D printing services such as Shapeways, Ponoko, Fablab, and Hackerspaces

From Video Games to Real Life: Tapping into Minecraft to Inspire Creativity and Learning in the Library - Mary L. Glendening 2016-09-19

This guide shows youth librarians how to use the appeal of Minecraft—a game that many young learners are intensely passionate about—to create engaging library programs that encourage creativity and build STEAM (Science, Technology, Engineering, Arts, and Mathematics) learning through library programs. • Helps librarians harness the power of an incredibly popular game and use it effectively as a springboard to learning • Assists librarians in supporting STEM and STEAM initiatives • Offers specific guidance for dozens of hands-on activities

Design, User Experience, and Usability: Design for Diversity, Well-being, and Social Development - Marcelo M. Soares 2021-07-03

This three volume set LNCS 12779, 12780, and 12781 constitutes the refereed proceedings of the 10th International Conference on Design, User Experience, and Usability, DUXU 2021, held as part of the 23rd International Conference, HCI International 2021, which took place in July 2021. Due to COVID-19 pandemic the conference was held virtually. The total of 1276 papers and 241 posters included in the 39 HCII 2021 proceedings volumes was carefully reviewed and selected from 5222 submissions. The papers of DUXU 2021, Part II are organized in topical sections named: Experience Design across Cultures; Design for Inclusion and Social Development¸ Design for Health and Well-being; DUXU Case Studies.

3D CAD with Autodesk 123D - Jesse Harrington Au 2015-12-21

If you've arrived at a stage in your creative life where you're ready to do more with your computer, it's time to learn how to combine its power with new advances in computer-aided design (CAD) and fabrication to make something awesome--in three dimensions! The free suite of Autodesk 123D software offers all the tools you need to capture or design three-dimensional objects and characters. This book tells you how to harness that power to print or fabricate just about anything you can imagine. Want to make something mechanical or structural that's based on precise measurements? 123D Design can help! Ready to create something cool based on a character, an organic shape, or something found in nature? 123D Catch, 123D Meshmixer, and 123D Sculpt+ will assist. Learn how to use these tools, plus 123D Make--perfect for prototyping designs you'll cut with a CNC mill--to take your creativity to a new level. An ideal book for Makers, hobbyists, students, artists, and designers (including beginners!), this book opens up the inexpensive world of personal fabrication to everyone. In 3D CAD with Autodesk 123D, you’ll: Meet the classic "Stanford bunny" and learn to modify it with Meshmixer Scan and 3D print anything around you Design your own 3D-printed guitar Find models in the Sculpt+ community and make a skeleton! Build a birdhouse, prototype a playground, or create a statue Learn everything from basics to troubleshooting skills Get started making right away

Environmental Monitoring with Arduino - Emily Gertz 2012-01-26

After the devastating tsunami in 2011, DYIers in Japan built their own devices to detect radiation levels, then posted their finding on the Internet. Right now, thousands of people worldwide are tracking environmental conditions with monitoring devices they’ve built themselves. You can do it too! This inspiring guide shows you how to use Arduino to create gadgets for measuring noise, weather, electromagnetic interference (EMI), water purity, and more. You’ll also learn how to collect and share your own data, and you can experiment by creating your own variations of the gadgets covered in the book. If you’re new to DIY electronics, the first chapter offers a primer on electronic circuits and Arduino programming. Use a special microphone and amplifier to build a reliable noise monitor Create a gadget to detect energy vampires: devices that use electricity when they’re “off” Examine water purity with a water conductivity device Measure weather basics such as temperature, humidity, and dew point Build your own Geiger counter to gauge background radiation Extend Arduino with an Ethernet shield—and put your data on the Internet Share your weather and radiation data online through Pachube

How Does 3D Printing Work? - Ian Chow-Miller 2017-12-15

3D printing can be used to make something as simple as a cell phone case to something as critical as a part to an airplane. This book serves as an introduction to the process of making things, from the knickknack to the replacement part, with a 3D printer, regardless of what it is used for.

Play with XYZprinting da Vinci 3D Printers - XYZprinting Studio 2014-11-13

3D printing is one of the most popular activities and industries in the 21st century. It has turns into an independent product unit although it was once a process during industrial production that was called rapid prototyping. The goal of this book is to lead you discovering the secret of 3D printing. Through easy-to-read-and-understand contents, you are going to realise the well-known technologies of 3D printing. Besides, you can regard this book as a guide of learning da Vinci 3D printers’ operations. The book contains several parts, including 3D printing technologies, 3D printer composition, 3D printing procedure (e.g. modeling, slicing and printing), relative software knowledge, 3D printer maintenance and online resources, etc. There are also online contents that are provided with hyperlinks in order to give you deeper exploration. Please let us know if you have any question by emailing us to “XYZ_publisher@xyzprinting.com”. Your advice will prompt us to a better publisher and your learning partner. Keyword: 3D printing, 3D printer, da Vinci 3D printer, FFF, FDM, XYZprinting, XYZ, 三緯國際立體列印科技股份有限公司, XYZware

Empowering Learners With Mobile Open-Access Learning Initiatives - Mills, Michael 2017-01-05

Education has been progressing at a rapid pace ever since educators have been able to harness the power of mobile technology. Open-access learning techniques provide more students with the opportunity to engage in educational opportunities that may have been previously restricted. Empowering Learners With Mobile Open-Access Learning Initiatives is an authoritative reference source that offers an engaging look at how mobile technologies are aiding educators in providing new, innovative ways to enhance student learning experiences. Featuring relevant topics such as switch access technology, digital portfolios, dual enrollment students, and place conscious education, this is a reliable resource for academicians, educators, students, and practitioners that are interested in studying recent mobile education advancements.