

1. Record Nr.	UNINA9910529174003321
Autore	Lombard Matt
Titolo	Mastering solidworks / / Matt Lombard
Pubbl/distr/stampa	Indianapolis, Indiana : , : Sybex, , [2019] ©2019
ISBN	1-119-30059-2 1-119-30058-4 1-119-51674-9
Edizione	[1st edition]
Descrizione fisica	1 online resource (1,251 pages)
Disciplina	006.6869
Soggetti	Computer graphics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Includes index.
Nota di contenuto	Cover -- Title Page -- Copyright -- Acknowledgments -- About the Author -- Contents -- Introduction -- Who Should Read This Book -- What You Will Learn -- What You Need -- The Mastering Series -- What Is Covered in This Book -- Part I: Introducing SolidWorks Basics -- Part II: Building Intelligence into Your Parts -- Part III: Working with Assemblies -- Part IV: Creating Drawings -- Part V: Using Advanced and Specialized Techniques -- Appendixes -- How to Contact the Author -- Part I Introducing SolidWorks Basics -- Chapter 1 Introducing SolidWorks -- Installing SolidWorks for the First Time -- Starting SolidWorks for the First Time -- Examining the SolidWorks License Agreement -- Using the Help Menu -- Creating a New Document -- Identifying SolidWorks Documents -- Saving Your Setup -- Using Templates -- Understanding Feature-Based Modeling -- Understanding History-Based Modeling -- Sketching with Parametrics -- Understanding Design Intent -- Editing Design Intent -- Choosing Sketch Relations -- Selecting Display/Delete Relations -- Using Suppressed Sketch Relations -- Working with Associativity -- The Bottom Line -- Chapter 2 Navigating the SolidWorks Interface -- Identifying Elements of the SolidWorks Interface -- Using the CommandManager and Toolbars -- Controlling Menus -- Changing Cursors -- Working with Models in the FeatureManager and

PropertyManager Windows -- Getting Around the Task Pane -- Getting Familiar with the Status Bar -- Using SolidWorks Search -- Making the Interface Work for You -- Customizing Colors -- Customizing Strategies -- Working with Multiple Document Windows -- The Bottom Line -- Chapter 3 Working with Sketches and Reference Geometry -- Creating a New Part -- Creating a Sketch -- Identifying Sketch Entities -- Using the Sketch Toolbar -- Driving Sketches with Smart Dimensions.

Using Tools on the Dimensions/Relations Toolbar -- Inferencing in Sketch -- Exploring Sketch Settings -- Using Sketch Blocks -- Working with Reference Geometry -- Creating Planes -- Working with Axes -- Using Coordinate Systems -- Using Points as Reference Geometry -- Sketching with Touch Interface -- Tutorial: Learning to Use Sketch Relations -- Tutorial: Using Blocks and Belts -- Tutorial: Creating Reference Geometry -- The Bottom Line -- Chapter 4 Creating Simple Parts and Drawings -- Discovering Design Intent -- Using Symmetry -- Determining Primary or Functional Features -- Predicting Change -- Creating a Simple Part -- Deciding Where to Start -- Building in Symmetry -- Making It Solid -- Using Instant 3D -- Making the First Extrude Feature -- Creating a Simple Assembly -- Creating the Assembly -- Populating the Assembly -- Examining Mates -- Creating a Simple Drawing -- Tutorial: Creating a Simple Part -- Tutorial: Making a Simple Drawing -- The Bottom Line -- Chapter 5 Using Visualization Techniques -- Manipulating the View -- Using Arrow Keys -- Using the Middle Mouse Button -- Using Mouse Gestures -- Using the View Toolbar -- Adding Scrollbars and Splitters -- Using the Magnifying Glass -- Clicking the Triad Axes -- Using the View Tools -- Zebra Stripes and Curvature -- View Orientation -- Annotation Views -- Using the DisplayManager -- Applying Appearances -- Using Decals -- Using Scenes, Lights, and Cameras -- The Display Pane -- Applying Color Automatically to Features -- Using Edge Display Settings -- Tutorial: Applying Visualization Techniques -- The Bottom Line -- Part II Building Intelligence into Your Parts -- Chapter 6 Getting More from Your Sketches -- Editing Sketch Relations -- Using Display/Delete Relations -- Using Replace Entity -- Using SketchXpert -- Getting More from Dimensions -- Dimensioning from Centerlines.

Sketching with Numeric Input -- Working with Sketch Entities -- Moving, Rotating, Copying, and Scaling Entities -- Modifying a Sketch -- Copying and Pasting Sketch Entities -- Dragging Entities -- Creating a Derived Sketch -- Using Sketch Pictures -- Using Three Views -- Compensating for Perspective -- Estimating Sharp Edges -- Using Auto Trace -- Using Stick Fonts -- Using Sketch Text -- Using Colors and Line Styles with Sketches -- Working in Color Display Mode -- Assigning Line Color -- Using the Edit Sketch or Curve Color Tool -- Assigning Line Thickness and Line Style -- Using Other Sketch Tools -- Working with RapidSketch -- Adding Sensors -- Using Metadata for Sketches -- Creating Construction Geometry -- Sketching in 3D -- Navigating in Space -- Exploring Sketch Relations in 3D Sketches -- Using Planes in Space -- Using Planar Path Segments -- Defining Dimensions -- Using 3D Sketch Summary -- Tutorial: Editing and Copying -- Tutorial: Controlling Pictures, Text, Colors, and Styles -- Tutorial: Using Metadata -- Tutorial: Sketching Calculator -- The Bottom Line -- Chapter 7 Modeling with Primary Features -- Identifying When to Use Which Tool -- Using the Extrude Feature -- Understanding Instant 3D -- Working with the Revolve Feature -- Introducing Loft, Boundary, and Sweep -- Controlling Sweep Features -- Understanding Fillet Types -- Creating a Constant-Size Fillet -- Creating Variable-Radius Fillets -- Using Face Fillets -- Applying a Full

Round Fillet -- Building a Setback Fillet -- Using Chamfers -- Creating Asymmetrical Chamfers -- Switching Between Fillet and Chamfer Features -- Tutorial: Bracket Casting -- The Bottom Line -- Chapter 8 Selecting Secondary Features -- Creating Curve Features -- Manipulating Curves -- Working with Helix Curve Features -- Creating Projected Curves -- Using the Curve Through XYZ Points Feature. Using the Curve Through Reference Points Feature -- Putting Together a Composite Curve -- Using Split Lines -- Using the Equation-Driven Curve -- Selecting a Specialty Feature -- Using Scale -- Using the Dome Feature -- Using the Wrap Feature -- Using the Flex Feature -- Applying the Deform Feature -- Using the Indent Feature -- Using Intersect -- Tutorial: Creating a Wire-Formed Part -- The Bottom Line -- Chapter 9 Patterning and Mirroring -- Patterning in a Sketch -- Debunking More Sketch Myths -- Patterning a Sketch -- Mirroring in a Sketch -- Using Mirror Entities -- Using Dynamic Mirror -- Using Symmetry Sketch Relation -- Using Mirroring in 3D Sketches -- Working with 3D Patterns -- Exploring the Geometry Pattern Option -- Patterning Bodies -- Patterning Faces -- Patterning Fillets -- Understanding Pattern Types -- Using the Linear Pattern -- Using the Circular Pattern -- Using a Curve-Driven Pattern -- Using a Sketch-Driven Pattern -- Using a Table-Driven Pattern -- Using the Fill Pattern -- Using a Variable Pattern -- Cosmetic Patterns -- Mirroring 3D Solids -- Mirroring Bodies -- Mirroring Features -- Mirroring Entire Parts -- Tutorial: Creating a Circular Pattern -- Tutorial: Mirroring Features -- Tutorial: Applying a Cosmetic Pattern -- The Bottom Line -- Chapter 10 Using Equations -- Understanding Equations -- Creating Equations -- Using Driven Dimensions -- Using Equation Tricks -- Using Global Variables -- Using the Modify Box -- Using Expressions -- Controlling Suppression States of Features -- Linking to External Equations -- Tutorial: Using Equations -- The Bottom Line -- Chapter 11 Working with Part Configurations -- Controlling Items with Configurations -- Finding Configurations -- Deleting Configs -- Sorting Configs -- Activating Configurations -- Creating Configurations -- Using the Modify Configurations Dialog Box. Using Custom Property Managers -- Using Derived Configurations -- Understanding How File Size Affects Speed -- Controlling Dimensions -- Controlling Suppression -- Controlling Custom Properties -- Controlling Sketch Relations -- Controlling Sketch Planes -- Controlling Configurations of Inserted Parts -- Using Library Features -- Using Design Tables -- Identifying What Can Be Driven by a Design Table -- Creating a Simple Design Table -- Editing Design Table Settings -- Editing the Design Table -- Using the Configuration Publisher -- Tutorial: Working with Configurations and Design Tables -- The Bottom Line -- Chapter 12 Editing, Evaluating, and Troubleshooting -- Using Rollback -- Using the Rollback Bar -- Using Other Rollback Techniques -- Using Part Reviewer -- Reordering Features -- Reordering Folders -- Using the Flyout and Detachable FeatureManagers -- Displaying the FeatureManager and PropertyManager -- Following Selection Breadcrumbs -- Summarizing Part Modeling Best Practices -- Using Design for Change -- Keeping Track of References -- Visualizing Horizontal Modeling -- Understanding Resilient Modeling -- Using Skeleton Sketches -- Using Evaluation Techniques -- Using Verification On Rebuild -- Using the Check Tool -- Evaluating Geometry with Reflective Techniques -- Troubleshooting Errors -- Interpreting Rebuild Errors -- Identifying Common Errors -- Dismissing Errors -- Using SolidWorks RX and Performance Benchmark -- Tutorial: Utilizing Editing and Evaluation Techniques -- The Bottom Line -- Part III Working with Assemblies --

Chapter 13 Building Efficient Assemblies -- Understanding the Purpose of Assemblies -- Identifying Types of Assemblies -- Creating an Alternative to Multiple Assemblies -- Identifying the Elements of an Assembly -- Working with Assembly Equations -- Using an Assembly Layout Sketch -- Working with Virtual Components.
Creating Assembly Reference Geometry.

Sommario/riassunto

The complete SolidWorks reference-tutorial for beginner to advanced techniques Mastering SolidWorks is the reference-tutorial for all users. Packed with step-by-step instructions, video tutorials for over 40 chapters, and coverage of little-known techniques, this book takes you from novice to power user with clear instruction that goes beyond the basics. Fundamental techniques are detailed with real-world examples for hands-on learning, and the companion website provides tutorial files for all exercises. Even veteran users will find value in new techniques that make familiar tasks faster, easier, and more organized, including advanced file management tools that simplify and streamline pre-flight checks. SolidWorks is the leading 3D CAD program, and is an essential tool for engineers, mechanical designers, industrial designers, and drafters around the world. User friendly features such as drag-and-drop, point-and-click, and cut-and-paste tools belie the software's powerful capabilities that can help you create cleaner, more precise, more polished designs in a fraction of the time. This book is the comprehensive reference every SolidWorks user needs, with tutorials, background, and more for beginner to advanced techniques. Get a grasp on fundamental SolidWorks 2D and 3D tasks using realistic examples with text-based tutorials Delve into advanced functionality and capabilities not commonly covered by how-to guides Incorporate improved search, Pack-and-Go and other file management tools into your workflow Adopt best practices and exclusive techniques you won't find anywhere else Work through this book beginning-to-end as a complete SolidWorks course, or dip in as needed to learn new techniques and time-saving tricks on-demand. Organized for efficiency and designed for practicality, these tips will remain useful at any stage of expertise. With exclusive coverage and informative detail, Mastering SolidWorks is the tutorial-reference for users at every level of expertise.
