


**Edition:** 1st Edition 2021  
**pages:** 232  
**Images:** 534  
**Cover:** Hardcover, 21,6 x 28 cm  
**ISBN:** 978-1-64724-051-6  
**Published:** June 2021

**Quintessence Publishing Company, Inc.**

 411 North Raddant Road  
 IL 60510 Batavia  
 United States of America

 +1 (0)630 / 736-3600

 +1 (0)630 / 736-3633

 [contact@quintbook.com](mailto:contact@quintbook.com)

 <https://www.quintessence-publishing.com/usa/en>

## Book information

**Editor:** Panayi, Nearchos C.

**Title:** DIY Orthodontics

**Subtitle:** Design It Yourself

**Short text:**

Since its recognition as the first specialty of dentistry, the practice of orthodontics has been influenced by the development of new materials, techniques, bracket designs and prescriptions, appliances, and software. However, never before has there been as revolutionary a change as digitization. Digitization and automation are transforming the entire landscape of how orthodontics is practiced, and the consequence is the “do it yourself” concept. With the technology available today with intraoral scanning, CBCT imaging, and CAD software, we can create the virtual patient and manipulate dental models virtually. Not only does this enable better and more precise treatment planning, but it also facilitates better communication with the patient. Perhaps most exciting is that it permits in-house designing and printing of the majority of orthodontic appliances. This book describes the current digital technology that is used in orthodontics, including volume and surface scanning, 3D printing, CAD software, and artificial intelligence, before delving into a “design it yourself” guide presenting the application of this technology in all aspects of orthodontic treatment. It describes all the necessary technologic ingredients to be used in a self-sufficient digital orthodontic clinic, and it focuses on the in-house design and production of tailor-made appliances by digitally diagnosing and evaluating the virtual patient and then creating an individualized treatment plan. Now you can design your own expanders, retainers, clear aligners, brackets, indirect bonding trays, and even wires with a wire-bending robot. It is incredible what technology has to offer; we just have to have the courage to learn and experiment with it. For the benefit of our patients, the challenge is laid.

**Contents**

Chapter 01. Introduction

3D Technology in Orthodontics

Chapter 02. CBCT in Orthodontics

Chapter 03. Surface Scanning

Chapter 04. Additive Manufacturing

Chapter 05. Orthodontic Office Digital Workflow

3D Applications in Orthodontics

Chapter 06. In-House Custom Appliance Design

Chapter 07. Custom Appliance Design with the Laboratory

Chapter 08. In-House Customized Orthodontic Brackets: UBrackets Software

Chapter 09. In-House Customized Lingual Orthodontic Appliances

Chapter 10. In-House Clear Aligners

Chapter 11. In-House Digital Indirect Bonding

Chapter 12. In-House Orthognathic Surgical Splints

The Future of Orthodontics

Chapter 13. In-House Orthodontic Archwire-Bending Robots

Chapter 14. Artificial Intelligence and Machine Learning in Orthodontics

**Contributors**

Evangelos Akli • Federico Hernández Alfaro • Silvia Allegrini • Christos Angelopoulos • Moshe Davidovitch • Spyridonas Efstathiou • Alfredo Gilbert • Ioannis Gkiazouris • Cristina Grippaudo • Santiago Isaza • Rosalia Leonardi • Manolis Mavrikis • George Michelinakis • Ambrosina Michelotti • Stefano Negrini • Riccardo Nucera • Adaia Valls Ontañón • Nearchos C. Panayi • Chris Riolo • Rafi Romano • Kostas Tsiklakis • Apostolos I. Tsolakis

**Categories:** Orthodontics