



# Rapid Manufacturing: An Industrial Revolution for the Digital Age

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## Rapid Manufacturing: An Industrial Revolution for the Digital Age From Wiley

Rapid Manufacturing is a new area of manufacturing developed from a family of technologies known as Rapid Prototyping. These processes have already had the effect of both improving products and reducing their development time; this in turn resulted in the development of the technology of Rapid Tooling, which implemented Rapid Prototyping techniques to improve its own processes. Rapid Manufacturing has developed as the next stage, in which the need for tooling is eliminated. It has been shown that it is economically feasible to use existing commercial Rapid Prototyping systems to manufacture series parts in quantities of up to 20,000 and customised parts in quantities of hundreds of thousands. This form of manufacturing can be incredibly cost-effective and the process is far more flexible than conventional manufacturing.

*Rapid Manufacturing: An Industrial Revolution for the Digital Age* addresses the academic fundamentals of Rapid Manufacturing as well as focussing on case studies and applications across a wide range of industry sectors. As a technology that allows manufacturers to create products without tools, it enables previously impossible geometries to be made. This book is abundant with images depicting the fantastic array of products that are now being commercially manufactured using these technologies.

1. Includes contributions from leading researchers working at the forefront of industry.
2. Features detailed illustrations throughout.

*Rapid Manufacturing: An Industrial Revolution for the Digital Age* is a groundbreaking text that provides excellent coverage of this fast emerging industry. It will interest manufacturing industry practitioners in research and development, product design and materials science, as well as having a theoretical appeal to researchers and post-graduate students in manufacturing engineering, product design, CAD/CAM and CIM.

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## **Editorial Review**

From the Back Cover

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About the Author

**Neil Hopkinson** is a lecturer in the Wolfson School of Mechanical and Manufacturing Engineering at Loughborough University, UK. Having obtained his PhD in Rapid Tooling in 1999, Neil began to look into the economic viability of Rapid Manufacturing. Inspired by the findings of this research Neil began to investigate lowcost, high-speed Rapid Manufacturing processes while also focusing his research on material properties in powder-based layer manufacturing processes. To date Neil has secured over £1 million of research funding and published over 40 journal/conference papers; he was also an invited visiting lecturer at the University of Queensland in Australia.

**Phill Dickens** is Professor of Manufacturing Technology and Director of the Innovative Manufacturing and Construction Research Centre at Loughborough University, UK. He is also Associate Dean of Research for the Engineering Faculty. Phill started work in the area of Rapid Prototyping in 1990, working on processes such as 3D Welding and using copper coated SL models as electrodes for EDM. The research work has changed emphasis since then from Rapid Prototyping to Rapid Tooling and is now concentrating on Rapid Manufacturing.

**Richard Hague** is a Senior Lecturer and Head of the Rapid Manufacturing Research Group at Loughborough University, UK. He has been involved with Rapid Prototyping and Rapid Manufacturing (RM) research since 1993, and is now Principal Investigator on several large EPSRC, DTI and EU funded research projects. He was also instrumental in setting up and managing the successful Rapid Manufacturing

Consortium that now operates from Loughborough. Richard has many academic publications in the area of Rapid Manufacturing and is referee to several international academic journals and conferences. He also holds a patent that was gained as part of his PhD studies which is licensed to the predominant manufacturer of Rapid Prototyping equipment (3D Systems Inc.).

## **Users Review**

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A lot of people always spent their free time to vacation as well as go to the outside with them family or their friend. Do you know? Many a lot of people spent they free time just watching TV, or perhaps playing video games all day long. If you want to try to find a new activity here is look different you can read any book. It is really fun to suit your needs. If you enjoy the book you read you can spent all day long to reading a reserve. The book Rapid Manufacturing: An Industrial Revolution for the Digital Age it doesn't matter what good to read. There are a lot of people who recommended this book. These were enjoying reading this book. If you did not have enough space to develop this book you can buy the particular e-book. You can m0ore simply to read this book out of your smart phone. The price is not to fund but this book possesses high quality.

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