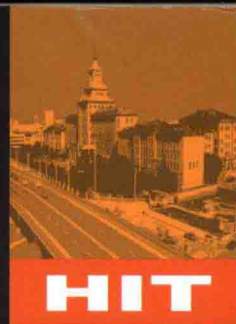




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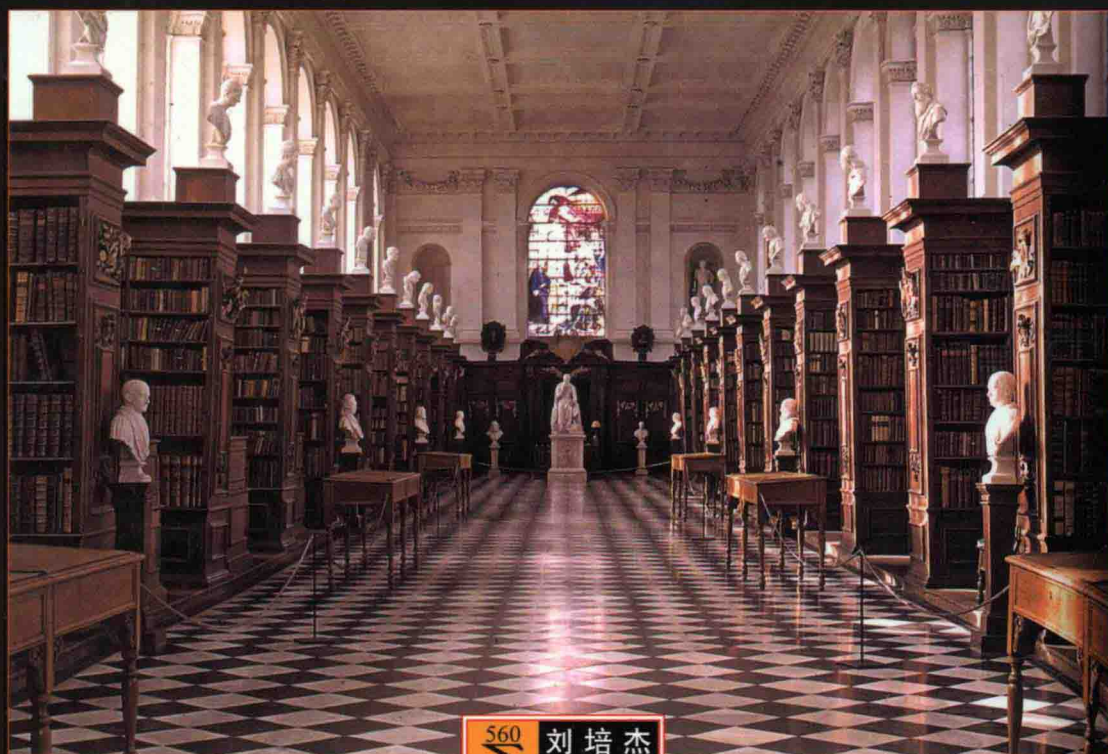
# 艾伦·图灵——他的工作 with 影响 (上)

[英] Cooper, S. B. (库珀) [荷] Leeuwen, J. V. (莱文) 著



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哈尔滨工业大学出版社 刘培杰数学工作室  
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邮 编: 150006  
联系电话: 0451-86281378 13904613167  
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# List of Contributors

**Alastair Abbott**

Department of Computer Science, The University of Auckland, Auckland, New Zealand

**Samson Abramsky**

Department of Computer Science, Oxford University, Oxford, UK

**Henk Barendregt**

Institute for Computing and Information Sciences, Faculty of Science, Radboud University, Nijmegen, The Netherlands

**Craig Bauer**

Department of Physical Sciences, York College of Pennsylvania, York, PA, USA

**Anthony Beavers**

Philosophy & Cognitive Science, The University of Evansville, Evansville, IN, USA

**Verónica Becher**

Departamento de Computación, Facultad de Ciencias Exactas y Naturales, Universidad de Buenos Aires and CONICET, Ciudad Universitaria, Buenos Aires, Argentina

**Nelson H. F. Beebe**

Department of Mathematics, University of Utah, Salt Lake City, UT, USA

**Henri Berestycki**

University of Chicago, and L'École des hautes études en sciences sociales (EHESS), Paris, France

**Meurig Beynon**

Department of Computer Science, University of Warwick, Coventry, UK

**Mark Bishop**

Department of Computing, Goldsmiths, University of London, New Cross, London, UK

**Lenore Blum**

School of Computer Science, Carnegie Mellon University, Pittsburgh, PA, USA

**Rodney Brooks**

Emeritus Professor of Robotics, Computer Science and Artificial Intelligence Laboratory, MIT, Cambridge, USA

**Cristian Calude**

Department of Computer Science, The University of Auckland, Auckland, New Zealand

**Gregory Chaitin**

Professor of Mathematics, Federal University of Rio de Janeiro (UFRJ), Rio de Janeiro, Argentina

**Jack Copeland**

School of Social and Political Sciences, University of Canterbury, Christchurch, New Zealand

**Martin Davis**

Department of Mathematics, University of California, Berkeley, CA, USA

**Daniel Dennett**

Center for Cognitive Studies, Tufts University, Medford, MA, USA

**Artur Ekert**

Mathematical Institute, University of Oxford, Oxford, UK and Centre for Quantum Technologies, National University of Singapore, Singapore

**Solomon Feferman**

Department of Mathematics, Stanford University, Stanford, CA, USA

**Luciano Floridi**

School of Humanities, University of Hertfordshire, Hertfordshire, and Department of Computer Science, University of Oxford, Oxford, UK

**Juliet Floyd**

Philosophy Department, Boston University, Boston, MA, USA

**Lance Fortnow**

School of Computer Science, Georgia Institute of Technology, Atlanta, USA

**Einar Fredriksson**

IOS Press, Amsterdam, The Netherlands

**Nicholas Gessler**

Information Science & Information Studies, Duke University, Durham, NC, USA

**Rainer Glaschick**

Paderborn, Germany

**David Harel**

Department of Computer Science and Applied Mathematics, The Weizmann Institute of Science, Rehovot, Israel

**John Harper**

Retired, Honorary Fellow of the British Computer Society

**Dennis Hejhal**

School of Mathematics, University of Minnesota, Minneapolis, MN, USA

**Andrew Hodges**

Wadham College, Oxford University, Oxford, UK

**Douglas Hofstadter**

College of Arts and Sciences, Center for Research on Concepts and Cognition, Indiana University, Bloomington, IN, USA

**Toby Howard**

School of Computer Science, The University of Manchester, Manchester, UK

**Cliff Jones**

School of Computing Science, Newcastle University, Newcastle, UK

**Richard Jozsa**

DAMTP, Centre for Mathematical Sciences, University of Cambridge, Cambridge, UK

**Jan van Leeuwen**

Department of Information and Computing Sciences, Utrecht University, Utrecht, The Netherlands

**David Levy**

Intelligent Toys Ltd, London, UK

**Philip Maini**

Centre for Mathematical Biology, Mathematical Institute, Oxford University, Oxford, UK

**Giulio Manzonetto**

LIPN - Institut Galilée, Université Paris-Nord, Villetaneuse, France

**Hans Meinhardt**

Max-Planck-Institut für Entwicklungsbiologie, Tübingen, Germany

**Peter Millican**

Faculty of Philosophy, Oxford University, Oxford, UK

**James D. Murray**

Professor Emeritus, Mathematical Institute, University of Oxford, Oxford, UK

**Andrew Odlyzko**

School of Mathematics, University of Minnesota, Minneapolis, MN, USA

**Christos Papadimitriou**

EECS Department, University of California, Berkeley, CA, USA

**Rinus Plasmeijer**

Institute for Computing and Information Sciences, Faculty of Science, Radboud University, Nijmegen, The Netherlands

**Antonino Raffone**

Department of Psychology, Sapienza University of Rome, Rome, Italy

**Michael Rathjen**

School of Mathematics, University of Leeds, Leeds, UK

**Bernard Richards**

Emeritus Professor of Medical Informatics, University of Manchester, Manchester, UK

**Anthony Edgar “Tony” Sale, FBCS (30 January 1931–28 August 2011)**

Founder member Bletchley Park Trust, leader Colossus rebuild project

**Peter T. Saunders**

Department of Mathematics, King’s College, Strand, London, UK



**Klaus Schmeh**

Gelsenkirchen, Germany

**Huma Shah**

School of Systems Engineering, University of Reading, Reading, UK

**Wilfried Sieg**

Department of Philosophy, Carnegie Mellon University, Pittsburgh, PA, USA

**Aaron Sloman**

School of Computer Science, University of Birmingham, Birmingham, UK

**Alan Slomson**

School of Mathematics, University of Leeds, Leeds, UK

**Paul Smolensky**

Department of Cognitive Science, The Johns Hopkins University, Baltimore, MD, USA

**Robert I. Soare**

Department of Mathematics, The University of Chicago, Chicago, IL, USA

**Ludwig Staiger**

Institut für Informatik, Martin-Luther-Universität, Halle, Germany

**Michael Stay**

Google Inc., CA, USA, and Department of Computer Science, The University of Auckland, Auckland, New Zealand

**Karl Svozil**

Institut für Theoretische Physik, Technische Universität Wien, Vienna, Austria

**Jonathan Swinton**

Physiomics plc, Oxford Science Park, Oxford, UK

**Christof Teuscher**

ECE Department, Portland State University, Portland, OR, USA

**K. Vela Velupillai**

Department of Economics, University of Trento, Trento, Italy

**Tom Vickers**

Retired, Manager computing service that developed and used the Pilot ACE, at National Physical Laboratory (NPL), Teddington, London, UK

**Paul Vitányi**

CWI, Amsterdam, The Netherlands

**Kevin Warwick**

School of Systems Engineering, University of Reading, Reading, UK

**Frode Weierud**

Le Pre Vert, Preveessin-Moens, France

**Philip Welch**

School of Mathematics, University of Bristol, Bristol, UK

**Jiří Wiedermann**

Institute of Computer Science, Academy of Sciences of the Czech Republic, Prague,  
Czech Republic

**Stephen Wolfram**

Wolfram Research, Champaign, IL, USA

**Mike Yates**

Emeritus Professor of Mathematics, University of Manchester, Manchester, UK

**Sandy L. Zabell**

Department of Mathematics, Northwestern University, Evanston, IL, USA



# Introduction

This is an unusual book. Its unusualness and complexity is appropriate for such an unusually inventive scientist, who was *personally* unique, as are so many creative thinkers.

Of the writings of Alan Turing selected here – which comprise most of those to be found in the Collected Works – a number have attracted a special interest, recognition and impact. And this is reflected in the number of commentaries accompanying his “computable numbers” paper, or the late great pieces on morphogenesis and the Turing test. But the collective power and energy of Turing is in the theoretical coherence of this collection of diverse writings. They are diverse in content, in style, in discipline, conveying different facets of a basic quest for understanding of ‘how the world computes’.

You will find here no anonymous papers by committees of researchers. Even the occasional unpublished writing by joint authors on closer inspection, turns out to be written by one man. The rewards of a visceral engagement with these original writings are on various levels. A researcher should always have first-hand experience of any writings referred to. But with Turing the sense of the man behind the formal words is ever present. The organic involvement with the technical material, the sense of its emergence – an important concept in relation to Turing – from some more basic level of thought, is ever with us.

And just as the work and the person are unusually at one, there is a personal organic involvement with the writings from many of those paying tribute to Turing’s thinking in this volume. We have tried to tap a wide spectrum of responses to Turing, people touched in many different ways by this strangely appealing man.

You will find here much to fascinate or surprise, both from Alan Turing and his commentators. The book intends to show the great value and impact Alan Turing’s work continues to have.

There is a living heterogeneity to the content, formatted by a major academic publisher, with the editors aiming at something with at least a hint of the newspaper’s immediacy and reporting of events in progress.

In this context, we hope our readers will excuse some rough edges. If you go to the “Afterword” first, you will see a candid description of the history of the “Collected Works of A.M. Turing”, from which this book grew. That invaluable four-volume work took over 40 years to complete. The present single volume, containing most of the Turing works and much else, had to be completed in less than three years, much of it under pressure from an anxious publisher, and with doubly anxious editors watching the pages of the calendar turn towards 2012 – and past. We are very grateful to the publisher for initiating this major contribution to the Turing centenary celebrations, and to the contributors and editorial support team at Elsevier for their enthusiasm for the project and their patience with, and understanding of, the difficulties and delays.

With a few more years, we might have done much better, though the result might have been less interesting, and certainly less timely! We took a decision early on to *not* try to subsume the Collected Works. The Collected Works continues to have its own unique place in the Turing scholar’s library, its value as an artefact matching the facsimile reproductions of Turing’s papers. And the editorial work is by thinkers much closer to Turing and his contemporaries than us, and more often than not no longer available to update their work.

So we have not tried to reproduce the style of an archive, rather aiming at a book to be read, to be dipped into for pure pleasure, to be enjoyed and browsed in office, on train or bus, or accompanying the proposer to some distant scientific meeting or place of relaxation. The rekeying of the historical items presented special challenges, but we hope the benefits in terms of readability and sense of contemporaneity made them worth taking on.

One omission from the Collected Works, spread as it was over four volumes and a decade of publishing, was a seriously comprehensive bibliography. This has been commented on by a number of people, and was something we were anxious to rectify. Turing's biographer, Andrew Hodges, has provided a characteristically careful and insightful summary of the literature at his "The Alan Turing Bibliography" webpage: <http://www.turing.org.uk/sources/biblio.html>.

We did think of asking Andrew for permission to reprint this. And then came an unexpected discovery, which was the gargantuan work – "Bibliography of Publications of Alan Mathison Turing" – by Professor Nelson Beebe of the University of Utah. This is a bibliography whose scope and attention to detail, and current updated status, is beyond anything we could have provided. For details, see the Bibliography page at the end of this book.

Sadly, we never met Alan Turing, though we have talked to those who did, some of them represented in this book. What we hope the reader will share with us is the excitement of an ongoing exploration of 'how the world computes', and of a distinct sense of Turing's visionary presence accompanying us as we carry forward, in many different ways, his uncompleted work. In the much-quoted words of the great man himself, from his 1950 *Mind* paper on *Computing Machinery and Intelligence*:

*We can only see a short distance ahead, but we can see plenty there that needs to be done.*

S. Barry Cooper  
Jan van Leeuwen

Spring 2013



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