

# **Tackling industrial complexity: the ideas that make a difference**

**Papers from the 2<sup>nd</sup> International Conference  
of the Manufacturing Complexity Network,  
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## PREFACE

Welcome to the second international conference being run by the Manufacturing Complexity Network, and to Downing College Cambridge. I hope that you find the two days interesting and informative.

There is still widespread debate about what exactly complexity is. John Casti, in his keynote address to the first conference, noted the importance of distinguishing between complex systems and complex adaptive systems. One reason was that each required distinct approaches. Not surprisingly people working in the whole broad area of complexity have found it necessary to develop a variety of approaches and techniques.

In putting together the second conference, we took the view that the emphasis should be on ideas that have delivered, or have the potential to deliver, results. Hence the theme of the conference is 'the ideas that make a difference'. In addition we felt that drawing too rigid a boundary around what to include was not only pointless but also counter-productive. The important criterion was whether or not the approach offered something that is actually or potentially useful to people who have to manage, run or work with the complexity encountered in all areas of manufacturing. As a consequence you will find a very broad spectrum of papers in these proceedings. They range from the mathematical to the qualitative. What they have in common is sound research and applicability.

Indeed we received a number of papers that are on the boundary of what might be described as 'complexity science'. They are included in two special sessions. One, entitled 'complexity related', deals with problems that arise because of the presence of complexity, and offers ways to deal with them; the other, 'Making things better – the manager's task in complexity' is being run in conjunction with the Management Professional Network of the Institute of Electrical Engineers. This session comprises three linked papers from members of the Network's Executive looking at some of the issues facing engineering managers in the future, and represents a departure from the usual Conference format. It is intended to be a forum for discussing issues raised by the contributors, rather than simply a sequence of unrelated presentations.

The papers for this conference were all double blind refereed and we would like to express our gratitude to the following for their help in this process:

Bob Malcolm, Chris Earl, Chris Hicks, David Snowden, Donald Maclean, Eric Van deMerwe, Ian McCarthy, Janet Efstathiou, Jeff Johnson, John Kay, John Mills, Keith Ridgway, Peter Allen, Pierpaolo Andriani, Robert MacIntosh.

We must also say thankyou to our sponsors GlaxoSmithKline and Manugistics for providing financial support.

We also particularly acknowledge the efforts of Jackie Ouchikh, Patricia Fritzinger and Helen Page-Carter for carrying out much of the organisation and administration associated with the event.

Finally, thanks to the delegates, without whom there would be no conference, and to our keynote speakers Michael Lyons and Dan Jones, and to our after dinner speaker David Cleevly.

We look forward to seeing you in Cambridge.

Gerry Frizelle  
Huw Richards

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