

# **Expertise and Decision Support**

# **Expertise and Decision Support**

**Edited by**

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# Preface

This volume brings together a range of contributors from Europe and North America. All contributions were especially commissioned with a view to elucidating a major multidisciplinary topic that is of concern to both academics and practitioners. The focus of the book is on expert judgment and its interaction with decision support systems. In the first part, the nature of expertise is discussed and characteristics of expert judges are described. Issues concerned with the evaluation of judgment in the psychological laboratory are assessed and contrasted with studies of expert judgment in ecologically valid contexts. In addition, issues concerned with eliciting and validating expert knowledge are discussed. Demonstrations of good judgmental performance are linked to situational factors such as feedback cycles, and measurement of coherence and reliability in expert judgment is introduced as a baseline determinant of good judgmental performance. Issues concerned with the representation of elicited expert knowledge in knowledge-based systems are evaluated and methods are described that have been shown to produce improvements in judgmental performance. Behavioral and mathematical ways of combining judgments from multiple experts are compared and contrasted.

Finally, the issues developed in the preceding contributions are focused on current controversies in decision support. Expert judgment is utilized as a major input into decision analysis, forecasting with statistical models, and expert systems. Should the role for judgment be minimized or should further “gateways” for judgment be opened? The overall conclusion is that expert judgment does and should play a major role in approaches to decision support—hence the importance of accurate evaluation of expertise.

This book will be of interest to those concerned with assessing and improving expert judgment in professional contexts, including academics in management science and psychology, software and knowledge engineers, decision analysts, and forecasting practitioners.

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