The knowledge engineering review

VOLUME 28 NUMBER 3 SEPTEMBER 2013

Special Issue: Visualization, Visual Representation and Reasoning

Guest editors: Mélanie Frappier Letitia Meynell James Robert Brown



The knowledge engineering review

Professor Simon Parsons, University of Liverpool, UK Professor Peter McBurney, Kings College London, UK TUTORIALS EDITOR Dr Iyad Rahwan, Masdar Institute of Science and Technology FOUNDING EDITOR Professor John Fox, University of Oxford, UK EDITORIAL BOARD Professor Jacky Baltes Dr Anthony Hunter University College London, UK University of Manitoba, Canada Professor J. Christopher Beck Professor Kate Larson University of Toronto, Canada University of Waterloo, Canada Dr Patrick Brézillon Professor Khaled Mellouli University Paris, France Institute des Hautes Edudes Commerciales, Tunisia Professor Odest Chad Jenkins Professor Ann Nicholson Brown University, USA Monash University, Australia Professor Xiaoping Chen Dr Ann Nowe University of Science and Technology of China VUB, Brussels, Belgium Dr Frans Coenen Professor Alun Preece Cardiff University, UK University of Liverpool, UK Dr Stephen Cranefield Dr Juan Antonio Rodriguez-Aguilar University of Otago, New Zealand Artificial Intelligence Research Institute, Spain Professor Keith Decker Dr Sandip Sen University of Delaware, USA University of Tulsa, USA Professor Noémie Elhadad Professor Jaime Sichman University of São Paulo, Brazil Columbia University, USA Dr Maria Fasli Professor Guillermo Simari Essex University, UK Universidad Nacional del Sur, Argentina Dr Yolanda Gil Professor Liz Sonenberg University of Southern California, USA University of Melbourne, Australia Professor C. Lee Giles Dr Mirko Viroli The Pennsylvania State University, USA University of Bologna - Cesena, Italy Dr Carla Gomes Dr Rogier van Eijk Cornell University, USA Utrecht University, the Netherlands

The Knowledge Engineering Review: Publication Policy

The Knowledge Engineering Review has been established to provide a general source of information and analysis in all areas relevant to research and development in knowledge based systems and applied artificial intelligence. The editors wish to encourage careful preparation of original papers analysing developments in the field. In particular we wish to see tutorial and survey articles, and commentary, criticism and debate. Primary research papers on specialised technical topics are unlikely to be appropriate but research papers on broad topics, such as development methodology or general evaluations of tools and techniques, are of interest. Descriptions of specific projects or particular computer systems will be considered if their presentation draws out general issues in the design, implementation or impact of knowledge based systems.

Subscriptions

FDITORS

THE KNOWLEDGE ENGINEERING REVIEW (ISSN 0269-8889) is published quarterly in March, June, September and December. Four parts form a volume. Orders, which must be accompanied by payment, should be sent to any bookseller or subscription agent, or direct to Cambridge University Press, The Edinburgh Building, Shaftesbury Road, Cambridge CB2 8RU. Subscriptions in the USA or Canada should be sent to Cambridge University Press, 100 Brook Hill Drive, West Nyack, New York 10994-2133. The subscription price (which includes delivery by air where appropriate plus electronic access to institutional subscribers, but excludes VAT) of volume 28, 2013 is £432 (US\$772 in the USA and Canada) for institutions; £119 (US\$205 in the USA and Canada) for individuals, including postage; separate parts cost £100 (US\$170 in the USA and Canada) plus postage. EU subscribers (outside the UK) who are not registered for VAT should add VAT at their country's rate. VAT registered subscribers should provide their VAT registration number.

Japanese prices for institutions are available from Kinokuniya Company Ltd, P.O. Box 55, Chitose, Tokyo 156, Japan. POSTMASTER: send address changes in USA and Canada to The Knowledge Engineering Review, Cambridge University Press, 100 Brook Hill Drive, West Nyack, New York 10994-2133.

Copying

This journal is registered with the Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923. Organisations in the USA, also registered with the C.C.C., may therefore copy material (beyond the limits permitted by sections 107 and 108 of US copyright law) subject to payment to C.C.C. of the per-copy fee of \$12.00. This consent does not extend to multiple copy for promotional or commercial purposes. Code 0269-8889/2013 \$12.50+0.10.

FOR ALL OTHER USE, permission should be sought from the Cambridge or New York offices of the Cambridge University Press.

CLAIMS for missing issues can only be considered if made immediately after receipt of the subsequent issue.

ADVERTISING: Details of advertising in The Knowledge Engineering Review may be obtained from the publisher.

Information on *The Knowledge Engineering Review* and all other Cambridge journals can be accessed via journals.cambridge.org. For further information on other Press titles access journals.cambridge.org

INTERNET ACCESS. This journal is included in the Cambridge Journals Online service which can be found at journals.cambridge.org/ker