

Curriculum Vitae

11 May 2012

Anthony G Cohn (Born: 19 August 1954)

School of Computing
University of Leeds
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Education:

1972-1975: University of Essex

BSc hons (1st Class) in Computing Science

1976-1979: University of Essex

SRC supported postgraduate student
Phd in Computer Science awarded July 1983:
Mechanising a Particularly Expressive Many Sorted Logic

British Computer Society

Chartered Information Technology Professional (CITP), 2005

Career:

1975-1976: Systems Programmer
Chelmsford Computer Centre, Marconi Research Labs, Great Baddow, Essex
1979-1989: Lecturer in Computer Science, University of Warwick
1990 - 1993: Senior Lecturer, School of Computer Studies, University of Leeds
1993 - 1996: Reader in Automated Reasoning, School of Computer Studies, Univ. of Leeds
1996 - *present*: Professor of Automated Reasoning, School of Computing, Univ. of Leeds.
1995 - 1999 Director of Research, School of Computing
1999 - 2004 Head of School of Computing
2009 - *ongoing* Director of Institute of Artificial Intelligence and Biological systems

Research Grants:

SERC £56,283, 1.8.84 - 30.7.86, *Very Expressive Many Sorted Inference Systems*, Sole Investigator: A G Cohn

(Industrial source undisclosed) £83,300, 1.10.84 - 30.9.86, *Expert Systems for Tooling Design*, Investigators: A G Cohn & J R Thomas

SERC £62,636 (plus £42,200 centrally purchased equipment), 3.11.86 - 2.11.89, *Exploring Many Sorted Logic*, Sole Investigator: A G Cohn

SERC £123,565, 1.10.89 - 30.9.92, *Representation and Inference in a Naive Physics Theory of Space and Time*, Sole Investigator: A G Cohn

SERC £4,499, 1.7.90 - 30.9.91

Many Sorted Unification: Visiting Fellowship for Prof A M Frisch, Beckman Inst. Univ of Illinois at Urbana Champaign, USA, Sole Investigator: A G Cohn

SERC £2650, 1.8.92 - 31.7.93, *Many Sorted Equation Solving: Visiting Fellowship for Prof A M Frisch, Beckman Inst. Univ of Illinois at Urbana Champaign, USA*, Sole Investigator: A G Cohn

EPSRC £231,550, 29.3.93 - 28.9.96, *Logical and Computational Aspects of Space and Time*, Sole Investigator: A G Cohn

EPSRC £159,792, 14.10.92 - 13.1.96, *Declarative Extensions of Logic Programming*, Sole Investigator: A G Cohn,

CEC (ESPRIT Basic Research Project) ECU 1,550,000 (Leeds' share: ECU30,000), 1.8.92 - 31.1.96, *MEDLAR 2*, Principal investigator at Leeds: A G Cohn

CEC (Exploratory Activity) ECU 49,000, 1.11.93 - 31.10.96, Consortium: Leeds(prime contractor), Sarbruecken and Cyprus, *KIT1012 COMPUCYPRUS*, Principal investigator at Leeds: A G Cohn

HEFCE/JISC New Technologies Initiative £37000, 1.8.94 - 28.2.96, *KnowTIS: Knowledge-Based Modular Timetable Information System*, Principal investigators: E Atwell and A G Cohn

CEC HCM Network, SPACENET, ECU 132,000, 1.12.94 - 30.11.97, Coordinator: University of Leeds, Principal scientist: A G Cohn.

EPSRC £188095, 1.8.95 - 31.7.98, *Logical Theories and Decision Procedures for Reasoning about Physical Systems* Sole Investigator: A G Cohn

EPSRC £91,341, 1.1.96 - 31.12.98, *Detecting and Exploiting Determinacy in Logic Programs*, Principal Investigator: P M Hill, Co-Investigator: A G Cohn

EPSRC £47742, 1.1.1997 - 12.1997, *Declarative language interface for constraint solving*, Principal Investigator: P M Hill; Co-investigator: A G Cohn

- EPSRC £167103, 1.10.98 - 9.2001, *Semantic-based software support for constraint logic programs*, Principal Investigator: P M Hill; Co-investigators: A G Cohn and B M Smith
- EPSRC £237700, 01.01.1999 – 6.2002, *Managing vagueness, uncertainty and granularity in spatial information systems*, Principal Investigator: A G Cohn, Co-investigator: S A Roberts
- EPSRC £206,505, 1.10.2000 – 9.2002, *Specification and Verification of ARM6*, Original Principal Investigator: G Birtwistle, Original Co-investigator: K M Hobley; New Principal Investigator: A G Cohn (from 1.1.03, after original investigators left academic sector).
- CEC, £364,710, 1.3.2001 – 7.2004, *Cognitive vision systems*, Principal Investigators: A G Cohn and D C Hogg
- Thames Water plc, £32150, 01.11.2000 - 9.2001 *A study into High Burst Occurrence* Investigators: A G Cohn, P M Mott, S A Roberts
- EPSRC £25,745, 1.9.2001 – 8.2002, *Escape analysis of object-orientated languages*, Principal Investigator: P M Hill; Co-investigator A G Cohn
- Ordnance Survey £19,673, 1.7.2002 - 10.2002, *Ontology of Built Environments*, Sole Investigator: A G Cohn; Co-author: B Bennett
- Ordnance Survey £19,952 1.3.2004 – 10.2004, *Iridium - foundations for a hydrographic ontology*, Principal Investigator: B Bennett, Co-Investigator: A G Cohn
- EPSRC £158,437, plus £9,000 from Yorkshire Water, and £4,000 from Ordnance Survey. 1.1.2005 – 31.12.2008, *Mapping the Underworld: Knowledge and Data Integration*, Principal Investigator: A G Cohn; Co-investigators: B Bennett and J G Stell.
- DTI Technology Programme £629,793, 1/1/2006 - 31/12/2009, *Visualising integrated information on buried assets to reduce streetworks (VISTA)*, Principal Investigator: A G Cohn; Co-investigators: B Bennett, D J Duke and J G Stell.
- EPSRC, £426,517, 1/3/2006-28/2/2009, *Learning about Activities from Video (LAViD)*, Principal Investigators: D C Hogg, A G Cohn
- Ordnance Survey, Versatile Support for Ontology Construction, Principal Investigator: V Dimitrova, Co-investigator: A G Cohn, £145643, 01/05/2007 – 03/2012
- EU FP7, Cognitive and Flexible learning system operating Robust Interpretation of Extended real sceNes by multi-sensors Datafusion, (Co-FRIEND) Principal Investigator: A G Cohn, Co-investigator: David Hogg, € 524,484, 01/02/2008 – 1/2011

Royal Society, Topics in Qualitative Spatio-temporal Reasoning, £2480.00, Principal Investigator: A G Cohn; 03/04/2008 – 6/2008

EPSRC, Geometric Abstractions for Scalable Program Analyzers, Principal Investigator: A G Cohn; Co-investigator: P M Hill, £51230, 01/10/2008 – 9/2009

EPSRC, Mapping the Underworld: Multi-Sensor Device Creation, Assessment, Protocols, £395610, Principal Investigator: A G Cohn; 01/09/2008 – 28/2/2013

Detection of Archaeological Residues using remote sensing Techniques (DART), AHRC/EPSRC Science Heritage funding (Large Grant) £534,833 + 3 studentships (146,887). Principal Investigator: A G Cohn; 01/04/2010 – 30/9/2013. The grant is collaborative with 3 other Universities (Bradford, Birmingham, Nottingham, Winchester); final distribution of monies still being determined.

Cognitive Workflow Capturing and Rendering with On-Body Sensor Networks (COGNITO) EU FP7, Co-PIs D C Hogg and A G Cohn, € 500689, 1/1/2010 - 31/12/2012

CONFLUENCE-2, £30,000, 1/3/2009-28/2/2012, Ordnance Survey, PI: V Dimitrova, Co-I: A G Cohn

Data management and mapping for Oman Earthwatch Programme, Consultancy, £12,000, PI: Dr A R Beck, co-I: A G Cohn, 1/1/2010 - 31/3/2010.

Phase 2 of VISTA trial in Scotland, £14,000 consultancy, PI: A G Cohn, 1/1/2010-31/7/2010

Faculty of Engineering University of Leeds “ICEPICK” Award, £3000, 2009.

KTS award, - £30,731 for secondment (of 20% A R Beck) to 1Spatial, 1/4/10-30/9/12

Visual Intelligence Grounded in Learning (VIGIL), subcontractor to SRI on DARPA Mind’s Eye program grant, (W911NF-10-C-0083).

Robustness by Autonomous Competence Enhancement (RACE), EU FP7, 518,874 EC contribution to Leeds, PI: A G Cohn, Co-I: D C Hogg, 1/12/2011 - 30/11/2014.

Approximate reasoning with qualitative spatial constraints involving landmarks, Australian Research Council, Co-Investigators: Sanjiang Li (University of Technology, Sydney), Jochen Renz (Australian National University, Canberra), Partner-Investigator: A G Cohn, AU\$150,000 (for all universities), 1/1/2012-31/12/2014.

DART ARSF data collection-Detection of Archaeological residues using remote sensing techniques, NERC ARSF Award No. GB 12-06, PI: A R Beck, Collaborators: A G Cohn, D Boyd, D Stott, G Ferrier, Q Carroll, T Overbury,

N Metje; no direct monetary value, but four hyperspectral flights to be flown in 2012.

New Technologies for Tunnelling and UNderground works (NeTTUN), 1/9/12 - 28/2/17, EC contribution: 9,974,600 Euros, 861,440 Euros for Leeds, PI: A G Cohn, Co-Is: D R Magee, V Dimitrova.

Participation in European Networks of Excellence:

Elected member of Executive Council of COMPULOG network (1992 –1995) and treasurer (1994 – 1995).

Esprit (FP4) Network of Excellence 22672 - MONET, Model-Based and Qualitative Reasoning Systems Network (June 1997 – May 2000), elected member of Executive and Research Committees.

Theory and Applications of Relational Structures as Knowledge Instruments (TARSKI), EU COST Action 274, 2001 – 2004, member of Management Committee.

ECVision Network of Excellence: European Research Network for Cognitive Vision Systems, IST Project 35454, April 2002 - March 2005, member node.

Node in German Academic Exchange Service (DAAD) funded International Quality Network on Spatial Cognition, 1 Jan 02 - 31 Dec 03.

Invited Presentations at International Meetings :

European Conference on AI (ECAI) Tutorial Lecturer on Qualitative Reasoning, Brighton (joint with P J Hayes) (July 1986).

Invited Lecturer at ECCAI summer school ACAI87, Oslo (July/August 1987).

Invited Speaker at AAAI Workshop on Principles of Hybrid Reasoning, St Paul, (Aug. 88).

Invited Speaker at AAAI Spring Symposium on Representation and Compilation in High Performance Theorem Proving, Stanford, (March 1989).

Invited Speaker at Third Workshop on the Semantics of Space, Time and Movement, Toulouse, Sept 1991 (talk given by my RF, David Randell in my unavoidable absence).

Invited Speaker at AAAI Fall Symposium on Principles of Hybrid Reasoning, Asilomar, California (Nov 91).

Invited Speaker at IFIP Workshop on the Role of Knowledge Representation in Qualitative Reasoning, Florida, (Feb 92).

Invited Tutorial to NVKI (Dutch AI Society), Amsterdam (March 92).

Invited Speaker at ERCIM(European Research Consortium for Informatics and Mathematics) Workshop on Theoretical and Experimental Aspects of Knowledge Representation, Pisa (May 92).

Invited Speaker at Fourth Workshop on the Semantics of Space, Time and Movement, Ch. de Bonas, France, Sept 1992.

Invited Speaker at Special Session on Spatial Reasoning, QUARDET93, Barcelona, June 1993

Invited Speaker at the 16th International Wittgenstein Symposium, Kirchberg/Wechsel, Austria, 1993

Invited Panelist, IJCAI Workshop on Spatial and Temporal Reasoning, Chambéry, France, August 1993.

Invited Panelist at COSIT Conference, Elba, Italy, September 1993.

Invited Speaker at the Workshop on the Topological Foundations of Cognitive Science, First International Summer Institute in Cognitive Science, Buffalo, USA, July 1994

Invited Speaker at the Workshop on the Ontology of Space, First International Summer Institute in Cognitive Science, Buffalo, USA, July 1994

Invited Panelist, ECAI Workshop on Spatial and Temporal Reasoning, Amsterdam, August 1994.

Invited Speaker at International School on Spatial Reasoning, Bolzano, Italy, Spring 1995.

Invited Speaker at 5th Toulouse International Workshop TIME, SPACE and MOVEMENT (TSM), Toulouse, June 1995.

Invited workshop organizer/speaker at ESLLI 95 (European Summer School on Logic, Language and Information), Barcelona.

Invited tutorial speaker at the conference on Formal and Practical Aspects of Practical Reasoning (FAPR), 1996, Bonn.

Invited Speaker at Artificial Intelligence and Symbolic Mathematical Computation (AISMC-3: Steyr, Austria, September 1996)

Invited Speaker at German AI Conference, KI-97 (Freiburg, Germany, September 1997)

Invited Speaker, National Science Foundation (NSF) special initiative workshop on spatial reasoning near Baltimore, USA in May 1997.

Invited lecture at the IJCAI'99 workshop on Adaptive Spatial Representations of Dynamic Environments

Invited lecture on Qualitative Spatial Reasoning at a Summer School in Bertinoro, Italy, in May 2000.

Invited Speaker, 19th Conference on Automated Deduction (CADE-19), Miami, July 2003.

Invited Speaker, AAAI Spring Symposium on Foundations and Applications of Spatial and Temporal Reasoning (FASTR), Stanford, March 2003.

Invited lecturer (5 x 1.5 hours), International Spatial Cognition Institute, 24 Aug and 6 Sep 03, Bad Zwischenahn, Germany.

Invited Tutorial Speaker and Cognitive Systems confence, Bled, Slovenia, October 2004.

Invited lecturer at Australian Logic Summer School, Canberra, December 13-17, 2004

Invited Speaker at KBCS-2004, Hyderabad, December 2004

Invited Speaker at CIT'04, Hyderabad, December 2004

Invited Speaker at Pattern Recognition and Computer Vision Colloquium, Czech Technical University, Spring 2005

Invited Speaker at Mapping the Human Body: Spatial Reasoning at the Interface between Human Anatomy and Geographic Information Science, Buffalo, 2005

Invited Tutorial Speaker, Third Summerschool on Cognitive Vision, Bonn, Germany, 2005

Keynote speaker, National Workshop on Trends in Advanced Computing, 2006 Tezpur, India, 23-24 January, 2006

Invited Speaker, European GeoInformatics Workshop, Edinburgh, March 2007

Invited Speaker, Towards Interoperability of Biomedical Ontologies, Dagstuhl Seminar 07132, March 2007, Germany

Invited Speaker CogRob 2008, The 6th International Cognitive Robotics Workshop, July 21-22, 2008 Patras, Greece

Invited Speaker, PCAR2008: Second International Symposium on Practical Cognitive Agents and Robots, 22 September 2008, Sydney, Australia

Keynote speaker 21st Australasian Joint Conference on Artificial Intelligence - AI-08, Auckland, New Zealand, 2008.

Invited Speaker Commonsense-2009, the Ninth International Symposium on Logical Formalization on Commonsense Reasoning, June 1-3, 2009, Fields Institute, Toronto, Canada.

Invited Speaker 15th Computer Vision Winter Workshop 2010 (CVWW-10), Nove Hradky Czech Republic, January 2010

Invited Speaker 23rd Florida Artificial Intelligence Research Society Conference (FLAIRS-23), Spatial-Temporal Reasoning TRack, May 2010

Invited Speaker International Conference on "Advances and Emerging Trends in Computing Technologies" June 21-24, 2010, Chennai, India

Invited Talk: IEEE SMC Workshop on Artificial Intelligence and Applications, Belfast, June 2010

Invited Speaker ECAI-10 Workshop on Artificial Intelligence and Logistics (AILog), Lisbon, August 2010

Keynote Speaker 4th International Conference on Knowledge Science, Engineering and Management (KSEM 2010) 1-3 September 2010 Belfast, Northern Ireland, UK

Invited Speaker, MIWAI'08, Thailand, December 2010.

Invited Speaker, 11th AI*IA Symposium on Artificial Intelligence Brescia (Italy), December 1-3, 2010

Keynote Speaker, 7th AIAI Joint Conference (Artificial Intelligence Applications and Innovations), September 2011, Corfu, Greece

Invited Speaker at SANKEN International Symposium 2012, January 12 and 13, 2012, at Osaka University, Japan

Keynote Speaker, 4th International Conference on Agents and Artificial Intelligence (ICAART), Portugal, February 2012

Keynote Talk, 2nd World Conference on Innovation and Computer Sciences, Efes, Turkey, May 2012

Invited Speaker, ICAPS 2012, the 22nd International Conference on Automated Planning and Scheduling, Brazil, June 2012.

Invited Presentations at National Meetings:

Invited Speaker at HP User Group conference, Warwick (July 1985).

Invited Speaker at British Computer Association for the Blind's conference on Expert systems, Handforth (May 1987).

Invited Speaker at British Theoretical Computer Science Symposium, Warwick (March 1986).

Invited Keynote Speaker at INFO User group conference, Aston (Sept. 1986).

Invited Speaker at Alvey Knowledge Based Systems Club Meeting, Oxford, (January 1987).

Invited Speaker at Meeting on Many Sorted Logic and its Applications in Computer Science, Leeds (Sept. 1988).

Invited lecture at BCS-ES Evening Seminar Series, London (October 1990).

Invited Speaker at AISB91 Conference, Leeds, April 1991.

Invited Panelist at AISB94 Workshop on Spatial Reasoning, Leeds 1994

Invited Keynote Speaker, AISB'04, University of Leeds.

Invited Keynote Speaker, AISB'07, University of Newcastle.

Invited Seminars:

Aberdeen University; Adelaide University, Australia; Albany University, USA; Australian National University; Birmingham University; BT, Ipswich; Birmingham University; Bremen University; Bristol University; CEAB, Blanes, Spain; Cambridge University; DFKI/Universitaet Saarlandes, Germany; Edinburgh University; Essex University; Exeter University; Griffiths University, Brisbane, Australia; HP Labs, Bristol; HP Labs, Palo Alto, USA; Hamburg University, Germany; Honeywell Inc, USA, IBM Stuttgart, Germany; IRIT, Université Paul Sabatier; Illinois University, USA; Imperial Cancer Research Fund, London; Imperial College; Karlsruhe University, Germany; Keele University; MCC, Texas, USA; McDonnell Douglas, St Louis, USA; Muenster University; Open University; Oxford University; QMC, University of London Rochester University, USA; SCI, Bristol; SRI, California; Strathclyde University; Sussex University; Sydney University, Australia; Technical University of Vienna; University of Bremen; University of Freiburg; University of Leeds; University of New South Wales; University of Technology Sydney; Xerox Parc, USA; York University.

Invited attendee at closed workshops and symposia:

Future of Expert Systems Workshop, Edinburgh (June 86).

Workshop on Non Standard Logics, Rodez, (June 1987).

AAAI Workshop on the Principles of Hybrid Reasoning, St Paul, USA (Aug 1988).

Workshop on Non Standard Logics, Rocamadour, (Oct. 1988).

AAAI Spring Symposium on Representation and Compilation in High Performance Theorem Proving, Stanford, March 1989.

3rd International Qualitative Physics Workshop, Stanford, August, 1989.

UNESCO sponsored symposium entitled "AI in Higher Education", Prague, Oct. 1989.

UNIF90 International Workshop on Unification, Leeds, July 1990.

5th International Qualitative Reasoning Workshop, Austin, May, 1991.

AAAI Fall Symposium on the Principles of Hybrid Reasoning, Asilomar, USA, Nov 1991

European Workshop on "Spatial Concepts: Connecting Cognitive Theories with Formal Representation", at ECAI, Vienna, August, 1992.

6th International Qualitative Reasoning Workshop, Edinburgh, August, 1992.

AAAI Fall Symposium on Design from Physical Principles, Cambridge, Mass., USA, Oct 1992.

7 Alvey/IED workshops.

International Workshop on Formal Ontology in Conceptual Analysis and Knowledge Representation, Padova, 1993

Specialist NCGIA Meeting on Time in Geographic Space, Lake Arrowhead, California, May 1993

IJCAI 93 Workshop on Automated Theorem Proving, Chambéry (France), August 1993.

IJCAI 93 Workshop on Spatial and Temporal Reasoning, Chambéry (France), August 1993.

7th International Qualitative Reasoning Workshop, Washington, 1993.

GISDATA Meeting on Regions with Undetermined Boundaries, Baden, Austria, May 1994

AAAI94 Workshop on Integrating Language and Vision, Seattle, August 1994

ECAI94 Workshop on Spatial and Temporal Reasoning, Amsterdam, August 1994

ECAI94 Workshop on Parts and Wholes, Amsterdam, August 1994

9th International Qualitative Reasoning Workshop, Amsterdam, 1995.

NCGIA meeting on “Formal Models of Common Sense Geographic Worlds”, San Marcos, Texas, October 30 – November 3, 1996.

IJCAI97 Workshop on Spatial and Temporal Reasoning. 1997

ICCV98 Workshop on Conceptual Description of Images (CDI-98), Mumbai, India, 1998.

Qualitative Reasoning: the Twelfth International Workshop, Cape Cod, MA, 1998.

“Scale and Detail in the Cognition of Geographic Information”, Project Varenus Workshop, Santa Barbara, California, May 14-16, 1998

ECAI 98 Workshop on Intelligent Virtual Environments, Brighton, 1998.

IJCAI-99 Workshop on Hot Topics in Spatial and Temporal Reasoning. 1999.

IJCAI-99 Workshop on Adaptive Spatial Representations of Dynamic Environments. 1999.

ECAI 2000 Workshop on Current Trends in Spatio-Temporal Reasoning. 2000.

Spatial Cognition 2002, 21-23 May 2002, Tutzing Castle, Germany

Dagstuhl seminar on Cognitive Vision systems, 03441, November 2003
Spatial Webs Workshop, Santa Barbara, December 2004
FB/TR 8 Spatial Cognition and the Spatial Intelligence and Learning Center
(SILC) International Spatial Cognition Workshop, New York, July 2009.
Workshop on Liquid Publications, Italy, January 2009 (Panelist)
ISO-Space workshop, Maryland, September 2010

Fellowships and other honours:

Elected Founding Fellow of European Coordinating Committee on Artificial Intelligence (FECCAI) 1999.
Elected member of UKCRC (An Expert Panel of the British Computer Society, the Institution of Electrical Engineers and the Council of Professors and Heads of Computing).
Fellow of the British Computer Society (FBCS)
Fellow of the Institute of Electrical Engineers (IEE)/Institute of Engineering Technology (FIET)
Fellow of the Society for the Study of Artificial Intelligence and Simulation of Behaviour (FAISB)
Fellow of the Association for Advancement of Artificial Intelligence (FAAAI)
The entry from the Cognitive Vision project (which I was a co-PI of) won the annual British Computer Society Machine Intelligence prize in December 2004.
Faculty of Engineering, University of Leeds Research Excellence Award, 2006

Supervised Completed Postgraduate Research Students:

A K Courtney (MPhil 1989); G Kelleher (PhD 1990, took over supervision on arrival at Leeds, Jan 90 – July 90) F Hovsepian (PhD 1992); D Randell (PhD 1991); C Johnson (MSc by dissertation awarded, 1989); G Saward (PhD 1991); G Lajos (PhD 1992, took over supervision after arrival at Leeds); I P Gent (PhD 1992); B Bennett (PhD 1998); A Adams (MSc by Dissertation with Distinction awarded, 1994), (co-supervisor with Dr M Tarver); G C Ralha (PhD 1996); J C L Ralha (PhD 1998); J Fernyhough (PhD 1996); S Wright (PhD 2000); S M Hazarika (PhD 2005); Z Al Qayyum (PhD 2008); M Sridhar (PhD 2011)

Research Assistants and Research Fellows:

G Footring (1984-6); C Jenkins (1984-5); F Hovsepian (1985-9); D Randell (1989-92); Z Cui (1990-92); P M Hill (1992 - 1996); N Gotts (1993 - 1996); J Gooday (1993 - 1996), G Lajos (1990 - 1993; 1994 - 1996), B Bennett (1995 - 2003); F

Ibanez (1995 -1996); A Isli (1997-1998); D Magee (1999 - 2003); A Galata (1999 - 2003); V Devin (1999 - 2003); P Santos (2003 - 2004); C Needham (2003 - 2004); Gaihua Fu (2005-2008); Anthony Beck (2006-2013); N Boukhelifa (2006-2009), S Hickinbotham (2006-8), P Harper(2006-9); R Denaux (2007-8); H Dee (2006-2009); R Fraile (2006-2009); H Chen (2009-12); A Behera (2010-2013); H Lodhi (2011-2012); R Dutta(2011-2012); F Gu (2011-2012); K Dubba (2012-2014)

Teaching:

I have taught at undergraduate and postgraduate level including courses on Artificial Intelligence, in particular Knowledge Representation, Machine Learning , as well as other aspects of computing including Operating Systems and Compilers. I have supervised undergraduate and MSc projects, been a member of the School Learning and Teaching Committee and its Examination Board (including chairing it whilst Head of School), Programme Director for Artificial intelligence modules and programmes.

Journal Refereeing:

Artificial Intelligence, Journal of the Association for Computer Machinery (JACM), Theoretical Computer Science, Journal of Automated Reasoning, Software Practice and Experience, International Journal of Approximate Reasoning, Artificial Intelligence, International Journal of Geographical Information Science, Artificial Intelligence Review, Intelligent Systems Engineering, Int. J. of Geographic Information Systems, Computer Journal, Bulletin of the IGPL, Spatial Cognition and Computation, Image and Vision Computing, Journal of Visual Languages, Knowledge Engineering Review, Journal of Philosophical Logic, Journal of Visual Computing.

I have also acted as referee for many publishers, conferences and workshops.

Services to Learned Societies and Research Centres

Local Organiser of AISB85, University of Warwick.

Elected Hon. Treasurer Society for the Study of Artificial Intelligence and Simulation of Behaviour (AISB), 1986 – 1988

Elected Hon. Vice Chairman Society for the Study of Artificial Intelligence and Simulation of Behaviour (AISB), 1989 – 1991

Elected Treasurer of European Coordinating Committee for Artificial Intelligence (ECCAI), 1988 – 1990

Alvey/IED Deep Knowledge Based Systems SIG chairman, 1987 - 1989 and representative on Alvey KBS Club Steering Committee, 1987 – 1989

Deputy Director, Centre for Theoretical Computer Science, University of Leeds, 1990 – 1992.

Elected Chairman of European Coordinating Committee for Artificial Intelligence (ECCAI), 1990 – 1992

Elected Hon. Chairman Society for the Study of Artificial Intelligence and Simulation of Behaviour (AISB), 1992 – 1994

Director, Centre for Theoretical Computer Science, University of Leeds, Aug. 1992 – July 1998.

Member of judging panel of the CPHC/BCS Distinguished Dissertation award scheme, 1998 – 2000

Trustee of International Joint Conferences on Artificial Intelligence (IJCAI), 1999 – 2006 (observer 2007-2009).

Member of Nominating Committee of European Coordinating Committee on AI for ECCAI Fellows, 2000 – 2002

President of *Principles of Knowledge Representation and Reasoning, Incorporated (KR, Inc.)*, 2000-2002

Director of KR, Inc. 2000 –

Member of Advisory Board of KR Inc, 2002 – 2006

President of *International Joint Conferences on Artificial Intelligence (IJCAI)*, 2003-2005

Member of Executive Committee of UKCRC (UK Computing Research Committee), 2005-9; 2011-2012.

Advisory Board Member of International Association for Ontology and its Applications (IAOA) 2010 —

Services to Grant Awarding Bodies/Universities:

Member of SERC ad hoc subcommittee of Logic for IT on Logics for Artificial Intelligence.

Reviewer for National Science Foundation (USA) grant applications.

Reviewer for SERC/EPSRC grant applications.

Reviewer for FWF (Austrian Science Foundation)

Reviewer for CNRS (French science research council)

Member of EPSRC College since 1997.

Member of CNRS Evaluation Committee for IRIT, Toulouse March 2002.

Reviewer for Science Foundation Ireland

Member of visiting evaluation panel for SFI Award, Cork, Ireland, November 2004.

Chair of International Knowledge Representation Review Panel for National Information Technology Computing Australia (NICTA), September 2005.

Member of visiting evaluation panel for SFI Award, Dublin, Ireland, September 2005.

Member of CNRS Evaluation Committee for IRIT, Toulouse November 2005.

Invited participant at Framework 7 planning workshop, Luxembourg, December 2005.

Reviewer of research output for a UK Computing Department, December 2005.

Reviewer for EU Framework 6 project, Brussels, January February 2006.

Reviewer of DFG SFB TR/8, Bremen, September 2006.

Reviewer of research output for a UK Computing Department, October 2006.

Reviewer of research output for a UK Computing Department, January 2007.

Reviewer for EU Framework 6 project, Brussels, January February 2007,

Reviewer for EU Framework 6 project, Toulouse, January April 2008

Reviewer for EU Framework 7 IP project, DFKI Saarbruecken, October 2009, Freiburg 2010, Stockholm 2011.

External member of Chair appointing committee at Universities of Cork, York, Exeter, Aberystwyth, Warwick, Oxford.

Member of CHIST-ERA Evaluation Panel for Data to Knowledge call, Paris, January and March 2012.

Member of UK Research Excellence Framework (REF) 2014 Sub Panel 11 (Computer Science and Informatics) of Panel B.

Consultancies (past and present):

Consultant on Expert Systems to an international metal process company.

Consultant on Knowledge Representation to BT plc.

Consultant to John Wiley & Sons.

Consultant to Manpower Services Commission.

Journal Editorships

Review Co-Editor of *Artificial Intelligence*, 1997 – 2004

Co-Editor-in-Chief, *Spatial Cognition and Computation*, 2003 –

Co-Editor-in-Chief of *Artificial Intelligence*, 2007 – 2010, re-elected for second and final term 2011-2014

Press Editorships

Editor-in-Chief, *AAAI Press*, 2004 –

Editorial Board Memberships

Data and Knowledge Engineering, 1994 – 1997

AI Communications (AICOM), 1997 – 2005

Policy Board of Electronic Transactions in Artificial Intelligence (ETAI) 1997

–

Advisory Board of new Springer Verlag series: “Cognitive Science and Artificial Intelligence”, 2003 –

Spatial Cognition and Computation, 1998 –

Journal of Applied Logic, 2003 –

Applied Ontology journal, 2005 – 2010

External Examinerships:

Overseas Research Degrees:

University of Amsterdam, PhD Thesis, 1992

Université Paul Sabatier, Toulouse, 1998.

Université Paul Sabatier, Toulouse, 2000.

University of Freiburg, 2001

Royal Melbourne Institute of Technology (RMIT), Australia, 2002.

Member of Habilitation Committee, Technical University of Vienna, 2003

Member of PhD committee, University of Ghent, Belgium, 2004

External reader of PhD at Columbia University, February 2005.

Examineur of PhD, INRIA/University of Nice, December 2005

University of Hyderabad, 2005.

Ludwig-Maximilians-Universitaet Muenchen, 2006.

Ghent University, March 2008

Ghent University, April 2008

Verona University, May 2009,

External Graduate Faculty member at University of Maine’s Graduate School and member of a Thesis committee

Sydney University of Technology, April 2010

Ghent University, April 2011

UK Research Degrees:

Edinburgh University Ph.d. Thesis, 1987.
Reviewer for CNA A higher degree proposal, 1987.
Sussex University DPhil Thesis, 1988.
Sussex University DPhil Thesis, 1989.
London University Ph.D. Thesis, 1989.
Edinburgh University Ph.d. Thesis, 1989.
Edinburgh University Ph.d. Thesis, 1990.
London University Ph.D. Thesis, 1990.
University of Essex, Ph.D. Thesis, 1991.
University of Nottingham Ph.D. Thesis, 1991.
CNA A Ph.D. Thesis, 1992.
Sussex University DPhil Thesis 1992.
University of Sheffield, Ph.D. Thesis, 1992.
University of Essex, Ph.D. Thesis, 1992.
University of Oxford, Ph.D. Thesis 1994.
University of London, Ph.D. thesis 1995.
University of Wales, Ph.D. thesis 1996.
University of London, Ph.D. thesis 1996.
University of Manchester, Ph.D. thesis 1997.
University of Exeter, Ph.D. thesis, 2001.
University of London, Ph.D. thesis, 2003.
University of London, Ph.D. thesis, 2007.

Taught Degrees:

MA in Cognitive Studies, MSc in Knowledge Based Systems, Sussex Univ, 1985-9
BSc in Linguistics and AI, BSc in AI and Computer Science, Edinburgh University, 1987-1991
MSc in Information Systems Engineering, South Bank University, 1990-94
MSc in Knowledge Based Systems, MSc in Computer Science/Studies, University of Essex, 1991-95
MSc in Cognitive Science, University of Manchester, 1994-96
B.Eng and M.Eng in Computing, and BSc and MSci in Computing and Maths, Imperial College, 1998 – 2001
BSc and MSci in Computer Science, University of Warwick, 2001 – 2005

MSc Computing Science, Imperial College, 2005 – 2009
BSc, MSci Computer Science, University of Liverpool, 2005 –
BEng, MEng, University of Southampton, 2006 – 2010
BSc Xi'an Jiaotong-Liverpool University, 2009-2013

Conference Chairmanships

Programme Chair, AISB89 Conference (Silver Jubilee of SSAISB).
Programme Chair, 11th European Conference on AI (ECAI 94), Amsterdam.
Workshop Chair, 14th Int. Joint Conf. on AI (IJCAI95), Montreal.
Programme Co-Chair, 6th International Conference on Principles of Knowledge Representation and Reasoning (KR'98), Trento, Italy
Conference Chair, 7th International Conference on Principles of Knowledge Representation and Reasoning (KR'00), Breckenridge, USA.
Conference Chair, 18th International Conference on Artificial Intelligence IJCAI'03), Acapulco, Mexico
Programme Co-Chair, 7th Conference on Spatial Information Theory, near Buffalo (COSIT'05), USA.
Co-Organiser, Dagstuhl Seminar “Spatial Cognition: Specialization and Integration”, 05491, 2005.
Co-Organiser, Dagstuhl Seminar “Logic and Probability for Scene Interpretation”, 07311, 2008.
Co-Organiser, 2009 AAI Spring Symposium on Benchmarking of Qualitative Spatial and Temporal Reasoning Systems Stanford University, CA, USA, March 23-25, 2009.
Co-organiser of Dagstuhl 10131 Spatial Representation and Reasoning in Language : Ontologies and Logics of Space (March 2010)
Co-organiser of Dagstuhl 10412 QSTRLib: A Benchmark Problem Repository for Qualitative Spatial and Temporal Reasoning (October 2010)
Member of Steering Committee of COSIT-11, USA, September 2011

Conference and Workshop Committee Memberships

Programme Committee Member for AISB87, Edinburgh.
Programme Committee Member for Alvey DKBS3,4,5,6,7,8 workshops.
Member of local organising committee European Conference on AI, ECAI98, Brighton.
Programme Committee Member, ECAI 90, Stockholm (European Conference on AI).

Co-organiser of “Logfit” workshop on Automated Theorem Proving, Leeds, (January 1991)

Programme Committee Member, World congress: intelligent manufacturing technology and systems (Yugoslavia 1992)

Programme Committee Member, 6th Intl. Qualitative Reasoning Workshop, Heriot Watt, 1992.

Programme Committee Member, Fifth Int. Conf on Industrial and Engineering Applications of Artificial Intelligence and Expert Systems (IAE/AIE 92), Paderborn, 1992

Programme Committee Member, World congress: intelligent manufacturing technology and systems, Yugoslavia, 1992

Programme Committee Member, Int. Workshop on Model Based Reasoning, Vienna, 1992.

Programme Committee Member, 12th Int Conference on AI and Expert Systems, Avignon 1992

Member of local organising committee European Conference on AI, ECAI92, Vienna.

Member Scientific Committee, ACAI93, Capri.

Member of International Joint Conference on AI (IJCAI) Advisory Board, for IJCAI93.

Programme Committee Member, 13th Int. Conference on AI and Expert Systems, Avignon 1993

Programme Committee Member, 4th International Conference on Knowledge Representation and Reasoning, KR94.

Programme Committee Member, AAI94 workshop on Spatial and Temporal Reasoning, Seattle, August 1994

Programme Committee Member, Conference on Automated Deduction (CADE), Nancy, July 1994

Programme Committee Member, 5th Toulouse International Workshop TIME, SPACE and MOVEMENT, Toulouse, June 1995.

Scientific Committee Member, COSIT95, Semmering, Austria, September 1995.

Programme Committee Member, FAPR - 96, 1st International conference on Formal and Applied Practical Reasoning, Bonn, 1996.

Programme Committee Member, IEA-AIE96 - 96, Ninth International Conference on Industrial and Engineering Applications of AI and Expert Systems, Fukuoka, Japan, June 1996

Programme Committee Member, ECAI 96, Budapest, August 1996

Programme Committee Member, CADE 96, Conference on Automated Deduction, New Brunswick, 1996

Programme Committee Member and organizer, AAAI Spring Symposium on Spatial Expressions, 1996

Programme Committee Member AISB Symposium on Automated Reasoning (Sussex 96)

Programme Committee Member Symposium on Data Handling (SDH-96, Delft)

Programme Committee Member International Joint Conference on Qualitative & Quantitative Practical Reasoning (ECSQARU/FAPR-97, Bad Honnef, Germany)

Programme Committee Member AISB Symposium on Automated Reasoning (Manchester 97)

Programme Committee Member Conference on Spatial Information Theory (COSIT-97, Pittsburgh)

Programme Committee Member Commonsense-98 (London)

Programme Committee Member First conference on Formal Ontology and Information Systems (FOIS'98), Trento, Italy.

Programme Committee Member Conference on Spatial Information Theory, COSIT-99, Stade, Germany September 1999.

Programme Committee Member AI and Maths 2000, Florida.

Programme Committee Member GIScience2000, Savannah, USA

Advisory committee of the Mexican AI conference, MICAI 2000

Programme Committee Member Formal Ontology and Information Systems (FOIS'01), Maine, October 2001

Advisory Board Member, KR'02

Programme Committee Member Conference on Spatial Information Theory, COSIT-03, Switzerland, September 2003.

Steering Committee Member, Cosit Conference Series, 2003 -

Programme Committee Member International Conference on Knowledge Representation and Reasoning, KR'04, Canada, June 2004

Programme Committee Member Formal Ontology and Information Systems (FOIS'04), Turin, October 2004.

Advisory Board Member, KR'04

Programme Committee Member Third International Conference on Geographic Information Science (GIScience'04, Maryland, USA)

Programme Committee Member Spatial Cognition 04 (Frauenchiemsee Island, Bavaria, Germany)

Advisory Board member ECAI 2006, Italy.

Programme Committee Member Formal Ontology and Information Systems (FOIS'06), Baltimore, 2006.

Programme Committee Member American Association for Artificial Intelligence Conference, AAAI-06, Boston, 2006.

Programme Committee Member International Cognitive Vision Workshop 2006, Austria

Programme Committee Member GiScience, Muenster, 2006

Programme Committee Member Int. Symp. Practical Cognitive Agents and Robots (PCAR), Perth, 2006

Programme Committee Member Terra Cognita, Athens, Georgia, 2006

Programme Committee Member Commonsense'07, London, 2007

Member of organising committee, Talking about and perceiving moving objects: exploring the bridge between natural language, perception and formal ontologies of space, workshop at Spatial Cognition Conference, Bremen 2006

Programme Committee Member, MIWAI'08, Thailand

PC member of Spatial Cognition 2008, Freiburg, September 15-19, 2008.

PC member of FOIS 2008, the 5th International Conference on Formal Ontology in Information Systems, Saarbruecken, Germany, Oct 31st - Nov 3rd 2008

PC member of 16th ACM SIGSPATIAL International Conference on Advances in Geographic Information Systems (ACM GIS 2008), November 5-7, 2008, Irvine, CA, USA

Steering Committee of UKCRC Grand Challenge GC5: Architecture of Brain and Mind, April 2008- onwards.

Programme Committee Member Conference on Spatial Information Theory, COSIT-07, Melbourne, Australia, September 2007.

Programme Committee and Advisory Committee Member Conference on Spatial Information Theory, COSIT-09, Brittany, France, September 2009.

Programme Committee Member Spatial Cognition 2010 Programme Committee, Mount Hood, August 2010

Programme Committee Member PCAR-10: Third International Symposium on Practical Cognitive Agents and Robots, Perth 2010

Impact

The Region Connection Calculus (RCC), developed in collaboration with my students and research fellows, is now the most widely used mereotopological calculus within the field of AI. Following an earlier version in 1989, the version published in the KR'92 conference has now garnered some 1480 Google Scholar citations, with many hundreds more to subsequent journal and further conference papers. Researchers around the world have added to the knowledge concerning the calculus, and extending it in various ways. It has also been implemented in a wide variety of platforms and systems, including CYC (Cycorp Inc, USA) - a multi-million fact repository of commonsense knowledge and other ontologies ; SNARK (SRI USA) - a theorem prover that has been used in a variety of DARPA and other funded projects; PelletSpatial , a Description Logic/OWL reasoner for the de facto standard Protege ontology editor widely used for building ontologies for the semantic web; SPARQ.

A system to deliver online realtime utility records based on work conducted in the VISTA and Mapping the Underworld projects has been launched in Scotland in March 2012 by the Scottish Road Works Register.

PUBLICATIONS:

My publications according to Google Scholar can be found at: <http://tinyurl.com/agc-pubs>

Books:

1. A G Cohn and J R Thomas, *Artificial Intelligence and its Applications*, (eds), 291 pp, Wiley, Chichester, 1986.
2. H Mortimer, *Logic of Induction*, (translation editors A G Cohn & I D Craig), Ellis Horwood, Chichester, 182 pp, 1988.
3. A G Cohn, *Proceedings of the Seventh Conference of the Society for the Study of Artificial Intelligence and Simulation of Behaviour*, (editor), Pitman/Morgan Kaufmann, London/Los Altos, 233 pp, 1989
4. A G Cohn, *Proc. 11th European Conference on AI*, John Wiley, Chichester, 832 pp, 1994 (Editor)
5. A G Cohn, L Schubert, S Shapiro, (editors). *Principles of Knowledge Representation and Reasoning: Proceedings of the 4th International Conference (KR98)* Morgan Kaufman. 1998.
6. A G Cohn, F Giunchiglia and B Selman (editors) *Principles of Knowledge Representation and Reasoning: Proceedings of the 7th International Conference (KR 2000)*, pp. 15-25 Morgan Kaufman. 2000.

7. A G Cohn and D M Mark (eds) ,Spatial Information Theory International Conference, COSIT 2005, Lecture Notes in Computer Science , 3693 , Springer, (2005).

Papers in Refereed Journals:

8. A G Cohn, Some Progress in Artificial Intelligence, *Journal of Electro Technology*, vol XXXI, pp 1-16, 1987
9. A G Cohn, A More Expressive Formulation of Many Sorted Logic, *Journal of Automated Reasoning*, vol 3, pp 113-200, 1987
10. A G Cohn, Taxonomic Reasoning with Many Sorted Logics, *Artificial Intelligence Review*, vol 3, pp 89-128, 1989.
11. A G Cohn, Approaches to Qualitative Reasoning, *Artificial Intelligence Review*, vol 3, pp 177-232, 1989.
12. D A Randell & A G Cohn, Exploiting Lattices in a Theory of Space and Time, *Computers and Mathematics with Applications*, vol 23(6-9) pp 459-476, 1992.
13. A G Cohn, Completing Sort Hierarchies, *Computers and Mathematics with Applications*, vol 23(6-9) pp 477-491, 1992.
14. A G Cohn, J M Gooday, B Bennett and N M Gotts, A logical approach to representing and reasoning about space, in special issue of *Artificial Intelligence Review* on Integration of Natural Language and Vision Processing, Volume 9(4-5), pp 255-259, 1995, (simultaneous publication of [166]).
15. A G Cohn, D A Randell & Z Cui, Taxonomies of Logically Defined Qualitative Spatial Relations, *International Journal of Human-Computer Studies*, vol 43, Issue 5-6, pp 831-846, 1995.
16. A G Cohn, The Challenge of Qualitative Spatial Reasoning, Special issue: Symposium on Artificial Intelligence, *ACM Computing Surveys*, vol. 27, pp. 223-325, September, 1995.
17. J M Gooday and A G Cohn, Using spatial logic to describe visual languages, in special issue of *Artificial Intelligence Review* on Integration of Natural Language and Vision Processing, Volume 10(1-2), pp. 171-186, 1996 (simultaneous publication of [167]).
18. N M Gotts, J M Gooday and A G Cohn, A Connecion Based Approach to Common-Sense Topological Description and Reasoning, *The Monist*, Volume 79(1), pp 51-75, 1996.
19. A G Cohn, B Bennett, J Gooday, N M Gotts, Qualitative spatial representation and reasoning with the region connection calculus. *Geoinformatica*, vol. 1, pp. 1-44. 1997.

20. E Davis, N M Gotts, A G Cohn, Constraint networks of topological relations and convexity. *Constraints*, vol. 4, pp. 241-280. 1999.
21. A Isli, A G Cohn, A new approach to cyclic ordering of 2D orientations using ternary relation algebras, *Artificial Intelligence*, vol. 122, pp. 137-187. 2000.
22. J Fernyhough, A G Cohn, D C Hogg, Constructing qualitative event models automatically from video input, *Image and Vision Computing*, vol. 18, pp. 81-103. 2000.
23. A G Cohn, S M Hazarika, Qualitative spatial representation and reasoning: an overview, *Fundamenta Informaticae*, vol. 45, pp. 1-29. 2001.
24. B Brandon, A G Cohn, F Wolter, M Zakharyashev, Multi-dimensional modal logic as a framework for spatio-temporal reasoning, *Applied Intelligence*, vol. 17, pp. 239-251. 2002.
25. M Cristani, A G Cohn, SpaceML: a mark-up language for spatial knowledge, *Journal of Visual Languages and Computing*, vol. 13, pp. 97-116. 2002.
26. S Wright, N J Ward, A G Cohn, Enhanced presence in driving simulators using autonomous traffic with virtual personalities, *Presence: Teleoperators and Virtual Environments*, vol. 11, pp. 578-590. 2002.
27. A G Cohn, A C Varzi, Mereotopological connection, *Journal of Philosophical Logic*, vol. 32, pp. 357-390. 2003.
28. C. Needham, P. Santos, D. R. Magee, V. Devin, D. C. Hogg and A. G. Cohn, Protocols from Perceptual Observations, *Artificial Intelligence*, 167 , pp 103-136, (2005).
29. B Bennett, A G Cohn and D R Magee, Enforcing global spatio-temporal consistency to enhance reliability of moving object tracking and classification. *Kuenstliche Intelligenz*, vol. 2/2005, pp. 32-35. 2005.
30. Representing Moving Objects in Computer-Based Expert Systems: The Overtake Event Example N. Van de Weghe, A. G. Cohn, P. De Maeyer and F. Witlox *Expert Systems with Applications*, 29 (4), pp 977-983, (November 2005).
31. N. Van de Weghe, A. G. Cohn, G. De Tre and P. De Maeyer, A Qualitative Trajectory Calculus as a Basis for Representing Moving Objects in Geographical Information Systems, *Cybernetics and Control*, vol. 35, pp. 97-119. 2006.
32. A Qualitative Trajectory Calculus as a Basis for Representing Moving Objects in Geographical Information Systems, N. Van de Weghe, A. G. Cohn, G. De Tre and P. De Maeyer *Control and Cybernetics*, vol. 35, No. 1, 2006.

33. Enhanced tracking and recognition of moving objects by reasoning about spatio-temporal continuity, Brandon Bennett, Derek Magee, Anthony Cohn and David Hogg, *Image and Vision Computing*, vol. 26, pp. 67-81. 2008.
34. Alexander C. D. Royal, Phil R. Atkins, Michael J. Brennan, David N. Chapman, Huanhuan Chen, Anthony G. Cohn, Kae Y. Foo, Kevin F. Goddard, Russell Hayes, Tong Hao, Paul L. Lewin, Nicole Metje, Jen M. Muggleton, Adham Najj, Giovanni Orlando, Steve R. Pennock, Miles A. Redfern, Adrian J. Saul, Steve G. Swingler, Ping Wang, and Christopher D. F. Rogers, *Site Assessment of Multiple-Sensor Approaches for Buried Utility Detection*, *International Journal of Geophysics*, vol. 2011, Article ID 496123, 19 pages, 2011. doi:10.1155/2011/496123
35. Implementing a qualitative calculus to analyse moving point objects, M. Delafontaine, A. G. Cohn and N. V. Weghe , *Expert Systems with Applications*, 38 (5), pp 5187-5196, 2011.
36. Inferring additional knowledge from QTCN relations, M. Delafontaine, P. Bogaert, A. G. Cohn, F. Witlox, P. D. Maeyer and N. V. Weghe, *Inf. Sci.*, 181 (9), pp 1573-1590, 2011
37. Ronald Denaux, Catherine Dolbear, Glen Hart, Vania Dimitrova and Anthony Cohn, Supporting domain experts to construct conceptual ontologies: A holistic approach in *Journal of Web Semantics: Science, Services and Agents on the World Wide Web*, vol 9., no. 2, pp. 113-127, Jul. 2011
38. Hao, T., Rogers, C. D. F., Metje, N., Chapman, D. N., Muggleton, J. M., Foo, K. Y., Wang, P., Pennock, S. R., Atkins, P. R., Swingler, S. G., Parker, J., Costello, S. B., Burrow, M. P. N., Anspach, J. H., Armitage, R. J., Cohn, A. G., Goddard, K. F., Lewin, P. L., Orlando, G., Redfern, M. A., Royal, A. C. D. and Saul, A. J. (2012) Condition assessment of the buried utility service infrastructure. *Tunnelling and Underground Space Technology*, 28 (1). pp. 331-344. ISSN 0886-7798
39. Rogers, C. D. F., Hao, T., Costello, S. B., Burrow, M. P. N., Metje, N., Chapman, D. N., Parker, J., Armitage, R. J., Anspach, J. H., Muggleton, J. M., Foo, K. Y., Wang, P., Pennock, S. R., Atkins, P. R., Swingler, S. G., Cohn, A. G., Goddard, K., Lewin, P. L., Orlando, G., Redfern, M. A., Royal, A. C. D. and Saul, A. J. (2012) Condition assessment of the surface and buried infrastructure – A proposal for integration. *Tunnelling and Underground Space Technology*, 28 (1). pp. 202-211. ISSN 0886-7798
40. Hannah M. Dee, Anthony G. Cohn, David C. Hogg, Building semantic scene models from unconstrained video, *Computer Vision and Image Understanding*, Volume 116, Issue 3, March 2012, Pages 446-456, ISSN 1077-3142, 10.1016/j.cviu.2011.09.005.
41. Reasoning with Topological and Directional Spatial Information, S. Li and A. G. Cohn, *Computational Intelligence*, (To Appear).

Contributions to Professional Journals:

42. Royal, A.C.D., Rogers, C.D.F., Chapman, D.N., Metje, N., Atkins, P.R., Brennan, M.J., Muggleton, J.M., Cohn, A.G., Swingler, S.G., Pennock, S.R., Redfern, M.A., Saul, A.J. Mapping the Underworld meets Subsurface Utility Engineering, *GEOCon-nexionUK*, June/July, Volume 8, issue 3, 2010
43. Royal, A.C.D., Rogers, C.D.F., Atkins, P.R., Brennan, M.J., Chapman, D.N., Chen, H., Cohn, A.G., Curioni, G., Foo, K.Y., Goddard, K., Hao, T., Lewin, P.L., Metje, N., Muggleton, J.M., Naji, A., Pennock, S.R., Redfern, M.A., Saul, A.J., Swingler, S.G. and Wang, P. Mapping the Underworld: Location, Mapping and Positioning without Excavation, *Climate Control Middle East*, July 2010,

Other Contributions to Journals:

44. A M Frisch & A G Cohn, Thoughts and Afterthoughts on the 1988 AAAI Workshop on Hybrid Reasoning, *AI Magazine*, vol 11(5), pp 77-83 1990.
45. Royal, A.C.D, Rogers, C.D.F., Atkins, P., Brennan, M., Chapman, D., Cohn, A., Lewin, P., Metje, N., Muggleton, J., Pennock, S., Redfern, M.A., Saul, A. and Swingler, S. (2010). Briefing: Stakeholder Perspectives of Buried Utility Mapping. *Municipal Engineer* 163 Issue ME1, p3 7. ISSN: 0965-0903, E-ISSN: 1751-7699. DOI: <http://dx.doi.org/10.1680/muen.2010.163.1.3>

Refereed Articles in Published Conference and Workshop Proceedings:

46. A G Cohn, Mechanising a Particularly Expressive Many Sorted Logic, *Proc IJCAI 6*, Morgan Kaufmann, Los Altos, pp 162-164, 1979
47. A G Cohn, Improving the Expressiveness of Many Sorted Logic, *Proc AAAI-83*, Morgan Kaufmann, Los Altos, pp 84-87, 1983
48. A G Cohn, On the Solution of Schubert's Steamroller in Many Sorted Logic, *Proc IJCAI 9*, Morgan Kaufmann, Los Altos, pp 1169-1174, 1985
49. A G Cohn, Deep Knowledge Representation Techniques, *Expert Systems 85*, (ed) M Merry, Cambridge University Press, Cambridge, pp 299 - 306, 1985
50. A G Cohn, Many Sorted Logic = Unsorted Logic + Control?, *Expert Systems 86*, (ed) M A Bramer, Cambridge University Press, Cambridge, pp 184 - 194, 1986
51. A G Cohn, On the appearance of sortal literals: a non substitutional framework for hybrid reasoning, *Principles of Knowledge Representation and Reasoning*, R Brachman, H Levesque & R Reiter (eds), Morgan Kaufmann, Los Altos, pp 357-368, 1989
52. D A Randell & A G Cohn, Modelling Topological and Metrical Properties in Physical Processes, *Principles of Knowledge Representation and Reasoning*, R Brachman, H Levesque & R Reiter (eds), Morgan Kaufmann, Los Altos, pp 55-66, 1989

53. J R Thomas & A G Cohn, An expert system for hollow extrusion die design, *Proc Artificial Intelligence and Expert Systems in Manufacturing*, IFS, Kempston, pp 307-314, 1990 (also appears as Report RR150, Dept Computer Science, University of Warwick).
54. D A Randell, A G Cohn and Z Cui, Computing Transitivity Tables: a Challenge for Automated Theorem Provers, *Proc. CADE 11*, Springer Verlag, pp 786 - 790, 1992.
55. Z Cui, A G Cohn and D A Randell, Qualitative Simulation based on a Logical Formalism of Space and Time, *Proc. AAAI-92*, AAAI Press, Menlo Park, California, pp 679 – 684, 1992 .
56. A G Cohn, A Many Sorted Logic with Possibly Empty Sorts, *Proc. CADE 11*, Springer Verlag, pp 633 - 647, 1992.
57. A M Frisch and A G Cohn, An Abstract View of Sorted Unification, *Proc. CADE 11*, Springer Verlag, pp 178 - 192, 1992.
58. G Kelleher and A G Cohn, Automatically Synthesising Domain Constraints from Operator Descriptions, *Proc ECAI*, John Wiley, Chichester, pp 653-655, 1992.
59. D A Randell, A G Cohn and Z Cui, An Interval Logic for Space based on “Connection”, *Proc ECAI*, John Wiley, Chichester, pp 394-398, 1992.
60. D A Randell, Z Cui and A G Cohn, A Spatial Logic based on Regions and Connection, in *Proc 3rd Int. Conf on Knowledge Representation and Reasoning*, Boston, pp 165 – 176, Morgan Kaufmann, San Mateo, 1992.
61. Z Cui, A G Cohn and D A Randell, Qualitative and Topological Relationships in Spatial Databases, in *Advances in Spatial Databases*, Lecture Notes in Computer Science No. 692, ed D Abel and B C Ooi, Springer Verlag, Berlin, pp 296-315, 1993
62. F Lehmann and A G Cohn, The Egg/Yolk Reliability Hierarchy: Data Translation and Model Integration Using Ordered Sorts with Prototypes, *Proc 3rd Int Conf. on Knowledge Management (CIKM94)*, Gaithersburg, Maryland, ACM Press, pp 272-279, 1994.
63. A G Cohn and N M Gotts, Spatial Regions with Undetermined Boundaries, In: N Pissinou and K Makki (eds) *Proceedings of the Second ACM Workshop on Advances in Geographic Information Systems*, ACM Press, pp. 52-59, 1994
64. A G Cohn, A Hierarchical Representation of Qualitative Shape based on Connection and Convexity, *in Spatial Information Theory: a theoretical basis for GIS*, *Proc. COSIT95*, ed A Frank & W Kuhn, Springer Verlag, LNCS, pp 311-326, September 1995

65. A G Cohn, N M Gotts, Representing spatial vagueness : a mereological approach in: Principles of Knowledge Representation and Reasoning: Proceedings of the 5th International Conference (KR96), pp. 230-241 Morgan Kaufman. 1996.
66. J M Gooday, A G Cohn, Transition-based qualitative simulation in: Proceedings of the 10th International Workshop on Qualitative Reasoning, pp. 74-82 AAAI Press. 1996.
67. A G Cohn, N M Gotts, The ‘egg-yolk’ representation of regions with indeterminate boundaries in: Burrough, P & Frank, A M (editors) Proceedings GISDATA Specialist Meeting on Spatial Objects with Undetermined Boundaries, pp. 171-187 Francis Taylor. 1996.
68. J H Fernyhough, A G Cohn, D C Hogg, Qualitative reasoning for automated traffic surveillance in: Proceedings of the 10th International Workshop on Qualitative Reasoning, pp. 40-42 AAAI Press. 1996.
69. J H Fernyhough, A G Cohn, D C Hogg, . Generation of semantic regions from image sequences in: Buxton, B & Cipolla, R (editors) Computer Vision ECCV’96, pp. 475-478 Springer-Verlag. 1996.
70. A G Cohn, B Bennett, J M Gooday, N M Gotts, Representing and reasoning with qualitative spatial relations about regions in: Stock, O (editors) Spatial and Temporal Reasoning, pp. 97-134 Kluwer Academic Publishers. 1997.
71. B Bennett, A G Cohn, A Isli, A logical approach to incorporating qualitative spatial reasoning in: Hirtle, S C & Frank, A U (editors) Spatial Information Theory: A Theoretical Basis for GIS, pp. 503-504 Springer-Verlag. 1997.
72. B Bennett, A G Cohn, A Isli, Combining multiple representations in a spatial reasoning system in: Proceedings of the 9th IEEE International Conference on Tools with Artificial Intelligence - ICTAI’97, pp. 314-322. 1997.
73. J H Fernyhough, A G Cohn, D C Hogg, Building qualitative event models automatically from visual input in: 6th IEEE International Conference on Computer Vision (ICCV’98), pp. 350-355 IEEE Computer Society Press. 1998.
74. A G Cohn, A Varzi, Connection relations in mereotopology in: Prade, H (editors) Proceedings of ECAI’98, pp. 150-154 John Wiley & Sons. 1998.
75. A Isli, A G Cohn, Qualitative spatial reasoning a la Allen: an algebra for cyclic ordering of 2D orientations in: Feng Zhao and Yip, Kenneth (editors) Qualitative Reasoning: the Twelfth International Workshop, AAAI Technical Report WS-98-01, pp. 65-76 AAAI Press. 1998.

76. A Isli, A G Cohn, An algebra for cyclic ordering of 2D orientations in: Proceedings of the 15th American Conference on Artificial Intelligence (AAAI), pp. 643-649 AAAI Press. 1998.
77. B Bennett, A Isli, A G Cohn, A system handling RCC-8 queries on 2D regions representable in the closure algebra of half-planes in: Proceedings of the 11th International Conference on Industrial and Engineering Applications of Artificial Intelligence & Expert Systems (IEA-AIE), pp. 281-290 Springer-Verlag. 1998.
78. A G Cohn, A C Varzi, Modes of connection, in: Spatial Information Theory - Cognitive and Computational Foundations of Geographic Information Science, pp. 299-314 Springer-Verlag. 1999.
79. B Bennett, A G Cohn, Consistency of topological relations in the presence of convexity constraints in: IJCAI-99 Workshop on Hot Topics in Spatial and Temporal Reasoning. 1999.
80. B Bennett, A G Cohn, Multi-dimensional multi-modal logics as a framework for spatio-temporal reasoning in: IJCAI-99 Workshop on Hot Topics in Spatial and Temporal Reasoning. 1999.
81. M Cristani, B Bennett, A G Cohn, Spatial locations via morpho-mereology in: Cohn AG, Giunchiglia F and Selman B (editors) Principles of Knowledge Representation and Reasoning: Proceedings of the 7th International Conference (KR 2000), pp. 15-25 Morgan Kaufman. 2000.
82. B Bennett, A G Cohn, P Torrini, S M Hazarika, Describing rigid body motions in a qualitative theory of spatial region in: Proceedings AAAI-2000 - the 17th National Conference on Artificial Intelligence, pp. 503-509 AAAI Press. 2000.
83. B Bennett, A G Cohn, P Torrini, S M Hazarika, A foundation for region-based qualitative geometry in: Proceedings of the 14th European Conference on Artificial Intelligence, pp. 204-208 IOS Press. 2000.
84. S Wright, A G Cohn, N J Ward, DRIVERSIM: a probabilistic approach to realistic traffic generation in: Driving Simulation Conference, pp. 267-274. 2000.
85. A G Cohn, S M Hazarika, Continuous transitions in mereotopology in: Proceedings of Common Sense 2001, Fifth Symposium on Logical Formalizations of Commonsense Reasoning. 2001.
86. S M Hazarika, A G Cohn, Qualitative spatio-temporal continuity in: Montello, D R (editors) Spatial Information Theory: Foundations of Geographic Information Science; Proceedings of COSIT'01, pp. 92-107 Springer-Verlag. 2001.

87. A G Cohn, Formalising bio-spatial knowledge in: Welty, C. & Smith, B (editors) Proceedings of the 2nd International Conference on Formal Ontology in Information Systems (FOIS'01), pp. 198-209 ACM Press. 2001.
88. S M Hazarika, A G Cohn, Abducing qualitative spatio-temporal histories from partial observations in: Fensel, D, Guinchiglia, F, McGuinness, D & Williams, M-A (editors) Principles of Knowledge Representation and Reasoning: Proceedings of the Eighth International Conference (KR2002), pp. 14-25 Morgan Kaufman. 2002.
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