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Education and Work

2005.2-present Associate Professor, Seoul National University
2007.11-present Adjunct Professor, National University of Ireland, Galway
1998.3-2005.1 Assistant & Associate Professor, Dankook University
1996.12-1998.2 Fellow, The University of Georgia
1996 Ph.D. The University of Georgia
1993 M.S. The University of Georgia
1985 B.S. Korea University

Research topics

Medical Informatics, Semantic Web, Ontology Engineering, Knowledge Representation

Research Projects

December 2006 - November 2008 Semi-Automatic Crawling of Conference Data and Inferring of Scholarly Meanings, Korea Research Foundation
March 2005 - February 2009 Semantic Service Agent technology development for Next Generation Web, Korea Ministry of Information and Telecommunication
November 2005 - October 2010 Ontology-based interoperable EHR technology research, Korea Ministry of Health and Welfare
December 2004 - November 2005 Ontology based Knowledge Management Technology for Medical Science, Korea Ministry of Health and Welfare
May 2004 - December 2004 Deontic Behavioral Control for Intelligent Robot, Electronic & Telecommunications Research Institute, Korea
March 2004 - February 2004 Non-monotonic Logic based business knowledge representation and processing, Electronics & Telecommunications Research Institute, Korea
March 2004 - February 2005 Development of Semantic Web Based Total Information Management Platform, HANUL Information INC, Korea
March 2003 - April 2005 Ontology based Inference technology for Oriental Medical Knowledge, Korea Ministry of Health and Welfare
March 2003 - December 2003 Study on the interconnection Web Services and Semantic Web, Electronics & Telecommunications Research Institute, Korea

January 2001 - November 2004 System Design for Flexible Reasoning and Learning, Korea Ministry of Science and Technology

Publications

Kim, H. L., Yang, S. K., Breslin, G. J., Kim, H. G.. 2008. "int.ere.st: Building a Tag Sharing Service with the SCOT Ontology". Proceedings of the Twenty-Third AAAI Conference on Artificial Intelligence(AAAI-08).

Kim, H. L., Yang, S. K., Breslin, G. J., Kim, H. G.. 2008. "Social Semantic Cloud of Tag: Semantic Model for Social Tagging". Proceedings of the 12th International Conference on Knowledge-Based and Intelligent Information & Engineering Systems(KES2008)

Kim, E.H., Hwang, S.H., Kim, H.G., "On Development of an Automatic Tool for Extracting Association Rules of a user query using Formal Concept Analysis", Journal of Korea Information Processing Society, 2008 (In Press).

Hai-tao Zheng, Bo-Yeong Kang, Hong-Gee Kim, "Learnable Focused Crawling Based on Ontology," Asia Information Retrieval Symposium, Harbin, China, 2008

Namgoong, H., Kim, H.G., "Ontology-based Controlled Natural Language Editor Using CFG with Lexical Dependency", International Semantic Web Conference 2007, Busan, Korea, 2007.

Kim, H.L., Yang, S.K., Breslin, G.J., Kim, H.G., "Simple Algorithms for the SCOT Exporters using Tag Frequency and Cooccurrence", Proceedings of the 2007 IEEE/WIC/ACM International Conference on Intelligent Agent Technology(IAT '07), Silicon Valley, USA, 2007.

Kim, H.G., Ha, B.H., Lee, J.I., Kim, M.G., "Narrative Information Processing based on Controlled Natural Language in EMR Systems", International Journal of Medical Informatics, 2007(in Revision).

Kang, B. Y., Kim, H. G., "Web Page Filtering for Domain Ontology with the Context of Concept" IEICE Transactions of Information and Systems, Vol. E90-D(5), 2007.

Park, S. G., Kim, H.G., Kim, M.K., "Tooth Positional Ontology Represented in OWL", Poster presented at MEDINFO 2007, Brisbane, Australia, 2007.

Namgoong, H., Jeong, S., Kim, H.G., Lee, D. H., Nam, Y. W., Kim, M.K., "Open platform for A Longitudinal Study in Dental Implant", Poster presented at MEDINFO 2007, Brisbane, Australia, 2007.

Choi, H. C., Park, S. G., Lee, D. H., Hai-tao Zheng, Kim, H.G., "An Interactive Shared Decision Making System for Dental Treatment Planning", Poster presented at MEDINFO 2007, Brisbane, Australia, 2007.

Kim, H. L., Choi, J. H., Kim, H.G., Hwang, S. H., "WANT: A Personal Knowledge Management System on Social Software Agent Technologies", KES-AMSTA 2007: Proceedings of The 1st KES Symposium on Agent and Multi-Agent Systems: Technologies and Applications, Vol. LNAI4496:785-794, Springer-Verlag, Berlin Heidelberg, 2007.

Kim, H. L.; Hwang, S. H., Kim, H.G., "FCA-based approach for mining contextualized folksonomy", In Proceedings of the 2007 ACM symposium on Applied computing', ACM Press, pp. 1340-1345, New York, NY, USA, 2007.

Kim, H.G., Hwang, S.H., Kang, Y.; Kim, H. Yang, H., "An Agent Environment for Contextualizing

Folksonomies in a Triadic Context”, KES-AMSTA 2007: Proceedings of The 1st KES Symposium on Agent and Multi-Agent Systems: Technologies and Applications, Springer-Verlag, Berlin Heidelberg, 2007.

Jeong , S., Grzonkowski, S., Lee, S. I., Kim , H.G., “Semantically Enhanced Event Description”, 5th Annual Conference on Teaching & Learning: Learning Technologies , Galway, Ireland, 2007.

Choi, H. C., Hwang, S. H. , Kim, D. S., Kang, Y. K., Kim , H.G., Kim, M.K., “Scaling of many-valued context with FCA-Wizard”, The 5th Asia Pacific International Symposium on Information Technology(APIS2006), 135-138, 2006.

Kim, M.K., Hwang, S. H. , Kim , H.G., Kang, Y. K., Choi, H. C., Kim, D. S., “Classification and Conceptualization of Clinical Documents using Formal Concept Analysis”, Journal of Korean Society of Medical Informatics, 12(1): 31-43, 2006.

Hwang, S. H., Kim, H.G., Kim, M.K., Choi, S.H., Yang, H.S., “A Data-Driven Approach to Constructing an Ontological Concept Hierarchy Based on the Formal Concept Analysis”, International Conference on Computational Science and its Applications(ICCSA2006), LNCS3983:937-946, 2006.

Kang, Y. K., Hwang, S. H. , Kim, H.G., Baek, S.H., Kim, D. S., Kim, E. H., Yang, K. M., Yang, S. K., ”Development of a Clinical Decision Support System using Formal Concept Analysis”, Proceedings of the 25th KIPS Spring Conference, Vol.13(1):407-410, 2006.

Kang, Y. K., Hwang, S. H. , Kim , H.G., Baek, S.H., Kim, K.R., Kim, D. S., Kim, E. H., Yang, K. M., Yang, S. K., “Development of a FCA-based Clinical Decision Support System for the Cephalometric analysis in the orthodontics field”, Journal of Korean society of Medical Informatics, Vol.12, Supplement 1: 17-20, 2006

Kim, D. S., Hwang, S. H. , Kim , H.G., Yang, K. M., “On developing OWL Analyzer based on Formal Concept Analysis”, Proceedings of the 26th KIPS Fall conference, Vol.13(2): 7-10, 2006.

Jeong, S., Kim, H.G., ”Design of semantically interoperable adverse event reporting framework, 1st Asian Semantic Web Conference, Beijing, China, Sept 2006.

Jeong, S., Kim, H.G., “Ontology-Based Adverse Event Reporting System”, Journal of Korean Society of Medical Informatics, Vol. 12(1): 17-20, 2006.

Ha, B. H., Kim , H.G., Lee, J.I., Kim, M.K., “How to Deal with Medical Narratives based on Controlled Natural Language Operated by an Ontology”, Journal of Korean Society of Medical Informatics, Vol. 12(3):261-271, 2006.

Park, S.G, Kim , H.G., “Dental decision making on missing tooth represented in an ontology and rules”, Lecture Notes in Computer Science, Vol. 4185:322-328, 2006.

Kang, B. Y., Kim , H.G., ”Document filtering for domain ontology based on concept preferences”, 1st Asian Semantic Web Conference, Lecture Notes in Computer Science, Vol. 4185:377-386, 2006.

Kim, Y., Choi, I. S., Seo, J.W., Kim, I. K., Kim , H.G., Choi, Y. H., ”Research and Development Efforts Aimed at Implementing Electronic Health Record Systems with Interoperability and Patient Safety” Journal of Korean Society of Medical Informatics 12-2:none115-132, 2006.

Hai-tao, Z., Kang, B. Y., Gu, S.O., Choi, H. C., Kim, G. S., Kim , H.G., “A Semantic Annotation Tool to Extract Instances from Korean Web Documents”, Proceedings of 1st Semantic Authoring and Annotation Workshop of 5th ISWC(International Semantic Web Conference), Athens, GA,

USA, 2006.

Kim, H.L., Kim, H.G., Choi, J. H., Decker, S. "Translating Documents into Semantic Documents using Semantic Web and Web2.0", Proceedings of the 1st Semantic Authoring and Annotation Workshop (SAAW2006) located at the 5th International Semantic Web Conference, Athens, GA, USA, 2006.

Kim, H.G., Hai-Tao, Z., "A Pragmatic View on Developing a Tool for Ontology Integration", In Proceeding of Workshop on Semantic Web Applications and Tools of 1st ASWC(Asia Semantic Web Conference) International Conference, Beijing, China, 2006.

Kim, H.G., Kang, Y. K., Hwang, S. H., Kim, D. S., "The Development of an Automatic Tool for Formal Concept Analysis and its Applications on Medical Domain", The KIPS Transactions : Part D, Vol.13-D(7): (Serial Number110), 2006.

Kim, H. L.; Kim, H.G., Decker, S., "How Semantic Desktop and Web2.0 can help Personal Knowledge Management?", of 1st ASWC(Asia Semantic Web Conference) International Conference, Beijing, China, 2006.

Kim, H. L.; Kim, H.G., Decker, S. "Semantic Documentation Using Semantic Web Technologies and Social Web Services", in 'NWeSP 2006: International Conference on Next Generation Web Services Practices', IEEE Computer Society, pp 27-32, Los Alamitos, California, USA, 2006.

Jeong, S., Kim, H.G., "Ontology based Adverse Event Reporting System Architecture", World Library and Information Congress: 72nd IFLA General Conference and Council, Seoul, Korea, August 2006.

Kang, Y.K. S. Hwang, S.H. Choi, H.C., Kim, D.S., Kim, H.G., Kim, M.K., "Development of a FCA Tool For Building Conceptual Hierarchy of Clinical Data". Journal of Korean society of Medical Informatics, Vol.11(Supplement 2):71-76, 2005.

Lee, J. I., Ha, B. H., Kim, H.G., Kim, M.K., "An ontology-based pathology reporting system" Journal of Korean society of Medical Informatics, vol.11(1):41-45, 2005.

Kang, Y.K., Hwang, S. Choi, H.C., Kim, D.S., Wee, H.W., Kim, H.G., Yang, H.S., "Development of a Tool for Formal Concept Analysis", Journal of Software Engineering, Vol.8(1-2), 2005.

Kim, D. B., Kim, H.G., Jeong-Hwa, Song, T. M., "Ontology-Based Health Information Query system on Relational Database Management System" Journal of Korean society of Medical Informatics, Vol.11(1): 25-28, 2005.

Hwang, S. H., Kim, H.G., Yang, H. S., "A FCA-Based Ontology Construction for the Design of Class Hierarchy", International Conference on Computational Science and its Applications (ICCSA2005), Vol. LNCS3482: 827-835, 2005.

Hwang, S., Kang, Y.K., Kim, H.G., Kim, M.K., "A FCA-based Conceptualization of Medical Documents", Journal of Korean society of Medical Informatics, Vol.11(Supplement 1):53-56, 2005.

Kim, H.G., Ha, B. H., Lee, J. I., Kim, M.K., "A multi-layered application for the gross description using semantic web technology", International Journal of Medical Informatics, Vol.74 :339-407, 2005.

Kim, H.G., Kim, H.L., "Ontology-Based Personal Document Management & Retrieval Systems, in the Proceedings of 10th international Conference: Cybernetics and information Technologies", pp. 216-218, USA, 2004.

Kim, H.G., "Markup Languages, Berkshire Encyclopedia of Human-Computer Interaction", Berkshire Publishing:449-452, 2004.

Kim, H.G., "Semantic Web Services, Industrial Engineering Magazine", 11(2):42-46, 2004.

Kim, H.L., Kim, H.G., "Building Ontology based on the Unified Construction Information Classification System", The Journal Korean Institute of CALS/EC, Vol. 9(3), August 2004.

Hai-Tao Zheng, Kim, H.G., "An easy tool for Ontology Integration", 9th APDSI Conference(Asia Pacific Decision Sciences Institute, Seoul, Korea, 2004.

Kim, H.G., Kim, H.L., Choi, J.H., "Intelligent Ontology-based Personal Document Management & Retrieval System", Proceeding of 1st International Conference on Cybernetics and Information Technologies, Systems and Applications: CITSA2004, Florida, USA, 2004.

Kim, H.L., Kim, H.G., "Ontology-based Electronic Document Retrieval", Proceeding of KIIS Conference on Focal Motive Power for the Growth and Intelligent Information Technology, Seoul, Korea, 2004.

Kim, H.G., Kim, H.L., "Extension of Service Description in Semantic Web Language", The Journal Korean Institute of CALS/EC, Vol. 8(4):113-129, 2003.

Park, E.J., Kim, H.G., "Artificial Intelligence and Its Applications: The Study of Business Knowledge Processing using Deontic Logic", In Proceedings of Fall Annual Conference for The Korea Society of Management Information Systems, 2003(0):737-743, 2003.

Kim, H.L., Kim, H.G., "Semantic Web Technologies for Ubiquitous Services", In Proceeding of 29th International KMIS Conference on Informatization in Ubiquitous Computing Era, Vol.2003(0): 31-35, 2003.

Kim, D.B., Kim, H.G., Jeon, J.H., "Implementation of Document Retrieval System based Ontology using RQL", In Proceeding of 29th International KMIS Conference on Informatization in Ubiquitous Computing Era, 2003(0):36-41, 2003.

Shin, G.H., Kim, H.G., "The present and Future for Digital Management: Methodology and Strategy for Implementation of RossetNet", In Proceedings of Fall Annual Conference for The Korea Society of Management Information Systems, 2002(0) :1053-1060, 2002.

Kim, H.L., Kim, H.G., "C3:Business Intelligence(1) : Evaluating UML and Conceptual Graph as Ontology modeling frameworks", Vol.2002(0):396-401, 2002.

Kim, H.L., Kim, H.G., "Evaluating UML and Conceptual Graph as Ontology modeling framework" Proceeding of 27th International KMIS Conference on Re-Shaping of e-Business: Challenges and Opportunities, Seoul, Korea, 2002.

Kim, H.L., Kim, H.G., "Semantic Web based e-Business Interoperability", Proceeding of 26th KMIS Conference on e-Government and e-Biz Strategy toward the global leadership, Seoul, Korea, 2002.

Kim, H.G., Shin, G. H., "An Evaluation-Based Knowledge Management System for Managing Dynamic Knowledge", Korean Society For Information Management, Vol.19(2):109-130, 2002.

Kim, H.G., "Role of Meta-Knowledge in Knowledge Management", IE Interfaces, Vol 13: 10-16, 2000.

Kim, H.G., "Perspectival Knowledge Representation and Dynamic Reasoning", Proceedings of Korean Society for Cognitive Science, 383-389, 1999.

Kim, H.G., "Formalizing Perspectival Defeasible Reasoning", Proceedings of the 30th Hawaii International Conference on System Science, Vol 5: 347-353, 1997.

Kim, H.G., "A Psychologically Plausible Logical Model of Conceptualization" Minds and machines. Vol7(2): 249-267, 1997.

Invited Talks

Ontology Technologies for Semantically Interoperable EHR, KCC 2007 ILVB Workshop, Mujoo, Korea, June 2007.

Methodology for Connection and Convergence of Information Resources using Semantic Grid, Workshop on Perspectives and Principles on Ontology Modeling, KISTI, Daejeon, Korea, July 2007.

Semantic Web 2.0, Workshop on Research Group for Intelligent U-Logistics Technology, Brain Korea 21, In-Ha University, Incheon, Korea, April 2007.

Welcome Speech, Semantic Web 2.0 Conference, Seoul, Korea, February 2007.

Semantic Web 2.0: A next generation software paradigm, Entru World 2006, Seoul, Korea, October 2006.

Principles for Ontology Modeling, 1st Workshop on the Language-Neutral Ontology, Hankuk University of Foreign Studies, Seoul, Korea, August 2006.

Knowledge Representation in Health Informatics, Spring Annual Conference for the Korean Society of Medical Informatics, Seoul, Korea, June 2006.

Semantic Desktop & Social Network, Next Generation Web International Conference, Seoul, Korea, March 2006.

A Networked Semantic Desktop: A New Paradigm of Knowledge Management, 1st Workshop on Semantic Web Business, Seoul, Korea, June 2006.

Semantic Interoperability, Spring Annual Conference for the Korean Society of Medical Informatics, Seoul, Korea, June 2005.

Tools for Medical Ontology, HL7 Korea, Busan University, Busan, Korea, December 2005.

Professional Activities

Korean Society of Medical Informatics, Chair of Educational Committee

ISO JTCTC1SC34(Digital Contents) committee

ISO TC215 (Health Informatics) committee

East Web Steering Committee

OASIS SEE(Semantic Execution Environment) TC committee

Member of the W3C RIF(rule Information Format) Working Group

EHR Standard Working Group Committee, Ministry of Health & Welfare, Korea

Korean Society for Medical Informatics

Korean Society for Cognitive Science

Korean Society for Information Science

Korean Society for Management Information Systems