Curriculum Vitae

Krishnaprasad Thirunarayan (T. K. Prasad)

Metadata and Languages Laboratory
Knoesis : Ohio Center of Excellence in Knowledge-enabled Computing
Department of Computer Science and Engineering
Wright State University, Dayton, OH 45435
`t.k.prasad@wright.edu, tk@knoesis.org`
`http://www.cs.wright.edu/~tkprasad`

Date of appointment to present rank of Full Professor at Wright State University: September 2009.

Education

Institution	Concentration	Degree	Date
State Univ. of New York at Stony Brook	Computer Science	Ph.D.	1989
Indian Inst. of Science at Bangalore	Computer Science	M.E.	1984
Indian Inst. of Technology at Madras	Electrical Engr.	B. Tech.	1982

Academic and Professional Experience

Institution	Position	Dates
Wright State Univ	Professor with Tenure	2009 – present
Wright State Univ	Associate Professor with Tenure	1995 – 2009
Sensors Directorate, WPAFB	Visiting Reseach Faculty	2007
Cohesia Corporation	Consultant	1999 – 2002
Wright State Univ.	Assistant Professor	1989 – 1995
Microelectronics Division, WPAFB	Summer Reseach Faculty	1994, 1995, 1997
SUNY at Stony Brook	Graduate Assistant	1984 – 1989

Journal Articles

C. Henson, K. Thirunarayan, and A. Sheth: An Ontological Approach to Focusing Attention and Enhancing Machine Perception on the Web, *Applied Ontology Journal*, 6(4), pp. 345-376, 2011.

K. Thirunarayan, and T. Immaneni: A Coherent Query Language for XML, *Journal of Intelligent Information Systems*, Volume 32, Number 2, pp. 139-162, April 2009.

K. Cleereman, M. Cheatham, and K. Thirunarayan: Mechanisms for Improved Covariant Type-Checking, *Journal of Computer Languages, Systems and Structures*, Vol. 1, pp. 1-17, April 2008.

K. Thirunarayan, and T. Immaneni: An XML-Based Approach to Handling Tables in Documents, *Journal of Intelligent Systems*, Vol. 17(1-3), pp. 215-228, 2008.

K. Thirunarayan: On Embedding Machine-Processable Semantics into Documents, *IEEE Transactions of Knowledge and Data Engineering*, Vol. 17, No. 7, pp. 1014-1018, July 2005.

K. Thirunarayan, A. Berkovich, and D. Sokol: An Information Extraction Approach to Re-organizing and Summarizing Specifications, In: *Information and Software Technology Journal*, Vol. 47, Issue 4, pp. 215-232, 2005.

K. Thirunarayan, G. Kniesel, and H. Hampapuram, Simulating Multiple Inheritance and Generics in Java, In : *Computer Languages*, Vol. 25(4), pp. 189-210, 2001.

K. Thirunarayan and R. L. Ewing, Structural Operational Semantics for a Portable Subset of Behavioral VHDL-93, In : *Formal Methods in System Design*, Vol. 18, pp. 69-88, 2001.

K. Thirunarayan, On the Relationship between Annotated Logic Programs and Nonmonotonic Formalisms, In: *Journal of Experimental and Theoretical Artificial Intelligence*, Vol. 7, pp. 391-406, Dec 1995.

K. Thirunarayan, On the Equivalence of Upward and Downward Inheritance Reasoners, In: *Annals of Mathematics and Artificial Intelligence*, Vol. 15(2), pp. 239-256, Nov 1995.

K. Thirunarayan, Local Theories of Inheritance, In: *International Journal of Intelligent Systems*, Vol. 10(7), pp. 617-645, Jul 1995.

K. Thirunarayan, Locality in Inheritance Networks, In: *Information Processing Letters*, Vol. 46(6), pp. 263-268, Jul 1993.

K. Thirunarayan and Michael Kifer, A Theory of Nonmonotonic Inheritance Based on Annotated Logic, *Artificial Intelligence Journal*, Vol. 60, pp. 23-50, Mar 1993.

(The abstract of the above paper also appears in *Zentralblatt für Mathematik*.)

R. Ramesh, R. Verma, K. Thirunarayan and I.V. Ramakrishnan, Term Matching on Parallel Computers, In *Journal of Logic Programming*, Vol. 6, pp. 213-228, May 1989.

K. Thirunarayan, On the Computability of Circumscription, In *Information Processing Letters*, Vol. 27, pp. 237-243, April 1988.

Edited Books

Abraham Bernstein, David R. Karger, Tom Heath, Lee Feigenbaum, Diana Maynard, Enrico Motto and Krishnaprasad Thirunarayan (Editors): *Proceedings of the 8th In-*

ternational Semantic Web Conference (ISWC-2009), Washington DC, LNCS 5823, Springer-Verlag (Heidelberg), October 2009.

Amit Sheth, Steffen Staab, Mike Dean, Massimo Paolucci, Diana Maynard, Timothy Finin and Krishnaprasad Thirunarayan: *Proceedings of the 7th International Semantic Web Conference* (ISWC-2008), Karlsruhe, LNCS 5318, Springer-Verlag (Heidelberg), October 2008.

Book Chapters

K. Thirunarayan and T. Immaneni, Integrated Retrieval from Web of Documents and Data, In: *Advances in Data Management* (Book Series: Studies in Computational Intelligence), Editors: Zbyszek W. Ras and Agnieszka Dardzinska, Springer Berlin / Heidelberg, 2009.

K. Thirunarayan, Attribute Grammars and their Applications, In: *Encyclopedia of Information Science and Technology*, Second Edition, Editor: Mehdi Khosrow-Pour, Information Science Publishing, pp. 268-273, 2008.

K. Thirunarayan, Inheritance in Programming Languages, In: *Encyclopedia of Information Science and Technology*, Second Edition, Editor: Mehdi Khosrow-Pour, Information Science Publishing, pp. 2042-2047, 2008.

Laks V.S. Lakshmanan and K. Thirunarayan, Declarative Frameworks for Inheritance, In *Logics for Databases and Information Systems*, Eds: J. Chomicki and G. Saake, Kluwer Academic Publishers, pp. 357-388, 1998.

Conference Papers

D. Cameron, R. Kavuluru, O. Bodenreider, P. N. Mendes, A. P. Sheth, and K. Thirunarayan: Semantic Predications for Complex Information Needs in Biomedical Literature, In: *Proceedings of the 5th International Conference on Bioinformatics and Biomedicine* (BIBM-11), Atlanta GA, November 12-15, 2011

A. Ranabahu, M. Maximilien, A. Sheth and K. Thirunarayan: A Domain Specific Language for Enterprise Grade Cloud-Mobile Hybrid Applications, In: *Proceedings of DSM 2011 - The 11th Workshop on Domain-Specific Modeling*, October 23-24, Portland, Oregon.

A. Ranabahu, A. Manjunatha, A. Sheth and K. Thirunarayan, Cloud Centric Mobile Application Development Using Domain Specific Languages, In: *IEEE Communication Society Multimedia Communications Technical Committee News Letter*, Vol. 6, pp. 38-41, Oct 2011.

C. Henson, K. Thirunarayan, A. Sheth and P. Hitzler: Representation of Parsimonious Covering Theory in OWL-DL, In: *Proceedings of 2011 OWL: Experiences and Direction* (OWLED), San Franscisco, June, 2011.

K. Thirunarayan and P. Anantharam: Trust Networks: Interpersonal, Sensor, and Social, In: *Proceedings of 2011 International Conference on Collaborative Technologies and Systems* (CTS 2011), Philadelphia, Pennsylvania, USA, May 23-27, 2011.

A. Ranabahu, A. Sheth, A. Manjunatha, and K. Thirunarayan: MobiCloud Making Clouds Reachable : A Toolkit for Easy and Efficient Development of Customized Cloud Mobile Hybrid Applications, In: *2nd IEEE International Conference on Cloud computing Technology and Science* (IEEE CloudCom 2010), Indianapolis, IN, Dec 2010. (Received Best DEMO Award)

A. Ranabahu, A. Sheth, A. Manjunatha, and K. Thirunarayan, Power of Clouds In Your Pocket: An Efficient Approach for Cloud Mobile Hybrid Application Development, In: *2nd IEEE International Conference on Cloud computing Technology and Science* (IEEE CloudCom 2010), Indianapolis, IN, Dec 2010.

A. Ranabahu, A. Sheth, A. Manjunatha, and K. Thirunarayan: Towards Cloud Mobile Hybrid Application Generation using Semantically Enriched Domain Specific Languages, In: *Proceedings of International Workshop on Mobile Computing and Clouds* (MobiCloud 2010), Santa Clara, CA, October 28, 2010.

P. Anantharam, Cory A. Henson, K. Thirunarayan and A. P. Sheth, Trust Model for Semantic Sensor and Social Networks: A Preliminary Report, In: *Proceedings of National Aerospace and Electronics Conference* (NAECON), Dayton Ohio, July 14-16th, 2010.

S. Sahoo, O. Bodenreider, P. Hitzler, A. P. Sheth and K. Thirunarayan, Provenance Context Entity (PaCE): Scalable Provenance Tracking for Scientific RDF Data, In: *Proceedings of International Conference on Scientific and Statistical Database Management* (SSDBM 2010), M. Gertz and B. Ludscher (Eds.), LNCS 6187, pp. 461–470, July 2010.

K. Thirunarayan, P. Anantharam, C. A. Henson, A. P. Sheth, Some Trust Issues in Social Networks and Sensor Networks, In: *Proceedings of the Collaborative Trusted Sensing Special Session at the International Symposium on Collaborative Technologies and Systems* (CTS 2010), Chicago, IL, 8 pages, May 2010.

K. Thirunarayan, D. K. Althuru, C. A. Henson, and A. P. Sheth, A Local Qualitative Approach to Referral and Functional Trust, In: *Proceedings of the The 4th Indian International Conference on Artificial Intelligence* (IICAI-09), pp. 574-588, December 2009.

C. Henson, H. Neuhaus, A. Sheth, K. Thirunarayan, R. Buyya, An Ontological Representation of Time Series Observations on the Semantic Sensor Web, In: *Proceedings of 1st International Workshop on the Semantic Sensor Web 2009*, (Collocated with ESWC 2009), June, 2009.

K. Thirunarayan, C. A. Henson, A. P. Sheth, Situation Awareness via Abductive Reasoning for Semantic Sensor Data: A Preliminary Report, In: *Proceedings of 2009 International Symposium on Collaborative Technologies and Systems* (CTS 2009), pp. 111-118, May 2009.

C. Henson, J. Pschorr, A. Sheth, K. Thirunarayan, SemSOS: Semantic Sensor Observation Service, In: *Proceedings of the 2009 International Symposium on Collaborative Technologies and Systems* (CTS 2009), pp. 44-53, May 2009.

K. Thirunarayan and J. K. Pschorr, Semantic Information and Sensor Networks, In: *Proceedings of the 24th Annual ACM Symposium on Applied Computing* (ACM-SAC-SWAP), pp. 1273-1274, March 2009.

K. Thirunarayan and R. M. Verma, A Framework for Trust and Distrust Network, In: *Proceedings of Web 2.0 Trust Workshop* (co-located with: IFIPTM 2008 - Conference on Privacy, Trust Management and Security), June 2008, Trondheim, Norway.

K. Thirunarayan, T. Immaneni, and M. Shaik, Dependence of Binary Associations on Co-occurrence Granularity in News Documents, In: *Proceedings of The 2008 International Conference on Information and Knowledge Engineering* (IKE-08), pp. 193-198, July 2008.

K. Thirunarayan, T. Immaneni, and M. Shaik, Selecting Labels for News Document Clusters, In: *Proceedings of 12th International Conference on Applications of Natural Language to Information Systems* (NLDB-2007), LNCS 4592, pp. 119-130, June 2007.

K. Cleereman, M. Cheatham, and K. Thirunarayan, Runtime Support of Speculative Optimization for Offline Escape Analysis, In: *Proceedings of the International Conference on Software Engineering Research and Practice* (SERP'07), pp. 484-489, June 2007.

T. Immaneni and K. Thirunarayan, A Unified approach To Retrieving Web Documents and Semantic Web Data, In: *Proceedings of the 4th European Semantic Web Conference* (ESWC-2007), LNCS 4519, pp. 579-593, June 2007.

T. Immaneni, and K. Thirunarayan, Hybrid Retrieval from the Unified Web, In: *Proceedings of the 22nd Annual ACM Symposium on Applied Computing* (ACM-SAC-SWAP), pp. 1376-1380, March 2007.

K. Thirunarayan, and T. Immaneni, Flexible Querying of XML Documents, In: *Proceedings of the 16th International Symposium on Methodologies for Intelligent Systems* (ISMIS-2006), LNAI, Vol. 4203, pp. 198-207, September 2006.

K. Thirunarayan, and T. Immaneni, Formalizing and Querying Heterogeneous Documents with Tables, In: *Proceedings of the The 2nd Indian International Conference on Artificial Intelligence (IICAI-05)*, pp. 769-778, December 2005.

D. Ravishankar, K. Thirunarayan, and T. Immaneni, A Modular Approach to Document Indexing and Semantic Search, In: *Proceedings of the IASTED International Conference on Web Technologies, Applications and Services*, pp. 165 -170, July 2005.

K. Thirunarayan, On Embedding Machine-Processable Semantics into Documents, In *Proceedings of 9th International Conference on Applications of Natural Language to Information Systems* (NLDB-2004), LNCS Vol. 3136, pp. 368-373, June 2004.

K. Thirunarayan, and S. P. Carl, Toward a Comprehensive Supplement for Language Courses, In *Proceedings of International Symposium on Information Systems and Engineering* (ISE-2003), pp. 174-179, July 2003.

K. Thirunarayan, A. Berkovich, S. Grace, and D. Sokol, Information Extraction for Reorganizing Specifications, In *Proceedings of 8th International Conference on Applications of Natural Language to Information Systems* (NLDB-2003), LNI, Vol. P-29, pp. 242-248, June 2003.

K. Thirunarayan, Applying XML/XSLT Technology : A Case Study, In *Proceedings of International Symposium on Information Systems and Engineering* (ISE-2002), Simulation Series Vol 34(2), pp. 73-78, 2002.

K. Thirunarayan, A. Berkovich, and D. Sokol, Semi-automatic Content Extraction from Specifications, In *Proceedings of 7th International Conference on Applications of Natural Language to Information Systems* (NLDB-2002), LNCS 2553, Springer-Verlag, pp. 40-51, June 2002.

Chris Kinzig, K. Thirunarayan, G. B. Lamont, and R. E. Marmelstein, Summarizing Data Sets for Classification, In *Proceedings of International Conference on Artificial Intelligence* (ICAI-2001), pp.681-687, May 2001.

R. Ewing, G.Lamont, C. Brothers, M.Oxley, F. Beyette, Jr., J. Boyd, H. Carter, C. Purdy, H. Abdel-Aty-Zohdy, S. Bibyk, Y. Zheng, and K. Thirunarayan, In: *An Interactive Video Course in Multidisciplinarity and Collaborative Design for Systems on a Chip*, 2001 Intl. Conf. on Microelectronics Systems Education (MSE'01), pp. 87-88, 2001.

K. Thirunarayan, Collaborative Environments in Java, *Proceedings of the Collaborative Technologies Workshop*, pp. 69-71, November 1999.

Laura DeBrock and K. Thirunarayan, A VHDL Hardware Description Browser, In *Proceedings of Florida AI Research Symposium* (FLAIRS-97), pp. 145-149, May 1997.

K. Thirunarayan and Robert L. Ewing, Characterizing a Portable Subset of Behavioral VHDL-93, In *Proceedings of Computer Hardware Description Languages* (CHDL-97), Chapman and Hall, pp. 97-113, April 1997.

K. Thirunarayan and Robert L. Ewing, On the Portability of Behavioral VHDL-93, In *Proceedings of VIUF Fall 96 Conference*, pp. 251-260, October 1996.

Robert Eastham and K. Thirunarayan, Proof Strategies for Hardware Verification, In *Proceedings of National Aerospace and Electronics Conference* (NAECON), pp. 451-458, 1996.

K. Thirunarayan, A Meta-Interpreter for Circuit-Extraction, In *Proceedings of National Aerospace and Electronics Conference (NAECON)*, pp. 680-684, 1995.

K. Thirunarayan, Expressive Extensions to Inheritance Networks, In: *Proceedings of the Seventh International Symposium on Methodologies for Intelligent Systems*, Lecture Notes in Artificial Intelligence, Vol. 689, Springer Verlag, pp. 528-537, June 1993.

K. Thirunarayan, Abduction in Annotated Logic Programming, In: *Proceedings of IEEE International Conference on Systems, Man, and Cybernetics*, pp. 682-687, October 1992.

K. Thirunarayan, An Analysis of Property Flow View vs Individual Flow View of Inheritance, In: *Proceedings of the Sixth International Symposium on Methodologies for Intelligent Systems*, ISMIS-91, Lecture Notes in Artificial Intelligence, Vol. 542, Springer Verlag, pp. 256-265, October 1991.

K. Thirunarayan and V. Dasigi, On the Relationship between Abductive Reasoning and Boolean Minimization. In: *Proceedings of AAAI 91 Workshop: Towards Domain Independent Strategies for Abduction*, pp. 84-88, July 1991.

V. Dasigi and K. Thirunarayan, On the Relationship between Parsimonious Covering and Boolean Minimization. In *Proceedings of National Aerospace and Electronics Conference (NAECON)*, pp. 84-88, May 1991.

T. Krishnaprasad, M. Kifer and D.S. Warren, On the Declarative Semantics of Inheritance Networks, In *Proceedings of the Eleventh International Joint Conference on Artificial Intelligence* (IJCAI-89), Morgan-Kaufmann, pp. 1093-1098, August 1989.

T. Krishnaprasad and M. Kifer, An Evidence-based Framework for a Theory of Inheritance, In *Proceedings of the Eleventh International Joint Conference on Artificial Intelligence* (IJCAI-89), Morgan-Kaufmann, pp. 1099-1103, August 1989.

T. Krishnaprasad, M. Kifer and D.S. Warren, On the Circumscriptive Semantics of Inheritance Networks, In *Proceedings of the Fourth International Symposium on Methodologies for Intelligent Systems* (ISMIS-89), North-Holland, pp. 448-457, October 1989.

R. Ramesh, R. Verma, T. Krishnaprasad and I.V. Ramakrishnan, Term Matching on Parallel Computers, In *Proceedings of the Fourteenth International Colloquim on Automata, Languages and Programming* (ICALP-87), Lecture Notes in Computer Science, Vol. 267, Springer Verlag, pp. 336-346, July 1987.

R. Verma, T. Krishnaprasad and I.V. Ramakrishnan, An Efficient Parallel Algorithm for Term Matching, In *Proceedings of the Sixth International Conference on Foundations of Software Technology and Theoretical Computer Science* (FST-TCS), Lecture Notes in Computer Science, Vol. 241, Springer Verlag, pp. 504-518, December 1986.

T. Krishnaprasad, Y.N. Srikant, and Priti Shankar, An Attribute Grammar-Based Compiler Generator, In *Proc. Computer Society of India*, Annual Convention, 1985.

Grants and Contracts

Understanding Anomalies and Attacks in Sensor Networks to Explore Techniques for their Prevention and Mitigation, $20K+, AFRL/ASEE-SFFP 2011, *PI*: K. Thirunarayan.

Live, Virtual, and Constructive : Sensor Integration for Data Fusion in Operations and Training (LVC SIDFOT), $56K, 2011. AFRL/Ball Aerospace. *PI*: A. P. Sheth, *co-PI*: K. Thirunarayan. *Grant Number/Account Number* : WSU#6-68533

Trusted Semantic Sensor Web to Support Decision Making over Massive Amounts of Sensor and Social Data, $150K, 2011. AFRL/Riverside Research. *PI*: A. P. Sheth, *co-PI*: K. Thirunarayan. *Grant Number/Account Number* : WSU#6-68513

Trusted Semantic Sensor Web - Phase I, $148K + $29K, 2010. AFRL/SAIC. *PI*: A. P. Sheth, *co-PI*: K. Thirunarayan. *Grant Number/Account Number* : WSU#6-67320/6-67599

Spatio-Temporal-Thematic Queries of Semantic Web Data: A Study of Expressivity and Efficiency, $120K + $16K, 2008-2010. NSF. *PI*: A. P. Sheth, *co-PI*: K. Thirunarayan. *Grant Number/Account Number* : WSU#6-67426/6-67679

Electronic Patient Care Tracking (EPCT), $40K, Summer 2009, WSU TecÊdge Academic Pipeline, *PI*: Jack Jean, *co-PI*: K. Thirunarayan, B. Wang, and Y. Pei. *Grant Number/Account Number* : WSU#6-67659.

Trusted Semantic Sensor Web, $300K, 3/2009-2/2010. AFRL/SAIC. *PI*: A. P. Sheth, *co-PI*: K. Thirunarayan. *Grant Number/Account Number* : WSU#6-67320

Ontology and Semantic Aided Human Cognition Knowledge Discovery, $400K, 4/2009-9/2010. AFRL/H. Jackson Foundation. *PI*: A. P. Sheth, *co-PI*: K. Thirunarayan. *Grant Number/Account Number* : WSU#6-67319

Trusted Semantic Sensor Web, $126K, 2008-2009. AFRL/SAIC. *PI*: A. P. Sheth, *co-PIs*: K. Thirunarayan and B. Wang. *Grant Number/Account Number* : WSU#6-67320

Travel Grant for attending NSF Workshop *Teach Scheme - Reach Java*, $1000, 2009.

AFRL-DAGSI Ohio Student Faculty Graduate Fellowship Program. *PI*: K. Thirunarayan (with Joshua K. Pschorr), $57,767 + $7,221, 2008-2009. *Grant Number/Account Number* : WSU#6-67275

Travel Grant for attending NSF Workshop *Teach Scheme - Reach Java*, $1000, 2007.

Travel Grant for attending *European Semantic Web Conference*, $1000, 2007.

Metadata for Timelining Events, $15K, daytaOhio-LexisNexis, 2007. *PI*: K. Thirunarayan. *Grant Number/Account Number* : WSU#6-66496

Metadata for Timelining Events, $78,724, WCI-daytaOhio-LexisNexis, 2006. *PI*: K. Thirunarayan. *Grant Number/Account Number* : WSU#6-66496 (Plus, $25K for equipment from daytaOhio)

Information Extraction from Semi-Structured Documents, $39K, AFRL-WBI (SKM), 2004-2005. *PI*: K. Thirunarayan. *Grant Number/Account Number* : WSU#6-65785

Information Extraction from Semi-Structured Documents, $65K, AFRL-WBI (SKM), 2003-2004. *PI*: K. Thirunarayan. *Grant Number/Account Number* : WSU#6-65487

Computer-Assisted Document Interpretation Tools, $25K, NSF SBIR Phase IIB with Cohesia Corporation, 2002. *WSU-PI*: K. Thirunarayan. *Grant Number/Account Number* : DMI-0078525/WSU#6-65304

Computer-Assisted Document Interpretation Tools, $75K, NSF SBIR Phase II with Cohesia Corporation, 2000-2002. *WSU-PI*: K. Thirunarayan. *Grant Number/Account Number* : DMI-0078525/WSU#6-64641

Mixed-Signal Modelling for System Level Simulation, $50K, AFRL/DAGSI, 2001-2003. *WSU-PI*: K. Thirunarayan. *Proposal Number/Account Number* : WSU#01-279-10/WSU#6-65006

Advanced Global Information Methodology for Improved C4ISR System Integration, $53K, AFRL/DAGSI, 1999. *WSU-PI*: K. Thirunarayan. *Account Number* : WSU#99-396-10/WSU#6-64099

Computer-Assisted Document Interpretation Tools, $21K, NSF SBIR Phase I with Renaissance Engineering, 1999. *WSU-PI*: K. Thirunarayan. *Grant Number/Account Number* : DMI-9860316/WSU#6-64001

Java interface to a VHDL/VHDL-AMS parser, $17K, WPAFB contract, 1997. *PI*: K. Thirunarayan.

Microsoft Instructional Lab Grant for software licenses valued at $48,207. The software includes copies of Visual J++, Microsoft Office 97 Professional and Windows NT. (Co-Is: P. Bergstein, P. Mateti, K. Meyer, and S. Narayanan.)

Microsoft Instructional Lab Grant for software licenses valued at $19,450. The software includes 50 copies each of Visual C++, Microsoft Office Professional and Windows 95. (with: S. Narayanan and K. Meyer.)

VHDL-93 Parser in SWI-Prolog: A Basis for Design Query System, $25K, Air Force Office of Scientific Research (AFOSR), 1995. *PI*: K. Thirunarayan. *Proposal/Account Number*: WSU#95-102-10/WSU#662800 (The parser conforms to IEEE 1076-1993 Standard of VHDL.)

Implementation of an Efficient Inheritance Reasoner, Research Initiation Award of $51K, National Science Foundation (NSF), 1990-92. *Program*: Knowledge Models and Cognitive Systems. *PI*: K. Thirunarayan. *Grant Number*: IRI-9009587

The Design and Implementation of an Inheritance Reasoner, Research Challenge Award of $20K, The State of Ohio, 1989-91. *PI*: K. Thirunarayan. *Account Number*: WSU#660818

Teaching

- CS340 Programming Language Workshop in Java (1 credit)
- CS340 Programming Language Workshop in C# (1 credit)
- CS340 Programming Language Workshop in Python (1 credit)
- CS466/666 Formal Languages and Automata
- CS480/680 Comparative Languages
- CS499 Introduction to Information Retrieval
- CS774 Logic Programming
- CS776 Functional Programming
- CS780 Compiler Design and Construction I
- CS781 Compiler Design and Construction II
- CS784 Programming Languages
- CS707 Information Retrieval
- CS884 Advanced Topics in Programming Languages

- CEG 860 Object-Oriented Programming

- CEG 790 Collaborative Design of a System-on-a-Chip

- CS/CEG 891 Knowledge Representation and Reasoning : Linear Algebra Applications

- CS 891 Information Retrieval, Extraction and Management

- CS799 Special topics in AI: Knowledge Representation and Reasoning

- Java : Platform Independent Software Technology

- *Also taught*: CS141, CS142, CS240, CS241, CS242, etc

Online Material URL

`http://www.cs.wright.edu/~tkprasad`

Doctoral Students with Disseration Title

- Pramod Anantharam: *"Trust in Sensor and Social Networks"*. (In progress)

- Chad Arnold: *"Cyber Security"*. (In progress)

- Stephen P. Carl: *"A Framework for Experimentation in Memory Management Systems"*. (Assistant Professor, `http://scarl.sewanee.edu/`)

- Trivikram Immaneni: *"A Hybrid Approach to Retrieving Web Documents and Semantic Web Data"*. (Now with Disney `http://tapulous.com`, formerly with `http://technorati.com`) (Winner of Graduate Student Excellence Award for Ph.D. in CSE.)

- Kevin Cleereman: *"Programming language support for safe memory management.* (Formerly with `WPAFB-AFRL: Sensors Directorate`) (Leave of absence)

Masters' Students with Thesis Title

- Joshua Pschorr: *"Semantic Sensor Web"*. (In progress) (Winner of Graduate Student Excellence Award for M.S. in CS.)

- Dharan Althuru: *"Trust and Distrust Networks"*. (In progress)

- Mastan Vali Shaik: *"Design and Implementation of Timeline Application for News Documents"*.

- Venkatkalyan Potturi: "*Implementation for a Coherent Keyword-Based XML Query Language*".

- Sylvia George: "*Word Correlation Assistant for Query Refinement*".

- Dhanya Ravishankar: "*Document Indexing and Semantic Search*". (Winner of Graduate Student Excellence Award for M.S. in CS.)

- Nalini Pitchika: "*Issues and Techniques for Information Management*".

- Vijayasree Jonnalagadda: "*Extraction of Tabular Data from Heterogeneous Documents*".

- Jun Lu: "*Dependency Analysis and VHDL-AMS Programs Paritioning*".

- Prasanna Soundarapandian: "*Information Extraction for Reorganizing Specifications*".

- Chris Kinzig: "*Summarizing Data using Compact Decision Rule sets*".

- Tianrong Hu: "*Java-based VHDL-AMS Browser*".

- Laura DeBrock: "*A VHDL-93 Hardware Description Browser*".

- Robert Eastham: "*Proof Strategies for Digital Circuit Verification*".

- Mallikarjuna Mitnala: "*A Language for Temporal Reasoning*".

- Zhengjun Guo: "*Object-Oriented Database: A Survey and an X-Window Based Interface*".

- Yaqiong Zhang: "*Expressive Nonmonotonic Inheritance Networks*".

- Xixi Yang: "*Integrating Deductive and Abductive Reasoning*".

- Ross Rannells: "*Abduction: A Survey and a Prolog Interpreter*".

- Heather Kolano: "*Expression Parsing and Code Generation*". (Recent Undergraduate Honors Student)

Professional Membership

Association	Status	Dates
American Association for Artificial Intelligence (AAAI)	Member	1989 – 2003
Association for Computing Machinery (ACM + SIGPLAN)	Member	1990 – present
IEEE and IEEE Computer Society	Member	1992 – present

Professional Service (Each Multiple Years)

Referee for Research Proposals for the *NSF* and *NSERC*.

Reviewer for:

- IEEE CogSIMA Conference
- International Semantic Web Conference
- Symposium of Logic Programming
- Conference on the Principles of Database Systems
- North American Conference on Logic Programming
- International Conference on Logic Programming
- Florida AI Research Society Conference
- IEEE Symposium on Collaborative Technologies
- Foundations of Software Technology and Theoretical Computer Science
- Computer and Mathematics with Applications
- IEEE International Conference on Tools with Artificial Intelligence
- International Conference on Information Systems and Engineering
- Indian International Conference on AI
- Annual ACM Southeast Conference,
- Intl. Conf. on Industrial and Engineering Applications of AI and Expert Systems
- Journal of Logic Programming
- IEEE Transactions on Systems, Man, and Cybernetics
- International Journal on Artificial Intelligence Tools
- International Journal of Computers and their Applications
- Journal of Intelligent Systems (Special Issue: Web-based IR)
- International Journal of Pattern Recognition and Artificial Intelligence
- IEEE Concurrency
- IEEE Software
- IEEE Computer
- IEEE Internet Computing
- Journal of Data and Knowledge Engineering
- International Journal of Intelligent Information and Database Systems
- Journal of Applied Intelligence
- Journal of Web Semantics

- Sensor Journal
- Journal of Computer Languages, Systems and Structures

Session Organizer for a special track on

- "Semantic Web" at Indian International Conference on Artifical Intelligence, 2005.
- "Semantic Web and Information Retrieval" at Indian International Conference on Artifical Intelligence, 2007 and 2009.

Session Chair for

- "Software Engineering" at the IEEE National Aerospace and Electronics Conference.
- "Web Services and Service-based Approaches" at the International Conference on Information Systems and Engineering,
- "Intelligent Querying" at International Conference on Applications of Natural Language to Information Systems.
- "Semantic Web and Information Retrieval" at Indian International Conference on Artifical Intelligence.
- "Information Management + Retrieval + Databases" at Information and Knowledge Engineering Conference.

Program Committee Member for:

- Florida AI Research Society Conference
- International Conference on Information Systems and Engineering
- Indian International Conference on AI (Also, on Best Paper Award Committee.)
- Canadian Semantic Web Working Symposium.
- Intl Conf. on Applications of Natural Language to Information Systems.
- International Workshop on Ontologies and Information Systems for the Semantic Web.
- Conference on Information and Knowledge Management.
- International Symposium on Methodologies for Intelligent Systems
- The Joint International workshop on Metamodels, Ontologies, Semantic Technologies, and Information Systems for the Semantic Web
- International Workshop on Semantic Web and Provenance Management
- Workshop on Trust and Privacy on the Social and Semantic Web
- Workshop on User Profile Data on the Social Semantic Web

Proceedings Chair and Co-Editor of:

- *The Semantic Web - ISWC 2009, 8th International Semantic Web Conference*, LNCS 5823, Springer-Verlag (Heidelberg), October 2009.
- *The Semantic Web - ISWC 2008, 7th International Semantic Web Conference*, LNCS 5318, Springer-Verlag (Heidelberg), October 2008.

Book Reviewer:

- in the area of *Programming Languages and Compilers* for Morgan Kaufmann, John Wiley, McGraw Hill, Addison-Wesley, Prentice Hall, Taylor and Francis Publishers, etc.
- in the area of *Databases* for Addison Wesley.

Invited Talks/Tutorials titled:

- "Trust Networks", IICAI-2011, Tumkur, India. (2011)
- "Trust Networks: Interpersonal, Social and Sensors", CTS-2011, Philadelphia, PA. (2011)
- "Trust Networks: Interpersonal, Social and Sensors", INFOTECH-2010, Dayton, OH. (2010)
- "Research in Semantic Web and Information Retrieval: Trust, Sensors, and Search", Keynote talk at the: *International Seminar on Artificial Intelligence and Applications* at GMR Institute of Technology, India (2009).
- "An Introduction to Model Theory for Knowledge Representers" (1990), at the Indian Institute of Science, Bangalore, India.
- "The Semantics of Programming Languages" (1991), at the Indian Institute of Science, Bangalore, India.
- "Information Extraction from Semi-Structured Documents" (2004), at the Indian Institute of Science, Bangalore, India.
- "Paradoxes: The Seeds of Progress" at the ACM Student Chapter Meeting at the Wright State University, Dayton, Ohio in 1990.

Chaired

1. University IT Committee for two years.
2. College Steering Committee for one year.
3. Departmental Colloquium Committee for three years.
4. Languages and Software Area Committee for three years.
5. Department Graduate Studies Committee for one year.
6. Department Graduate Admissions Committee for four years.

7. University Promotion and Tenure Appeals Committee for a year.

Have served on:

University Committees: Library, Honors, Admissions, Petitions, Information Technology, Classroom of the Future, Membership, Buildings and Gounds, Promotion and Tenure Appeals.

College Committees: Faculty Development, Steering, Graduate Studies, Due Process, Curriculum, Library, Petitions.

Department Committees: Admissions, Graduate Studies, Undergraduate, Ph.D., Colloquium, CSE Website/Content Management Task Force.

Served as a Judge for 1989 ACM East-Central Programming Contest. I also contributed problems to 1991 ACM East-Central Programming Contest Trials held at Wright State University.

Served as a Judge for 2009 ACM Programming Contest Trials held at Wright Satte University.

Selected Distinctions

Secured *first rank* in Central School, Vadodara in All India Higher Secondary School Examination (CBSE).

Secured *second rank* in my Bachelor of Technology (in Electrical Engineering) class at the Indian Institute of Technology, Madras.

Secured *first rank* in my Master of Engineering (in Computer Science) class at the Indian Institute of Science, Bangalore.

Adv. GRE (Engr.) Score (1982) = **920**. Adv. GRE (CS) Score (1984) = **920**.

(99th percentile started at **840** for both Subject Areas.)

Awarded American Association of Artificial Intelligence Scholarship for presenting two papers at the *Eleventh International Joint Conference on Artificial Intelligence* (IJCAI-89), at Detroit, Michigan. Also Invited to participate (awarded Honorarium) for *Workshop for Defeasible Reasoning with Multiple Inheritance and Specificity*, at St. Louis, Missouri.

The work on *circumscription* has been cited in papers appearing in the Journal of the ACM (by Kolaitis and Papadimitriou), the Journal of Logic Programming, the Proceedings of the AAAI, etc and in books on Nonmonotonic Reasoning. The work on *Parallel Term Matching* has been cited in papers in the SIAM Journal of Computing (by

Dwork, Kanellakis and Stockmeyer). The work on *Inheritance* has been cited in papers appearing in the Artificial Intelligence Journal, the Proceedings of AAAI and IJCAI, the Journal of Computer and Systems Science, the Handbook of Logic Programming and Artificial Intelligence (by Horty) etc, and in the ACM Award Winning Doctoral Dissertation (by Geffner).

The work on *Abduction in Logic Programming* referenced in US Patent number: "5812994" and titled "Apparatus and method for data processing and/or for control" from Canon (Sept. 22, 1998).

Google search on "Comparative Languages" yields my *CS480/CS680 Comparative Languages* course web page at rank 1 (as of October 5, 2011).

Google search on "Attribute Grammars" yields my lecture on the first page. (It was at *rank 2* as of April 2008 (second entry on the first page following the Wikipedia article)).

`http://www.cs.wright.edu/~tkprasad/courses/cs784/L167AG.ppt`

Winner of *Achievement and Service Award* at Indian International Conference on Artifical Intelligence, 2005, 2007, 2009, and 2011.

Winner of *Recognition for Outstanding Service to Children* by YGIC Parent Forum, 2008. President of YGIC, 2011.

Winner of 2007-2008 College of Engineering and Computer Science *Outstanding Faculty Award*.

Winner of 2011 Fritz J. Russ Award from Dayton Section of the IEEE.

Other Selected Service

The *Compiler Generator based on Attributed Translation Grammar* (which also automates Wirth's scheme of error recovery) written as a part of my Master's Thesis has been used as a tool in Compiler Construction classes at the Indian Institute of Science, Bangalore.

The *IEEE 1076.1 Standard of VHDL Design Browser* with parser in SWI-Prolog and GUI in Java 1.1 that runs on UNIX and Windows95, and the older *VHDL-93 Hardware Description Browser* in SWI-Prolog and Tcl/TK are publically available from my home page

`http://www.cs.wright.edu/~tkprasad/selectedprojects.html`

Contributed to "Tutorial on HOL-90".

Functional Programming Notes (especially lectures on Recursive Definitions involving Combinatorial Functions and ADT specs) shared on PLT-Scheme listserv.

http://www.cs.wright.edu/~tkprasad/courses/cs776/cs776.html

http://www.cs.wright.edu/~tkprasad/courses/cs784/cs784.html

Currently teaching *Vedic Mathematics for Kids* on behalf of Youth Group for Indian Culture (YGIC).

http://www.cs.wright.edu/~tkprasad/assortedbookmarks.html

Developing informal lectures on Logic too.

OUTREACH: Helping with Science Olympiad on Astronomy and Reach for the Stars at Dayton Regional STEM School

OUTREACH: Invited Speaker at HONOR SEMINARS of Metropolitan Dayton on *Astronomy from Scratch : Grasping the Scale*