Dr Kavi Mahesh

Dr. Kavi Mahesh was till recently the Director of Indian Institute of Information Technology, Dharwad, an Institute of National Importance under the Ministry of Education, Government of India. Previously, he was the *Dean of Research* at *PES University, Director* of the World-Bank funded Research *Centre for Knowledge Analytics and Ontological Engineering – KAnOE* and a *Professor of Computer Science*. His areas of interest are data analytics, knowledge management, epistemology, ontology, classification studies, text processing and unstructured data management. He has three US patents and has published two books, 16 book chapters and 80 papers which have received over 1900 citations with a *h-index* of 22 and i_{10}-*index* of 40. Notable among these are the textbook *Theory of Computation: A Problem-Solving Approach* (Wiley India, 2012) and *Ten Steps to Maturity in Knowledge Management* (Elsevier Pub. UK, 2006). He was earlier with *Oracle Corporation,* USA and *New Mexico State University* and has consulted in the area of Knowledge Management with *Infosys, Hewlett Packard, United Nations* and *EasyLib.com.* He holds an M. Tech. in Computer Science from the *Indian Institute of Technology, Bombay* (1989) and an MS (1991) and a PhD (1995) in Computer Science from *Georgia Institute of Technology, USA.*

INTERESTS

He is primarily interested in managing large semantic datasets, understanding the ontological and epistemological models of such data and developing quantitative analytical methods in order to derive solutions to problems of business and social relevance to India and its citizens.

At a personal level, he is keenly interested in Indian tradition, knowledge systems, languages, philosophy and spirituality.

General Information:

Name	KAVI MAHESH

Most Recent Position:

a	Designation	Director
b	Organization	Indian Institute of Information Technology Dharwad
d	Date of appointment to the post	01 September 2017
e	Total experience (in years and months)	33 years 9 months

Educational Qualification (in chronological order from latest to graduation level):

Sl No	Qualifi-cation	University	Year	Subject/Topic	% achieve d	Distinction etc.
1	PhD	Georgia Institute of Technology, USA	1995	Computer Science	NA	Georgia Tech CS department is one of the **Top 10 in USA**
2	MS	Georgia Institute of Technology, USA	1991	Computer Science	4.0/4.0	
3	MTech	IIT Bombay	1989	Computer Science & Engineering	9.7/10	IIT B CS department is **Topmost in India**
4	BE	Bangalore University	1987	Mechanical Engi-neering	80.1%	FIRST RANK

Administrative Experience/Post(s) & Responsibilities held:

Sl No	Post	Organization/University	Period		Experience (in years & months)
			From	To	
1	Director (academic and executive head of institu-tion)	IIIT Dharwad	01/09/2017	15/09/2023	5 years 6 months
2	Head of the Department	Data Science and Intelligent Sys-tems Department, IIIT Dharwad	01/12/2020	15/09/2023	1 year
3	Director (head of Centre of Excellence funded by World Bank/MHRD)	Centre for Knowledge Analytics and Ontological Engineering - KA-nOE, PESU	20/05/2013	07/01/2017	3 years and 7 months
4	Dean of Research (PhD program and all funded research projects)	PES University	15/02/2014	07/01/2017	2 years 11 months
5	Technology Manager - Knowledge Management	Infosys Limited	28/08/2000	01/05/2002	1 year 8 months
6	Principal Member of Technical Staff	Oracle Corporation, USA	01/06/1997	30/06/2000	3 years 1 month
7	Member of Board of Trustees (International)	RCIS - Ranganathan Centre for Information Studies	10/08/2011		10 years 5 months
8	Member of Board of Trustees (International)	SRELS - Sarada Ranganathan En-dowment for Library Sciences	10/11/2013		8 years 2 months
9	Member of Board of Gov-ernors	PES University	15/02/2014	07/01/2017	2 years 11 months
10	Board Member	BITES - Board for IT Education Standards	2017		4 years
11	Member Secretary	Karnataka State Innovation Council	2013	2015	2 years

			From	To	
12	Member	CIPK - Creativity and Innovation Platform of Karnataka (under Districts of Creativity, Flanders, Belgium)	2009	2016	7 years
13	Member	Karnataka Vision Group on IT	09/07 2021		6 months
14	Member Board of Studies	(i) MS Ramaiah Inst. of Tech. (ii) KLE Tech University (iii) Central University, Gulbarga (iv) International School of Information Management, Mysore			
15	Member of Academic Council/Senate	(i) Rajiv Gandhi University of Knowledge Technology (ii) PES University (iii) RVCE, Bangalore			
16	Member	American National Standards Institute - ANSI Ad Hoc Committee on Ontology Standardization (at Stanford University, USA)	1995	1998	3 years
17	Member of Professional / Academic Bodies	(i) International Society for Knowledge Oganization (ii) Knowledge Management Community			

Academic / Teaching Experience & Responsibilities (in reverse chronological order):

Sl No	Post	Organization/University	Duration		Experience (in years & months)
			From	To	
1	Professor & Director	IIIT Dharwad	01/09/ 2017	15/09/ 2023	5 years 3 months
2	Professor and Dean of Research	PES University / PESIT, Bangalore	18/06/ 2005	07/01/ 2017	11 years 6 months
3	Adjunct Assistant Professor	New Mexico State University, USA	01/12/ 1994	31/05/ 1997	2 years 6 months
4	Teaching Assistant	College of Computing, Georgia Institute of Technology, USA	01/10/ 1989	01/11/ 1994	5 years 1 month
5	Scientific Officer	CSA Department, IISc, Bangalore	01/12/ 1988	30/08/ 1989	9 months

Participation and contribution in institutes of higher education:

	Organization / University	Remarks
Visiting Professor	Indian Statistical Institute, Bangalore	2007-2011 (taught a course on knowledge management)
Resource Person	Microsoft Research, Bangalore	2014 (taught one of the first online courses on algorithms)

Involvement with Formulation of Academic Programmes:

SI #	Innovative academic programmes formulated	University / Institute	Date introduced
1	BTech in Data Science and AI	IIIT Dharwad	2020
2	MTech in Web Technologies (first such program)	PESIT, VTU	2012
3	MS program for BSc graduates (IBM employees)	Mysore University and IBM India	2006
4	Masters in Information Systems and Management	International School of Information Management, Mysore University	2006

Important MoUs Formulated for Academic Collaborations:

SI #	MoUs Formulated	Name of Agencies / Departments	Year of MoU
1	MoU for Startup collaboration	Sandbox Startup and IIIT Dharwad	2019
2	Australia India Water Consortium (AIWC)	IIT Guwahati, IIIT Dharwad, Australian universities, others	2020
3	Autonomous vehicle (humanoid) research	NMICPS Technology Innovation Hub on Autonomous Navigation Foundation 0 TiHAN (IIT Hyderabad) and IIIT Dharwad	2021
4	Cyber Shiksha Program	Data Security Council of India and IIIT Dharwad	2021
5	Research collaboration and student exchange	Dalhousie University, Canada and PES University	2012
6	MoU for institutional collaboration	IIT Bombay, PES University	2015
7	MoU for Knowledge Partner in IT	Health and Family Welfare Department, Government of Karnataka and IIIT Dharwad	2019
8	MoU with MindTree and EduNet	For offering IT training to college dropouts from rural areas through sponsored corporate CSR initiative	2022

International Academic Exposure:

Sl No	Post	Organization/University	Area of assignment	Duration		Experience (in years & months)
				From	To	
1	Principal Member of Technical Staff	Oracle, USA	R&D in AI	01/06/1997	15/06/2000	3 years
2	Senior Computational Linguist and Adjunct Assistant Professor	New Mexico State University, USA	CS and AI	01/12/1994	31/05/1997	2 years 6 months
3	Teaching Assistant	Georgia Institute of Technology, USA	CS	01/10/1989	01/11/1994	5 years 1 month

Scholarly Achievements
A. Contribution to Journals and Books:

Books authored	1. Kavi Mahesh (2012) Theory of Computation: A Problem-Solving Approach New Delhi, India: Wiley isbn:978-81-265-3311-4 2. J K Suresh, Kavi Mahesh (2006) Ten Steps to Maturity in Knowledge Management: Lessons in Economy Oxford, United Kingdom: Chandos Publishing (now Elsevier), U.K. isbn:1843341301 **(Plus about 16 Book Chapters with reputed publishers, e.g., MIT Press)**
Editor in chief	Information Studies journal
Peer reviewer	Numerous research papers peer reviewed over the last 30 years
Member of international advisory board	Member of Board of Trustees (International) of RCIS - Ranganathan Centre for Information Studies Member of Board of Trustees (International) of SRELS - Sarada Ranganathan Endowment for Library Sciences
Others (specify)	A total of 14 journal papers (including 10 International journal papers)

B. Publications:

Total publications: 112   **Total citations: 1900**

h-index: 22   **i10-index: 40**

Most cited 20 publications in decreasing order of citations:

SI #	Title	Where Published	No. of citations
1	A situated ontology for practical NLP K Mahesh, S Nirenburg	Proc. IJCAI-95 Workshop on Basic Ontological Issues in Knowledge Sharing, Montreal, Canada	**285**
2	Ontology development for machine translation: Ideology and methodology K Mahesh, S Helmreich, L Wilson	New Mexico State University, Computing Research Laboratory MCCS-96-292	**226**
3	Semantic analysis in the Mikrokosmos machine translation project S Beale, S Nirenburg, K Mahesh	Proc. 2nd Symposium on Natural Language Processing, SNLP-95, 297-307, Bangkok, Thailand	**128**
4	Finger detection for sign language recognition J Ravikiran, K Mahesh, S Mahishi, R Dheeraj, S Sudheender, NV Pujari	Proc. International MultiConference of Engineers and Computer Scientists IMECS 2009 Hong Kong	**121**
5	Automated method for quantitative measurement of benefits in a plurality of self-assessing, knowledge sharing communities V Kochikar, SC Sen, K Mahesh, S Kapanipathy	US Patent App. 10/551,829	**63**
6	Automated integration of terminological information into a knowledge base K Mahesh	US Patent 6,654,731	**56**
7	Knowledge criteria for organization design K Mahesh, JK Suresh	Journal of Knowledge Management 13:4. 41-51	**53**
8	What is the K in KM Technology K Mahesh, JK Suresh	The Electronic Journal of Knowledge Management 2 (2), 11-22	**48**
9	Semantic classification for practical natural language processing K Mahesh, S Nirenburg	Proc. Sixth ASIS SIG/CR Classification Research Workshop	**47**
10	Oracle at Trec8: A Lexical Approach. K Mahesh, J Kud, P Dixon	TREC8, National Institute of Standards and Technology, USA	**46**
11	An assessment of Cyc for natural language processing K Mahesh, S Nirenburg, J Cowie, D Farwell	Memoranda in Computer and Cognitive Sciences MCCS-96-296	**44**
12	Lexical acquisition with WordNet and the Mikrokosmos Ontology T O'Hara, K Mahesh, S Nirenburg	COLING/ACL Workshop on Usage of WordNet in Natural Language Processing Systems	**40**
13	Meaning representation for knowledge sharing in practical machine translation K Mahesh, S Nirenburg	Proc. FLAIRS-96 Track on Information Interchange	**39**
14	Semantics in Action K Mahesh, S Nirenburg, S Beale	Predicative forms in natural language and in lexical knowledge bases 6, 171	**39**
15	Lexicons in the Mikrokosmos project S Nirenburg, S Beale, K Mahesh, B Onyshkevych, V Raskin, E Viegas, ...	Proc. Society for Artificial Intelligence and Simulation of Behaviour, UK	**36**
16	Ten steps to maturity in knowledge management: lessons in economy JK Suresh, K Mahesh	Elsevier	**35**

17	Hypertext summary extraction for fast document browsing K Mahesh	AAAI 97 Spring Symposium on Natural Language Processing for the WWW, Stanford University	**33**
18	Hunter-gatherer: Three search techniques integrated for natural language semantics S Beale, S Nirenburg, K Mahesh	Proc. National Conference on Artificial Intelligence, 1056-1061	**27**
19	Automated integration of terminological information into a knowledge base K Mahesh	US Patent 7,512,575	**24**
20	Word Sense Disambiguation: Why statistics when we have these numbers? K Mahesh, S Nirenburg, S Beale, E Viegas, V Raskin, B Onyshkevych	Proc. 7th International Conference on Theoretical and Methodological Issues in Machine Translation TMI-97	**24**

C. Keynote / Plenary and Invited Talks delivered at conferences, etc.:
I. National: (selected ones)

Sl #	Date	Title of Conference or Institution	Subject of presentation
1	18/08/ 2017	College of Defence Management, Secunderabad	Visual Analytics of Terrorism in India
2	10/10/ 2021	IIT Bombay Alumni Association	Data Science for Societal Good
3	02/05/ 2017	IIM Bangalore	Copyrights and Intellectual Property Panel
4	Nov 2016	TERI New Delhi - ICDL	Knowledge Management Technology
5	08/12/ 2012	23rd Dr L S Chandrakanth Memorial Lecture, ISTE Convention	Redefining the Role of an Engineering Teacher
6	9-11/08/ 2009	15th Dr S R Ranganathan Memorial Lecture Series	Trends in Knowledge Representation and Management: A Unifying Model
7	01/04/ 2007	2nd National Frontiers of Engineering Symposium, INAE, IIT Delhi	Managing the Demand and Supply of Knowledge in India
8	27/08/ 2014	Ericsson Research Labs, Bangalore	Quantifying Knowledge Management: From Measurement to Analytics
9	27/07/ 2013	Bharatiya Vidya Bhavan and ISKCON	Vedic Ontology
10	24/01/ 2015	World Ramayana Conference	Ramayana Research through Knowledge Analytics
11	28/02/ 2008	Dept. of Atomic Energy, Nuclear Power Corporation of India Ltd.	Knowledge Management: The Infosys Experience
12	17/06/ 2009	IISc Bangalore	Role of Knowledge Management in the Growth of the Indian IT Industry

II. International: (selected ones)

Sl #	Date	Title of Conference or Institution	Subject of presentation
1	18/11/ 1999	US National Institute of Standards and Technology (NIST), **Gaithersburg, USA**	Oracle at TREC8: A Lexical Approach

2	06/12/1995	US National Security Agency (NSA), Dept. of Defense, **Fort Meade, USA**	Ontology: Semantic Classification for Natural Language Processing
3	19/07/1994	Sun Microsystems Lab, **Chelmsford, MA, USA**	Reaping the Benefits of Interactive Syntax and Semantics
4	28/05/1992	Science Applications International Corporation (SAIC), Atlanta, **USA**	Machine Translation by Understanding Languages
5	21/05/2014	ISKO International Conference on Knowledge Organization in the 21st Century, **Krakow, Poland**	Highly Expressive Tagging for Knowledge Organisation in the 21st Century
6	24/10/2013	12th International Semantic Web Conference, **Sydney, Australia**	Curating Semantic Linked Open Datasets for Software Engineering
7	Mar 2009	IMECS International Multi-conference of Engineers and Computer Scientists, **Hong Kong**	Finger Detection for Sign Language Recognition
8	28/09/2016	14th International ISKO Conference, **Rio de Janeiro, Brazil**	Organizing Knowledge to Facilitate Analytics
9	20/08/1995	IJACI International Joint Conference on Artificial Intelligence, **Montreal, Canada**	A Situated Ontology for Practical NLP
10	22/10/2014	13th International Semantic Web Conference, **Riva del Garda, Italy**	LODMedics: Bringing Semantic Data to the Common Man

D. Patents:

Sl No	Year	Patent number	Details
1	2015	US Patent 9,128,772	Kavi Mahesh, J K Suresh and Rujuswami D Gandhi, Infosys Limited (2015) *Performance Optimization through Run-Time Quality Governance*
2	2009	US Patent 7,512,575	Kavi Mahesh, Oracle Corporation (2009) *Automated integration of terminological information into a knowledge base*
3	2003	US Patent 6,654,731	Kavi Mahesh, Oracle Corporation (2003) *Automated Integration of Terminological Information into a Knowledge Base*

Research Projects:

Sl No	Client / Organisation's name	Nature of project	Duration of project	Amount of grant (Rupees)
1	World Bank / MHRD	Centre of Excellence in Knowledge Analytics and Ontological Engineering	3 years	5,00,00,000
2	Department of Health and Family Welfare Services, Government of Karnataka	Knowledge Partner in Information Technology	3 years	72,00,000
3	TDIL-DeitY, Government of India	Indian language modelling (consortium under CDAC)	2 years	1,00,00,000
4	MODROBS - AICTE	Ontological engineering	1 year	11,00,000

5	Microsoft Research	Unrestricted research grant	1 year	4,00,000
6	VTU	Ontological engineering	3 years	14,00,000
7	RPS - AICTE	Sign language recognition	2 years	5,00,000
8	US Department of Defence	Mikrokosmos ontology development	3 years	N/A

Consulting Experience:

Sl No	Client / Organization's name	Nature of assignment	Duration of assignment
1	Infosys Limited	Principal Consultant, Knowledge Management, Education & Research	05/2002-09/2013 (11 years 4 months)
2	Hewlett Packard	Knowledge Management: designing solution for HP India	2006-2008 (2 years)
3	United Nations Development Programme (UNDP)	Technology Consultant	2009-2010 (1.5 years)
4	easylib.com	Technology Consultant	2001-2013 (12 years)
5	Internet startup company, San Francisco, USA	Name of company and nature of work are confidential	1998 (1 year)

Honors / Awards & Fellowships for Outstanding Work:

1. 9th Rank for Karnataka State, SSLC public examination (out of 1,60,000 students), 1980
2. 1st Rank for Bangalore University, BE degree, 1987
3. National Merit Scholarship awarded by Government of India throughout (1980-1987)
4. Elected member of *The Honor Society of Phi Kappa Phi*
5. Best technical paper award, Science Applications International Corp (SAIC)
6. Recipient of *Unrestricted Research Grant* from Microsoft Research
7. Permanent Residence (Green Card) in USA awarded under *Outstanding Researcher* category