Venkatesh Choppella

CONTACT
INFORMATION

International Institute of Information Technology
Hyderabad
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INTERESTS

Software Architectures and technologies, Programming Languages, Formal specification and verification of systems, Computer Science Education

EDUCATION

Indiana University, Bloomington, Indiana, USA

Ph.D. in Computer Science, Aug 2002
- Dissertation: "Unification Source-tracking with Application to Diagnosis of Type Inference"
- Advisor: Christopher T. Haynes

M.S., Computer Science, May 1995,

Indian Institute of Technology, Madras, Chennai, India

M.Tech., Computer Science and Engineering, May, 1987
- Dissertation: "Implementation of ML using the SECD machine"
- Advisor: C. R. Muthukrishnan

Indian Institute of Technology, Kanpur, Kanpur, India

B.Tech., Computer Science and Engineering, May, 1985.

EMPLOYMENT

Associate Professor, IIIT Hyderabad	**Jan**	**2010**	**-**		
Visiting Associate Professor, IIIT Hyderabad	**Jul**	**2009**	**-**	**Dec**	**2009**
Visiting Associate Professor, IIIT Bangalore	**Jul**	**2009**	**-**	**Apr**	**2010**
Visiting Research Associate, Ohio State University	**May**	**2005**	**-**	**May**	**2006**
Associate Professor, Indian Inst. of Info. Tech.& Mgmt Kerala	**Oct**	**2003**	**-**		
Adjunct Faculty, Tata Consultancy Services	**Nov**	**2003**	**-**	**Nov**	**2005**
Post-Doctoral Researcher, Oak Ridge National Laboratory	**Dec**	**2002**	**-**	**Sep**	**2003**
PhD. Candidate, Indiana University	**Sep**	**2001**	**-**	**Jul**	**2002**
Senior Software Engineer, Hewlett-Packard Company	**Jan**	**2001**	**-**	**Aug**	**2001**
Research Staff, Indiana University	**Mar**	**2000**	**-**	**Dec**	**2000**
Senior S/W Engineer, Xerox Corporation	**Sep**	**1999**	**-**	**Feb**	**2000**
PhD. Candidate, Indiana University	**Jan**	**1999**	**-**	**Sep**	**1999**

EMPLOYMENT CONTD.	*Research Staff*, Derivation Systems	**Jun**	**1995**	**-**	**May**	**1997**
	Research/Teaching Associate Indiana University	**Aug**	**1988**	**-**	**Jan**	**1995**
	S/W Engineer CMC Ltd	**Mar**	**1987**	**-**	**Aug**	**1988**

TEACHING EXPERIENCE

International Institute of Information Technology, Hyderabad
Associate Professor **Jan 2010 - present**
Designing and teaching the following courses in computer science:

- Information Technology Workshop 2011, 2012
- Principles of Programming Languages 2010, 2011, 2012
- Topics in Programming Languages 2011

International Institute of Information Technology, Bangalore
Adjunct Associate Professor **Jul 2009 - Jun 2010**
Designing and teaching the following courses in computer science:

- Principles of Programming 2009
- Programming Languages and Models 2010

International Institute of Information Technology, Hyderabad
Adjunct Associate Professor **Jul 2009 - Dec 2009**
Designing and teaching the following course

- Principles of Programming Languages

Indian Institute of Information Technology and Management – Kerala,
Associate Professor **Oct 2003 - present**
Designing and teaching the following courses in computer science and information technology.

- Principles of Programming 2007, 2008
- Web Technologies 2003, 2004, 2006, 2007, 2008
- Interpreters and Compilers 2004.
- Mathematical Foundations of Information Technology 2004.
- Introduction to Databases 2005, 2006
- Data Structures 2009
- Computer Networks 2008 (Associate Instructor)
- Scientific Computing 2006 (Associate Instructor)
- Computational Biology 2007 (Co-Instructor)

Indiana University Computer Science, Bloomington, Indiana, USA
Associate Instructor **Jan 1990 - Jan 1995**
Graded assignments, conducted discussions, and shared lecturing responsibilities for the following courses:

- Introduction to Programming with C and Scheme
- Introduction to Data Structures
- Introduction to Algorithms
- Introduction to Programming Languages
- Semantics of Programming Languages

ENGINEERING
EXPERIENCE

IIITM-K, Trivandrum, India
Part-time Networks and Systems Administrator **May 2008 - Present**
Designed and continue to maintain institute network, systems and services, including institute Firewall, DNS, SSH, SVN, File server, Web Server and Pound reverse-proxy. Supervised deployment of other services: Moodle, DHCP, OTRS, Wiki. Instituted processes for managing the networks group: version control of network and system scripts using SVN, using mailing lists and regular meetings of systems staff, documentation of institute systems on the institute Wiki. Wrote programs in the Python and BASH scipting languages to automate change management in network, system and service configurations. Liaised with Internet Service Providers (ISP)'s. Negotiated with RailTel India and ERNET India on installation of network equipment. Oversaw the institute's switch from Reliance to Asianet as the institute's ISP's. Taught many classes introducing SSH, LaTeX, SVN, Emacs, and other Free and Open Source Software (FOSS) tools at IIITM-K and other colleges from Oct 2003 to present.

Hewlett-Packard Company, Cupertino, CA USA
Senior S/W Engineer **Jan 2001 - Aug 2001**
Worked in the the E-speak product development project. Implemented and participated in Java XML standards bodies (mainly JAXB). Implemented EJB-based applications using the HP-Bluestone application server. Coauthored proposal to the World Wide Web consortium on WSCL: Web Services Conversation Language.

Xerox Corporation, Palo Alto, CA USA
Senior S/W Engineer **Sep 1999 - Feb 2000**
Worked in the Document Portals Business Group at Xerox on the Flowport server. Designed and implemented an XML-based Java API for remote forms management. Briefly participated in the Xforms subgroup of the W3C HTML working group.

Derivation Systems, Carlsbad, CA USA
Research Engineer **Jun 1995 - May 1997**
Part of a three member team that designed, developed and verified Derivational Reasoning System, the company's flagship product and an interactive environment for formally transforming high level functional specifications of digital hardware to gate-level descriptions. Designed and implemented an ML-style polymorphic type inference system that also provided support for type coercions. Developed a mathematical formalism for the semantics of DRS and the core program transformations that it was based on. Mechanically verified the specification and the correctness of these transformations in the PVS theorem prover. Other duties included writing government and NASA grant proposals. One of the three authors of the Phase-II NASA-SBIR proposal that initially funded Derivation Systems.

CMC Ltd., Secunderabad, INDIA
Research and Development Engineer **Jan 1987 - Aug 1988**
Implemented the memory bank allocation subsystem of a Vectorized Fortran Compiler.

International Insitutes of Information Technology, Hyderabad and Bangalore
Exploring model based architectures. Working on process approaches in E-governance, and exploring applications of process models to other areas. Researching innovative Web Technologies for education.

Indian Institutes of Information Technology and Management – Kerala
Worked with and guided students in the area of web technologies and portal development. Continued research in unification theory, and investigated the application of formal methods to data bases.

Ohio State University, Columbus, OH, USA
Visiting Research Associate   **May 2005 - May 2006**
Worked with Prof. P. Sadayappan in the Tensor Contraction Engine (TCE) project. TCE is a compiler that generates optimized scientific computing algorithms from high-level specifications. Worked on operation minimization, tiling, and higher-order notation for canonical forms.

Oak Ridge National Laboratory, Oak Ridge, TN, USA
Post-Doctoral Researcher   **Dec 2002 - Sep 2003**
Did research work supervised by Dr. David Bernholdt in the Tensor Contraction Engine (TCE) project. TCE is a compiler that generates optimized scientific computing algorithms from high-level specifications. Implemented and extended TCE compiler to interface with existing quantum chemistry packages.

Indiana University, Bloomington, IN, USA
Research Staff   **Feb 2000 - Dec 2000**
Worked in the CCAT Project in the Computer Science Department. Under supervision of Prof. Dennis Gannon, designed component-based architectures for high-performance distributed systems. With other members in the lab, developed a Simple Object Access Protocol (SOAP) based implementation of Java's Remote Method Invocation Application Programmer Interface.

Xerox Palo Alto Research Center, Palo Alto, CA, USA
Research Staff   **Aug 1997 - Dec 1998**
Worked with the Aspect-Oriented Programming group in the development of AspectJ, an aspect-oriented extension to Java. Implemented the parser and AST module and parts of the AspectJ weaver, and managed early releases of AspectJ to the user community.

Indiana University, Bloomington, IN, USA
Research Associate   **Aug 1988 - Dec 1994**
Member of the Indiana programming language research group. Under supervision of Prof. Chris Haynes, designed and implemented Infer, an extension of Scheme with static type inference primarily used as an early test-bed for research in diagnostic unification and type reconstruction of variable-arity procedures. Earlier work included implementing Conlog, a Scheme embedding of Prolog that supported first-class continuations.

Venkatesh Choppella, Hitesh Kumar, P Manjula and K Viswanath. **From high-school algebra to computing through functional programming**. 4th IEEE International Conference on Technology for Education, Hyderabad, Jul 2012.

Ankur Goel and Venkatesh Choppella. **Algebraic Modelling of Educational Workflows**. 4th IEEE International Conference on Technology for Education, Hyderabad, Jul 2012.

Sankalp Khare, Ishan Misra and Venkatesh Choppella. **Using org-mode and SVN for Managing nd Publishing Content in Computer Science courses**. 4th IEEE International Conference on Technology for Education, Hyderabad, Jul 2012.

Shreya Malani, G N Srinivasa Prasanna Jesus A del Alamo, James L Hardison,Kannan Moudgalya and Venkatesh Choppella (IIITH). **Issues faced in a Remote Instrumentation Laboratory.** 4th IEEE International Conference on Technology for Education, Hyderabad, Jul 2012.

T B Dinesh, Venkatesh Choppella. **Alipi – tools for a Re-narration Web.** 9th International Cross-Disciplinary Conference on Web Accessibility, 16/17th April 2012, Lyon, France. Microsoft accessibility challenge: **delegates award.**

T B Dinesh, Suzan Uskudarli, Subramanya Sastry, Deepti Aggarwal, Venkatesh Choppella. **Alipi: A framework for re-narrating web pages.** 9th International Cross-Disciplinary Conference on Web Accessibility, 16/17th April 2012, Lyon, France.

Chaitanya Bandi, Aditya K Nori, Venkatesh Choppella and Sandhya Kode. **A Virtual Laboratory for teaching Linux on the web.** 3rd IEEE International Conference on Technology for Education, Chennai, Jul 2011.

Rohit Khot and Venkatesh Choppella. **'DISCOVIR: A Framework for Designing Interfaces and Structuring Content for Virtual Labs.** 3rd IEEE International Conference on Technology for Education, Chennai, Jul 2011.

Venkatesh Choppella , Vamsi Krishna Brahmajosyula , Medhamsh Vutpala and Sukant Kole. **Process Models for Virtual Lab Development, Deployment and Distribution.** 3rd IEEE International Conference on Technology for Education, Chennai, Jul 2011.

Vamsikrishna Brahmajosyula and Venkatesh Choppella. **Designing and Programming with State Variables**. 2nd India Workshop on Advances in Model based Software Engineering (WAMBSE) 2011.

Thulasi Ram Naidu P., Manisha Verma, Venkatesh Choppella and Gangadhar Chalapaka. **Synthesizing Learning Environments**. 2nd IEEE Conference on Technology for Education, Mumbai, Jul 2010.

T B Dinesh and Venkatesh Choppella. **A case for process-driven models for e-governance architectures**. 7th International Conference on E-Governance. 22 - 24 April, 2010, Bangalore, India.

Venkatesh Choppella and K R Srivathsan. **Fostering Community Interaction with the Trivandrum City Police Portal.** 3rd ACM International Conference on the Theory and Practice of E-Governance, Bogota, Colombia, pp 365–368, Nov 2009.

V. Choppella, A. Sengupta, E. L. Robertson and S. D. Johnson. **Preliminary Explorations in Specifying and Validating Entity-Relationship Models in PVS.** Proceedings of AFM 07, ACM Workshop on Applied Formal Methods, Nov. 6th, 2007, Atlanta, USA. Preprint available at `http://fm.csl.sri.com/AFM07/afm07-preprint.pdf`.

Albert Hartono, Qingda Lu, Xiaoyang Gao, Sriram Krishnamoorthy, Marcel Nooijen, Gerald Baumgartner, Venkatesh Choppella, David Bernholdt, Russell Pitzer, J. Ramanujam, Atanas Rountev, and P. Sadayappan. **Identifying Cost-Effective Common Subexpressions to Reduce Operation Count in Tensor Contraction Evaluations.** International Conference on Computational Science (ICCS'06), LNCS 3991, pages 267-275, May 2006. Copyright 2006 Springer-Verlag.

S. Krishnan, S. Krishnamoorthy, G. Baumgartner, C-C. Lam, J. Ramanujam, P. Sadayappan and V. Choppella. **Efficient Synthesis of Out-of-core Algorithms Using a Nonlinear Optimization Solver.** In *Proc. International Parallel and Distributed Processing Symposium, Albuquerque, New Mexico, USA, Apr 2004*. (Proceedings available on CD-ROM). IEEE Computer Society.

A. Bibireata, S. Krishnan, G. Baumgartner, D. Cociorva, C-C. Lam, P. Sadayappan, J. Ramanujam, D. E. Bernholdt and V. Choppella. **Memory-constrained Data Locality Optimizations for Tensor Contractions.** In *Proc. 16th International Workshop on Languages and Compilers for Parallel Computing (LCPC '03), College Station, Texas, Oct 2003*. Springer Lecture Notes in Computer Science Vol. 2958, pp. 93–108, 2004.

V. Choppella. **Polymorphic Type Reconstruction Using Type Equations.** In *Implementation of Functional Languages 15th International Workshop, IFL 2003, Edinburgh, UK, Sep 2003 Revised Papers*. Springer Lecture Notes in Computer Science, Vol. 3145, pp. 53–68, 2004.

S. Krishnan, S. Krishnamoorthy, G. Baumgartner, D. Cociorva, C. Lam, P. Sadayappan, J. Ramanujam, D. E. Bernholdt, and V. Choppella. **Data Locality Optimization for Synthesis of Efficient Out-of-Core Algorithms**. In *Proc. of the Intl. Conf. on High Performance Computing, Hyderabad, India, Dec 2003*. Springer Lecture Notes in Computer Science, Vol. 2913 pp. 406–417, 2003.

REFEREED WORKSHOP AND CONFERENCE PUBLICATIONS CONTD.

V. Choppella and C. T. Haynes. **Source-tracking Unification**. In *Proceedings of 19th International Conference on Automated Deduction, (CADE-19), Miami Beach, USA, Aug 2003* Springer Lecture Notes in Artificial Intelligence, Vol. 2741, pp. 458–472, 2003.

M. Govindaraju, A. Slomenski, V. Choppella, R. Bramley and D. Gannon. **Requirements for and Evaluation of RMI Protocols for Scientific Computing**. In *Proc. of the IEEE/ACM conference on SuperComputing (SC 2000), Nov 2000*.

B. Bose. M. Esen Tuna, and V. Choppella. **Tutorial on Digital Design Derivation with**

DRS. In *Proc. 1st International Conf. on Formal Methods in Computer Aided Design, (FMCAD '96), Palo Alto, CA, USA, Nov 1996*, Springer Lecture Notes in Computer Science, Vol 1166, 1996.

P. Bradford, V. Choppella, and G. J. E. Rawlins. **Lower Bounds on the Matrix Chain Order problem: Extended Abstract**. In *Proc. 2nd Latin American Symposium on Theoretical Informatics, (LATIN'95), Valparaiso, Apr 1995*. Springer Verlag Lecture Notes in Computer Science Vol. 911, 1995.

REFEREED
JOURNAL
PUBLICATIONS

Vamsikrishna Brahmajosyula and Venkatesh Choppella. **Designing and Programming with State Variables**. Setlab Briefings. Vol 9, No 4. 2011 pp 3-10.

S. Krishnan, S. Krishnamoorthy, G. Baumgartner, C-C. Lam, J. Ramanujam, P. Sadayappan and V. Choppella. **Efficient Synthesis of Out-of-core Algorithms Using a Nonlinear Optimization Solver (Revised and Extended Version).** *Journal of Parallel and Distributed Computing* Vol. 66. pp. 659-673, May 2006. **Invited submission**.

Alexander A. Auer, Gerald Baumgartner, David E. Bernholdt, Alina Bibireata, Venkatesh Choppella, Daniel Cociorva, Xiaoyang Gao, Robert Harrison, Sriram Krishnamoorthy, Sandhya Krishnan, Chi-Chung Lam, Qingda Lu, Marcel Nooijen, Russell Pitzer, J. Ramanujam, P. Sadayappan and Alexander Sibiryakov. **Automatic code generation for many-body electronic structure methods: the tensor contraction engine**. *Molecular Physics.* Vol. 104, No. 2, pp. 211-228, January 2006.

V. Choppella and C.T. Haynes. **Source-tracking Unification (Revised and Extended Version)**. *Information and Computation* Vol. 201 Issue 2, pp. 121-159, Sep 2005. **Invited submission**.

G. Baumgartner, A. Auer, D. Bernholdt, A. Bibireata, V. Choppella, D. Cociorva, X. Gao, R. Harrison, S. Hirata, S. Krishnamoorthy, S. Krishnan, C. Lam, M. Noojien, R. Pitzer, J. Ramanujam, P. Sadayappan, A. Sibiryakov. **Synthesis of High Performance Parallel Programs for a Class of ab initio Quantum Chemistry Models**. *Proceedings of the IEEE: Special Issue on Domain-Specific Program Generation and Optimization*, Vol. 93, No. 2, pp. 276–292, February 2005. **Invited submission**.

K. Rath, V. Choppella and S. D. Johnson. **Decomposition of Sequential Behavior using Interface Specification and Complementation**. In *VLSI Design, Special Issue on Decomposition*, Vol. 3, Nos. 3-4, pp. 347–358, 1995.

BOOKS IN
PREPARATION

An Introduction to the Principles of Programming. With T B Dinesh.

TECHNICAL
REPORTS

V. Choppella, A. Sengupta, E. L. Robertson, S. D. Johnson. Constructing and Validating

Entity-Relationship Data Models in the PVS Specification Language: A case study using a text-book example. Indiana University Computer Science Technical Report TR632. April 2006.

V. Choppella. A Compositionality Principle for Syntactic Unification. July 2004. *Unpublished manuscript*.

Venkatesh Choppella. Unification Source-tracking with Application to Diagnosis of Type Inference. (PhD. dissertation) *Indiana University Computer Science Tech. Report. #566, Aug 2002.*

A. Banerji, C. Bartolino, D. Beringer, V. Choppella, K. Govindarajan, A. Karp, H. Kuno, M. Lemon, G. Pogossiants, S. Sharma, S. Williams. Web Services Conversation Language (WSCL) 1.0 Hewlett-Packard Company, *World Wide Web Consortium Note, Mar 2002.* http://www.w3.org/TR/wscl10

B. Bose, M. Esen Tuna, V. Choppella. Derivational Reasoning System: A Digital Design Derivation System for Hardware Synthesis. *Contract NAS1-20414 National Aeronautics and Space Administration (NASA) SBIR Phase II Final Report, Mar 1997.*

V. Choppella and C. T. Haynes. Diagnosis of Ill-Typed Programs, *Indiana University Tech. Report. #426, Dec 1994.*

Venkatesh Choppella. Implementation of ML using the SECD machine. M.Tech thesis IIT Madras. 1987.

THESIS
SUPERVISION

Automatic generation and deployment of Network Configuration scripts. Gangadhar Chalapaka. Post-Graduate Diploma in Information Technology (PGDIT), IIITM-K 2009 (Expected).

Rebuilding the Institute Network. V. Asha Rose, Girish N Gopal, Mithu Mary Kuruvilla. MSIT, IIITM-K 2008.

Building Instructional Technologies and Content for the Course Principles of Programming Course. Girish N Gopal, Mithu Mary Kuruvilla. MSIT, IIITM-K 2008.

Automatic Generation of Formal Specification of Entity-Relationship Diagrams. Alice Joseph. M.Tech Vellore Institute of Technology 2008. External Supervisor.

Modeling Point Mutations in E-Coli Gene and their effect on fitness over successive generations. Nithya Sam and Vimi Soman. Masters in Information Technology (MSIT), IIITM-K 2007.

THESIS SUPERVISION CONTD.

IT support for Palliative Care services with an e-learning platform and an electronic health record. Cibi Chacko, K. Rejoy Bhaskar, V. R. Lekshmi and I. Subha. MSIT, IIITM-K 2007.

Detecting system-breakins by comparing correlated frequency matrices. Anju Pratap. M.Tech. Computer Science, Alagappa University 2007. External Supervisor.

Police Portal for Community Interaction: General Category Manipulation and Alert System. Jeena Premkumar. Post Graduate Diploma in Information Technology (PGDIT), IIITM-K 2005.

Formal Specification of Police Portal's Complaint Module using Z and OCL. Sangram Jena and Manish Garg. PGDIT, IIITM-K 2005.

Web Services for Agricultural Marketing System. K. M. Manu Prathab and P. Roopiga. MSc Computer Science, Kerala University 2004.

Implementation of Efficient Algorithms for Unification Debugging. M. T. Chitra and V. G. Suman. MSc. Computer Science, Kerala University 2004.

TALKS

IT Management Infrastructure in Colleges: The FOSS alternative. *EnhanceEdu Open Day, IIIT Hyderabad. April 20th 2010.*

Documentation with Restructured Text:. *IIT-Bombay IIIT Hyderabad workshop on Scientific Computing with Python (SciPy) February 9th 2010.*

FOSS Productivity tools: An introduction. *Workshop at IIIT Hyderabad , December 23rd, 2009.*

Teaching Principles of Programming in the Web 2.0 Era. *Seminar at IIIT Bangalore, Jun 22nd, 2009.*

Teaching Principles of Programming in the Web 2.0 Era. *Seminar at IIIT Bangalore, Jun 22nd, 2009.*

Teaching Principles of Programming in the Web 2.0 Era. *Seminar at IIIT Hyderabad, May 28th, 2009.*

Teaching Principles of Programming in the Web 2.0 Era. *Seminar at the Centre for Distance Engineering Education Programme, IIT Bombay, Jun 11th, 2009.*

Competency Development - Sharing of International Best Practices. Technopark, Trivandrum, Mar 9th, 2009. Moderator, Panel Discussion.

A Software Engineering Approach to Network Security. *Centre for Devolopment of Advanced Computing*, Hyderabad, Feb 19th, 2009.

TALKS CONTD.   Bringing Rigour in Teaching IT. *Workshop on IT education at Faith Infotech, Trivandrum, January 22, 2009.*

Reiventing Programming Education in the Web 2.0 Era. *Seminar at Google R&D, Bangalore, July 21st, 2008.*

Lexical Scope, Closures and Objects in Javascript. *Lecture at Bar Camp Bangalore, Apr 20th, 2008.*

Reiventing Programming Education in the Web 2.0 Era. *Seminar at the Computer Science and Engineering Department, National Institute of Technology, Calicut, Apr 15, 2008.*

Teaching the Principles of Programming: A foundational and applicative approach. *Presentation to Computer Science Faculty from Malaysia at Satyam Computers, Feb 19, 2008.*

Introduction to theorem proving with PVS. *TCS Excellence in Computer Science Workshop Feb 14th-18th, 2008, Hyderabad, India.* **Invited Tutorial.**

Information and Communication Technologies for Community Instrumentation and Direct Democracy: A Kerala perspective. Informal presentation. *Centre for Direct Democracy, University of Zurich, Aarau, Switzerland. Feb 5th, 2008.*

Teaching the Principles of Programming: A foundational and applicative Approach. *Computer Society of India National Conference on Software Engineering, Cochin University of Science and Engineering, Cochin, India. Apr 27th, 2007.* Invited Talk.

Automatic Proof Generation for Syntactic Unification. *Programming Languages and Verification research group, Computer Science and Engineering, IIT Bombay, India. Mar 9th, 2007.*

Scilab and Functional Programming. *Indo-French Workshop on the Scilab Scientific Computing Language IIT Bombay, India. Mar 8th, 2007.* Invited Presentation.

IT Tools, Applications and Information Security. *National Productivity Council Workshop for Non-IT Executives, Poovar Island, Kerala, India. Sep 30th, 2006.*

One-day tutorial on Aspect-Oriented Programming and JML. *IEEE Kerala Frontiers in Computing Practice Series, Trivandrum, India. July 26th, 2006.* With Satish Babu.

Panelist, "Free Software in Education" track, *3rd International Conference on GPL v3. Bangalore, India, Aug 23-24th, 2006.*

Introduction to Aspect-Oriented Design and Programming. **Invited Tutorial**. *Thirteenth International Conference on Advanced Computing and Communications, Coimbatore, India, Dec 14th, 2005.* With Anurag Mendhekar.

TALKS CONTD.   Constructing and Validating Data Models using PVS *IIITM-K/IEEE Kerala Workshop on XML and Databases, Trivandrum, India, Dec 10th, 2005.*

Scheme and the Essence of Programming – Part-I *IIITM-K Get to Know Seminar, Trivandrum, India, Nov 17th, 2005.*

Introduction to Python Programming. Invited Lecture. *Frontiers in Computing, IEEE Computer Society Kerala Chapter, Trivandrum, India, Aug 2004.*

Virtual Learning Campus for the Kerala Education Grid. Invited Lecture, *Open University of Catalunya, Barcelona, Spain, July 2004.*

A taste of Formal Methods. Guest Lecture, *TCS Corporate Training Centre, Trivandrum, India, Nov 2003.*

Polymorphic Type Reconstruction using Type Equations. *15th International Workshop on the Implementation of Functional Languages (IFL 2003), Edinburgh, UK, Sep 2003.*

Source-tracking Unification. *19th International Conf. on Automated Deduction, Miami, FL, USA, Aug 2003.*

Aspect-Oriented Programming. Colloquium at the *Computer Science Department of the State University of New York at Buffalo, Apr 2002.*

Diagnostic Unification and Type Inference. Colloquium at the *Computer Science Department, State University of New York at Stony Brook, USA, Apr 2002.*

Aspect-Oriented Programming (Poster). *DARPA Demo Days, Baltimore Maryland, USA, July 1998.* With Eric Hilsdale and Taher Haveliwala.

Diagnosis of Ill-Typed Programs. *ACM Midwest Programming Language conference, Iowa City, Iowa, USA, April 1994.*

WORKSHOPS AND TUTORIALS   Venkatesh Choppella and T B Dinesh. **FOSS, Web 2.0 and Mashups as a Natural Learning Management Infrastructure**. Tutorial proposal. *2nd IEEE Conference on Technology for Education, Mumbai, Jul 2010.* Accepted for presentation.

Principles of Programming for Web 2.0. 2 week Summer School at IIIT Hyderabad for college teachers. May 3rd–14th 2010. IIIT Hyderabad. With T B Dinesh.

Introduction to Aspect-Oriented Design and Programming. **Invited Tutorial**. *Thirteenth International Conference on Advanced Computing and Communications, Coimbatore, India, Dec 14th, 2005.* With Anurag Mendhekar.

PATENTS   Cristina Lopes, Gregor Kiczales, John Lamping, Erik Hilsdale, Venkatesh Choppella, and Taher Haveliwala. Aspect-Oriented System Monitoring and Tracing. *U.S. Patent No. 09/357,508.* Filed 1999. Awarded April 2002.

AWARDS   **All India Manthan Awards** Second Prize in the E-Governance category for coordinating the Trivandrum City Police Portal for Community Interaction `www.tvmcitypolice.org`, New Delhi, India, 2005.

Best Paper Award. International Parallel and Distributed Processing Symposium (IPDPS), Albuquerque, New Mexico, USA, 2004.

Best Paper Award (Systems). Internationl Conference on High Performance Computing (HiPC), Hyderabad, India, 2003.

DuPont Fellowship, Computer Science Dept., Indiana University, 1988.

Merit Certificate for performance in the Joint Entrance Examination, IIT Kanpur, 1981.

GRANTS   European Commission. Erasmus Mundus External Cooperation Window. European Research and Educational Collaboration with Asia Project for Academic Mobility 2008-2009. `http://www.mrtc.mdh.se/eureca/`. Institute Coordinator. 10,000 Euro.

Govt. of Kerala, Dept. of Information Technology. Centre for Computational Biology. January 2009. Rs. 30 Lakhs. Co-investigator.

Govt. of Kerala, Dept. of Information Technology. Centre for Computational Chemistry. January 2009. Rs. 25 Lakhs. Co-investigator.

Govt. of Kerala, Dept. of Information Technology. Innovation Centre for Open Standards in Software Engineering Education. January 2009. Rs. 40 Lakhs. Co-investigator.

Ministry of Information Technology, Government of India. Information Security Education and Awareness (ISEA) 2006-2011. Principal Investigator at Participating Institution IIITM-K. Rs. 300,000 per annum.

Government of Kerala. Police Portal for Community Interaction 2004-2005. Rs. 2,900,000. Co-investigator.

CONSULTING   Cognizant Technologies. Chennai, India. December 2007-January 2008.

Satyam Computers. Hyderabad, India. April 2008.

Servelots Infotech. Bangalore, India. Since December 2007

Indian Postal Service. New Delhi, India. May 2009

Terumo Penpol Ltd. Trivandrum, India. December 2008

PROFESSIONAL SERVICE

Reviewer and Examiner, Design and Development of Robot Design Platform and Database Research Platform and Database based Robot Software Development Framework. MS Thesis by Subhash S. IIIT Hyderbad. May 2010

Programme committee member, 11th International Conference on Distributed Computing and Internet Technologies (ICDCIT) February, 2011, Bhubaneswar, India.

Reviewer, Formal Methods in System Design. Springer, 2010.

Programme committee member, India Software Engineering Conference (ISEC) February, 2011, Thiruvananthapuram, India.

Programme committee member, International Conference on Distributed Computing and Internet Technologies (ICDCIT) February, 2010, Bhubaneswar, India.

Programme committee member and reviewer, IEEE International Conference on Software Engineering Education and Training (CSEET) Feb 17-19, 2009, Hyderabad, India.

External reviewer for PhD Thesis, Computer Science, Indian Institute of Technology, Bombay, Jan 2009.

Convener, Institute Information Technology and Services Committee, IIITM-K. Mar 2008 - Jan 2009.

Member, committee appointed by Kerala State IT Mission, Govt. of Kerala, to implement Public Key Infrastructure in state government offices, 2008.

Reviewer, Journal of Parallel and Distributed Computing. Elsevier. Aug 2008.

Reviewer, International Journal of Formal Computing. Springer. Aug 2008.

Organizer, Free Map Workshop, IIITM-K, Feb 2008.

Organizer, One day workshop on Pantoto: Building Information Management Systems for Small and Medium Enterprises. IIITM-K, Feb 2008.

Programme and Organizing Committee member, IEEE workshop on Connecting Computer Science to Domains, IIITM-K. Dec 2007.

Convener, Institute Academic Affairs Committee, IIITM-K. Aug 2006 - July 2007.

Moderator, Panel on Computer Science Teaching, National workshop on Technology Enhanced Learning, Trivandrum, Kerala, India. Jan 5th-6th, 2007.

Panelist, Scilab in Science and Engineering Education. Indo-French Workshop on Scilab, IIT Bombay. Mar 8th, 2007.

PROFESSIONAL SERVICE CONTD.	Organizer, IEEE/CSI Workshop on Community Wireless Networking, Trivandrum, Kerala, India, Dec 1st-2nd, 2006.
	Programme Committee member, International Conference on Advanced Computing and Communications (ADCOMM 05), Coimbatore, India, Dec 14-17, 2005.
	Programme Committee member, Free Software, Free Society: Three nation conference on Free, Libre and Open Source Software, Trivandrum India, May 2005.
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	Reviewer, Fifth International Conference on Parallel and Distributed Computing, Applications and Technologies (PDCAT 04), 2004.
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- D.P. Friedman, M. Wand and C.T. Haynes. Essentials of Programming Languages, 1st Edition *MIT Press, 1991*.
- Raymond Smullyan. Gödel's Incompleteness Theorems. *Oxford University Press, 1992*.
- Jon Barwise and Lawrence S. Moss. Vicious Circles *CSLI Stanford, 1997*.

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