

# CURRICULUM VITAE

## (1) Personel Data

- Full name : Heru Suhartanto
- e-mail : heru@cs.ui.ac.id
- Place and DOB : Jakarta, 19-th of April 1961
- Gender : Male
- Marital Status : Married with two children
- Religion : Islam
- Office Address : Faculty of Computer Science, UI, Depok 16424
- Office Phone : +62-21-786 3419, Fax : +62-21-786 3415
- Home Address : Jl. Perdana No. 9, Rt 05/Rw 03, Ulujami, Jakarta 12250
- Websites : <http://hsuhartanto.wordpress.com>



## (2) Formal Education

- 1995 – 1998, PhD in Parallel Computing, The University of Queensland, Australia
- 1987 – 1990, MSc in Computer Science, The University of Toronto, Canada
- 1981 – 1986, Sarjana Matematika, Universitas Indonesia

## Interests

- Grid and High Performance Computation
- Numerical Method and Analysis
- Biomedical Engineering and Informatics
- Information Technology and System
- Compiler and Programming Languages
- Learning Management Systems

## (3) Working Experiences

- 2008, Permanent Professor (Guru Besar tetap) at Faculty of Computer Science, Universitas Indonesia, commencing from April 1-st, 2008, based on the Ministry of Education – Republic of Indonesia's Decree, No 29911/A4.5/KP/2008
- 2004 -- 2008, Vice Dean for General Affair (Wakil Dekan Non Akademik), Faculty of Computer Science, Universitas Indonesia
- 2000 -- 2004, Vice Dean for General Affair (Wakil Dekan Non Akademik), Faculty of Computer Science, Universitas Indonesia
- 1998 – 2000, Post Doctoral Fellow, Advanced Computational Modelling Centre, The University of Queensland,
- 2000 – 2003, Assistant of Director, Quality of Undergraduate Education (QUE) Project, Faculty of Computer Science, Universitas Indonesia

- 2000 – 2004, Assistant Director for Financial and General Affair, Computer Science Centre (Pusilkom), Universitas Indonesia
- 1986 -- present, Academic Staffs, Faculty of Computer Science, Universitas Indonesia
- 2002 – 2004, General Manager for State College Student Entrance Process (SPMB), Pusilkom UI
- 2002, Chairman of The International Undergraduate Preparation Committee, Faculty of Computer Science, Universitas Indonesia
- 2002 – 2004, Administration Coordinator for International Undergraduate Program, Faculty of Computer Science, Universitas Indonesia
- 2003, Manager of Data processing for Recruitment Project PCPM BI XXV - Management Committee, Faculty of Economics, Universitas Indonesia
- 1990 – 1994, Non Degree Coordinator, Inter University Center for Computer Science, Universitas Indonesia
- 1989 – 1990, Teaching Assistant, Department of Computer Science, The University of Toronto, Canada

**(4) Professional Organization memberships:**

- IEEE, Member number: **87037955**, since 2006
- ACM, Member number: **5538029**, since 2008

**(5) Teaching experiences**

- Topics in Parallel Computation, Graduate Courses, 2001 – 2006,
- Mathematical Foundation for Information System program, 2007
- Calculus I, Undergraduate Course, 2006,2007
- Compiler Techniques, Undergraduate Courses, 1991 – 1994, 1998, 2000 – 2008.
- Distributed Computing, Undergraduate Course, 2004,
- Linear Algebra, International Undergraduate Course, 2004,2005, 2007,2008 as well as a summer course for Regular Class in 2007.
- Software Engineering, International Undergraduate Course, 2004,
- Foundation of Programming, International Undergraduate Course, 2003,
- Discrete Mathematics, International Undergraduate Course, 2002,
- Topics in Numerical Computation, Graduate Courses, 2000 – 2002
- Operating System, Graduate Courses, 2000 -- 2001
- Numerical Methods, Undergraduate Course, 1991 – 1994,
- Optimization, Undergraduate Course, 1992 – 1994,
- Combinatorial algorithms, Undergraduate Course 1992,

**(6) Grants**

- 2008, Principal Researcher, *The usage of e-learning portal to upgrade the education quality of street children and the poor community* ( Pemanfaatan Portal Pembelajaran untuk Peningkatan Kualitas Pendidikan Anak Jalanan / Komunitas Miskin Kota), HIBAH PENELITIAN Pemberdayaan Komunitas Miskin di Daerah Asal Migran dan Komunitas Miskin Kota, Program Hibah Kompetisi Institusi Universitas Indonesia, Tahun 2008
- 2007, Project coordinator, GDLN Learning Activity Development (GLAD)-Batch 3, Topic: A formal Method Approach for Reliable and High Quality Software, a Directorate General of Higher Education grant.
- 2003 – 2005, Principal Researcher, Indonesian International Joint Research Program with Universiteit Utrecht, Netherland, funded by The Ministry of Research and Technology Research Program, Republic of Indonesia, on *Developing Technology for Specifying and Generating Critical Data Processing Programs*,
- 1998 – 2000: Principal Researcher, The Developments of Numerical Methods based on parallel Iterated Multistep Runge-Kutta Formulae for solving Differential Algebraic Equations, Advanced Computational and Modelling Centre, The University of Queensland
- 1992: Principal Researcher, On the reduction of Jacobian evaluation in the performance of Stiff ODE solvers, Inter University Center for Computer Science Project (IUC CS), World Bank.
- 1993, Principal Researcher, On the implementation of Parallel Runge-Kutta methods on Transputer, IUC CS, World Bank.
- 1992 – 1994, Research Member, Ground Water Simulations, Schlumberger
- 1991, Research Member, On the solution of indefinite sparse linear system, IUC CS, Bank Dunia

## (7) Publication

### Papers

1. Heru Suhartanto, Kevin Burrage, VSMRK: A Parallel Implementation and the Performance of Variable Stepsize Multistep Runge-Kutta Methods for Stiff ODEs, *Asian Journal of Information Technology* 6 (11):, 2007, ISSN : 1110 – 1116
2. Heru Suhartanto, Kevin Burrage, Multistep Runge Kutta Methods for solving DAEs, *Proceeding of International Conference on Advances in Nuclear Science and Engineering*, Bandung, Indonesia, 2007, page A2.1
3. Heru Suhartanto, Jimmy Bong, Ade Azurat, *Lingu to Java Translator with UUAG Compiler Construction Tool*, *Asian Journal of Information Technology* 6 (7): 825 – 833, 2007, ISSN : 1682 – 3915
4. Heru Suhartanto, *Kajian Perangkatbantu Komputasi tersebar berbasis Message Passing*, Vol 10, No 2, *Makara Teknologi*, 2006, page 72 -- 81

5. Carroline D. Puspa, Heru Suhartanto, Ade Azurat, Siti Aminah, IMPLEMENTASI *PROTOTYPE* LINGU pada STUDI KASUS *STUDENT ENTRANCE TEST*, Konferensi Nasional Sistem Informasi, Bandung 2006.
6. Jimmy Bong & Heru Suhartanto, *Penerapan Attribute Grammar dalam Penerjemahan Bahasa Spesifikasi Lingu ke Bahasa Pemrograman Java*, Konferensi Nasional Sistem Informasi, Bandung 2006.
7. Heru Suhartanto dan Herry, *Algoritma Parallel Supervised PNN Structure Determination and Implementasi Berbasis Message Passing Interface*, submitted for publication on Sep 13, 2006
8. Sri Mardiyati, T. Basaruddin, H. Suhartanto, Numerical Analysis of the Electrical Potential, *Journal of Fundamental Science*, Vol 2, Number 1-2, 2006, page 109 - 118
9. Heru Suhartanto, Peluang meraih Hak Kekayaan Intelektual ICT: definisi, manfaat, proses, Seminar Raboan, Fasilkom UI, Sep 20, 2006
10. E. Sedyono, and H. Suhartanto, Modifikasi Algoritma Triangulasi Delaunay dan Implementasi Parallel untuk Rekonstruks Obyek, *Jurnal Teknologi Industri*, Vol X, Nomor 1, Januari 2006, hal 31 – 42
11. E. Sedyono, and H. Suhartanto, Perbandingan Penggunaan Deteksi Sudut dan Deteksi Tepi untuk Rekonstruksi Obyek dengan Metoda Triangulasi Delaunay, *Gematek*, Vol 8, No 1, Mar 2006, hal 37 -- 47)
12. H. Suhartanto, Rolis Kartiko Aplikasi xWatch Parallel berbasis Message Passing, Prosiding SNIKTI 2005, hal G-40
13. M. Kartawidjaja, H. Suhartanto, T. Basaruddin, "Performance of a Parallel Technique for Solving Stiff ODEs Using a Block-diagonal Implicit Runge-Kutta Method, *The IPSI BgD Transactions on Advanced Research*, July 2005 Volume 1 Number 2 (ISSN 1820-4511,
14. H. Suhartanto, B. Widjaja, et al, Technology for Specifying and Generating Critical Data Processing Programs, *Proceeding the 8-th International Conference on Quality in Research*, 2005, page EEEA-01
15. M.A. Kartawidjaja, H. Suhartanto, T. Basaruddin, PERFORMANCE OF A PARALLEL TECHNIQUE FOR SOLVING NONLINEAR SYSTEMS ARISING FROM ODES *TENCON Conference Proceeding on Analog and Digital Techniques in Electrical Engineering*, 2004, Bangkok, Thailand, page 40
16. H. Suhartanto and Jimmy Bong, Penerjemah Kode Numerik Fortran ke Java, *Prosiding Seminar Nasional Ilmu komputer dan Teknologi Informasi V*, 2004, hal 199
17. H. Suhartanto and E. Sedyono, Comparison and Implementation of Parallel Delaunay Triangulation for Object Reconstruction, *Proceeding Conference on Computer Graphics and Multimedia*, Esset, Selangor, Malaysia, 2004
18. H. Suhartanto and E. Sedyono, On The Parallel Performance of Taskfarm And Static Domain Decomposition Techniques for Mandelbrot Set, *Asian Journal of Information Technology*, June 2004
19. M. Kartawidjaja, H. Suhartanto, T. Basaruddin, Performance of Parallel Iterative Solution of Linear System using GMRESS, *International Conference on Computational Engineering*, Serbia, 2004
20. E. Sedyono and H. Suhartanto, Parallel Implementation of Delaunay Triangulation on PVM based PC Cluster, *International Conference on Computational Engineering*, Serbia, 2004

21. H. Suhartanto, The Development of Parallel ODEs codes based on Multistep Runge-Kutta (MRK) method, International Conference on High Performance Asia, Gold Coast, Australia, 2003
22. H.Suhartanto, The Development of Parallel Iterated Multistep Runge-Kutta methods on Cluster of workstations, International Conference on CMMSE, Alicante, Spains, 2003
23. E. Sedyono, H, Suhartanto, Model dan Implementasi Triangulasi Delaunay Parallel berbasis PVM, Seminar Nasional Ilmu Komputer dan Teknologi Informasi, IV, Salatiga, 2003
24. M.Kartawidjaja, H. Suhartanto, T. Basaruddin, Comparing Experimental and Analytical Parallel Performance Models in Solving Linear Systems, Industrial Electronics Seminar, Surabaya, 2003
25. H. Suhartanto and E. Sedyono, On The Parallel Performance of Taskfarm and Static Domain Decomposition Techniques for Mandelbrot Set, Seminar Nasional Teknik Informatika, Joggyakarta, 2003
26. H. Suhartanto and K. Burrage, NSMRK: A Parallel Implementation of Multistep Runge-Kutta Methods for Non Stiff ODEs, Jurnal Ilmu Komputer dan Teknologi Informasi, Vol 3, No 1, Okt 2003, ISSN 1411 - 9854
27. A. Bustamam, H. Suhartanto, T. Basaruddin, Beberapa Hasil Eksperimen dan Evaluasi Kinerja Metoda iPIMRK pada Sistem Parallel MPI-Linux, SNKK III, 2002
28. A. Bustamam, H. Suhartanto, T. Basaruddin, Implementasi Perangkat Lunak SVMRK pada Sistem Parallel MPI-Linux, Seminar Ilmiah Nasional Komputer dan Sistem Intelejen, 2002
29. A. Bustamam, H. Suhartanto, T. Basaruddin, Implementasi Metoda Iteratif Parallel Implisit Multistep Runge-Kutta pada Sistem Parallel MPI-Linux, Lokakarya Komputasi dalam Sains dan Teknologi Nuklir XIII, Batan, 2002
30. A. Bustamam, H. Suhartanto, T. Basaruddin, Hasil Evaluasi Kinerja Metoda Iteratif Parallel Implisit Multistep Runge-Kutta pada Sistem Parallel MPI-Linux, Jurnal Ilmu Komputer dan Teknologi Informasi, Vol 2, Okt 2002, ISSN: 1411 9854
31. H. Suhartanto and K. Burrage, Parallel Iterated Methods based on Variable stepsize Multistep Runge-Kutta Methods of Radau type, Journal of Advances in Computational Mathematics, 2000., ISSN 1019 7168.
32. H.Suhartanto, Perkembangan Teknik dan Lingkungan Komputasi, Workshop Komputasi Numerik dan Aplikasi Industri, Batan, Jakarta, 2001
33. H. Suhartanto and K. Burrage, A Matrix-Free implementation of Multistep Runge-Kutta methods for solving DAEs/ODEs, International Conference on SCICADE 2001, Vancouver, Canada
34. H. Suhartanto and K. Burrage, Mutistep Runge-Kutta methods for solving DAEs, International Conference on SCICADE 1999, Fraser Island, Australia
35. H. Suhartanto, Parallel Iterated Techniques based on Multistep Runge-Kutta Methods of Radau Type, Ph.D Thesis, Department of Mathematics, The University of Queensland, Australia, 1998

36. K. Burrage and H. Suhartanto, Parallel Iterated Methods based on Multistep Runge-Kutta of Radau type for Stiff problems, *Journal of Advances in Computational Mathematics*, Vol 7, Page 59, Mar 1997, ISSN 1019 7168.
37. K. Burrage and H. Suhartanto, Parallel Iterated Methods based on Multistep Runge-Kutta of Radau type for Non Stiff problems, *Journal of Advances in Computational Mathematics*, Vol 7, Page 37, Mar 1997, ISSN 1019 7168.
38. H. Suhartanto, Parallel Iterated Multistep Runge-Kutta methods for solving ODEs (invited speaker), International Conference on SCICADE 1997, Grado, Italy
39. H. Suhartanto, The Effect of Jacobian Evaluation Reduction for Stiffs IVPs, Proceesing of National Symposium on Computational Methods in Applied Science, ITB, Bandung 1994
40. H. Suhartanto, Automatic Grammar Checker for Bahasa Indonesia, Seminar on The Role of Information Technology in Bahasa Indonesia, UI, Jakarta, 1994
41. H. Suhartanto, On The Performance of Parallel Runge-Kutta Methods, Workshop Komputasi Numerik dan Aplikasi Industri IV, Batan, Jakarta, 1994
42. H. Suhartanto, Decompilation from Machine Code to Source Code: A Proposal, Konferensi Komputer Nasional VIII, IPKIN, Jakarta, 1993
43. H. Suhartanto, Parallelism in the numerical solution of IVPs for ODEs, Seminar Komputasi Numerik dan Aplikasi Industri III, UGM, Jogjakarta, 1993
44. H. Suhartanto, Implementation strategies for improving the performance of ODE solver, Workshop Komputasi Sains dan Teknologi Nuklir III, Batan, Jakarta, 1993
45. W.H. Enright and H. Suhartanto, Detecting and locating a singular point in the numerical solution of IVPs for ODEs, *Computing*, 48, 161 – 175, 1992
46. H. Suhartanto, Estimating local error with interpolants, Seminar Komputasi Numerik dan Aplikasi Indusri I, PAU-IK-UI, Jakarta, 1991

## Books

1. Heru Suhartanto, I.S.W.B. Prasetya, Carroline D Puspa, Ade Azurat, **Proses verifikasi piranti lunak basis data dengan Lingu dan Theorem Prover Hol**, Fasilkom UI, 2007, ISBN 979 142 102-1
2. Heru Suhartanto, Christine Angelina, Fuady Rosma Hidayat, Johanes, Yonna Widyanti, **Meeting Management System: Analisis, Desain dan Implementasi**, Fasilkom UI, 2007, ISBN 978-979 -1421- 04- 1,
3. Heru Suhartanto, I.S.W.B. Prasetya, Ade Azurat, Belawati Widjaja, Jimmy Bong, L.Y. Stefanus, Siti Aminah, **Developing Technology for Specifying and Generating Critical Data Processing Programs**, ISBN 979-98141-2-X, 2006.
4. Heru Suhartanto, Adhita Amanda Zulfa, Alisa Dewanti, Chrysta Coryna Pratiwi, Dian Maya Listya, Satria Graha, **Analisis Desain dan Implementasi SILAKIP**, 2007, ISBN 978 979 98141 –7-3, Fasilkom UI

## Patens/Copyrights

1. Heru Suhartanto et al, Catalog and Order Management System, dalam proses pendaftaran ke Dirjen HKI, Surat Pendaftaran Ciptaan No: 035060, Dirjen HKI, – 21 Maret 2007, ttd DJ HKI, 1 Oktober 2007

2. Heru Suhartanto et al, SIRAPAT - Sistem Manajemen Rapat, dalam proses pendaftaran ke Dirjen HKI, Surat Pendaftaran Ciptaan No: 035059, Dirjen HKI, – 21 maret 2007, ttd DJ HKI, 1 Oktober 2007
3. Heru Suhartanto et al, Sistem MEREKAT LAKUNTABEL Perguruan Tinggi, Surat Pendaftaran Ciptaan No: 035062, Dirjen HKI, 19 April 2007, ttd DJ HKI, 1 Oktober 2007
4. Heru Suhartanto et al, Sistem Remunerasi Dosen, dalam dalam proses pendaftaran ke Dirjen HKI, Surat Pendaftaran Ciptaan No: 035061, Dirjen HKI, 19 April 2007, ttd DJ HKI, 1 Oktober 2007.
5. Heru Suhartanto & Jimmy, Penerjemah Lingu ke Java, Surat Pendaftaran Ciptaan No: 032109, Dirjen HKI, 21 April 2006, , ttd DJ HKI 11 Januari 2007
6. Heru Suhartanto & Ade Azurat, et., al, LinguSQL, Surat Pendaftaran Ciptaan No: 032110 , Dirjen HKI, 21 April 2006, , ttd DJ HKI 11 Januari 2007
7. Heru Suhartanto, Model Pemroses Bahasa Pemrograman Dengan tools berbasis Java, Surat Pendaftaran Ciptaan No: 032108, Dirjen HKI, 21 April 2006, ttd DJ HKI 11 Januari 2007
8. Heru Suhartanto et al, Sistem Laporan Akuntabilitas Kinerja Instansi Pemerintah (SILAKIP) ,. Surat Pendaftaran Ciptaan No: 032171, Dirjen HKI, 18 Okt 2006, , ttd DJ HKI 16 Januari 2007
9. Heru Suhartanto, Model Kompilator Berbasis Pascal, Surat Pendaftaran Ciptaan No: 029005, Dirjen HKI, 08 February 2005
10. Heru Suhartanto & Jimmy, MuPL2Java translator, Surat Pendaftaran Ciptaan No: 029004, Dirjen HKI, 08 February 2005

**(8) Awards**

1. Piagam Penghargaan Tenaga Akademik UI penulis tiga buku teks, 2009
2. UI Best Researcher , Dies Natalis ke-58 UI tahun 2008
3. Piagam Penghargaan Tenaga Akademik UI yang Memiliki Patent/Hak Cipta, Dies Natalis ke-58 UI tahun 2008
4. Piagam Penghargaan Tenaga Akademik UI yang Memiliki Patent/Hak Cipta, Dies Natalis ke-57 UI tahun 2007
5. Satya Lencana Karya Satya X Tahun, Kepress No: 050/TK/2005

**(9) Others**

1. Friday prayers khatib, Mesjid UI, Depok, 2001, -- 2008
2. Member of Senat Akademik Fasilkom UI, 2000 – 2008
3. Member of Committee, Proses SPMB tahun 2000 – 2008
4. Reviewer member for Journal of Computational and Applied Mathematics, 2007
5. Reviewer member for International Journal of Computer Mathematics, 2007
6. Member of steering committee, LKSTN, 2003, 2004, 2007
7. Eid UI Fitri khatib, Mesjid UI, Depok, 2006
8. Committee members of MTsN 3 Pondok Pinang, 2003 -- 2007

9. Member of Indonesian Society on Computer and Info Sciences, Fasilkom UI, 2001/2002
10. Committee member , Pengelolaan Data PUPNS DKI, 2003
11. Committee member, Pengelolaan Data PCPM XXV BI, 2003
12. Member of Kurikulum Team MIK Fasilkom UI, 2003
13. Member of ICIS, 2002 -- 2003
14. Member of panitia lelang Procurement QUE, Fasilkom UI, 2002
15. Chairman of entrance test committee for SPMB Kelas Internasional Ilmu Komputer, 2002
16. Member of TPP Fakultas UI BHMN, 2001
17. Committee members of program SNKK II 2001
18. Islamic Society of St. Lucia, committee member in 1995, secretary in 1996, acting president in 1999
19. Muslim Students Association of the University of Queensland, secretary in 1996, president in 1997
20. Indonesian Islamic Society of Brisbane, secretary in 1996, president in 1997