Curriculum Vitae for Heru Suhartanto, PhD.

- Personal Data
  1. Full Name : Heru Suhartanto
  2. Place and Date of Birth: Jakarta, 19 April 1961
  3. Nationality : Indonesia
  4. Marital Status: Married with two children
  5. Permanent Address: Jl. Perdana No. 9, Ulujami, Jakarta 12250, Indonesia , phone: (62-21) 585 2288
  6. Office Address: Faculty of Computer Science, The University of Indonesia, Kampus UI Depok, Depok 16424, Indonesia , phone: (62-21) 786 3419, Fax: (62-21) 786 3415
  7. E-mail: heru@cs.ui.ac.id
- Academic Qualification
  1. 1998, Doctor of Philosophy, Department of Mathematics, The University of Queensland,
  2. 1990, Master of Science , Department of Computer Science, University of Toronto, Canada.
  3. 1986, Sarjana (A Degree somewhat higher than BSc), Department of Mathematics, , Universitas Indonesia.
- Research interests: Numerical and High perfomance computation, and some time (but not too often) I work on Language Processor Constructions.
- Professional Experiences
  1. Secretary for Curriculum Committe, Computer Science, University of Indonesia (CS-UI), 1994.
  2. Coordinator for Non-Degree program, CS-UI, 1992-1994.
  3. Member of the steering committe, National Conference on Scientific Computation and Industrial Application, 1992-1994.
  4. Lecturer and Academic Staff, CS-UI, 1986-present.
  5. Member of Indonesian Mathematical Society.
  6. Member of South East Asian Mathematical Society.
- Research

1. 1998-2000, Postdoctoral Fellow, Department of Mathematics, The University of Queensland, *The development of parallel numerical techniques for solving Large scale DAEs/ODEs.*
2. 1992, Principal Researcher, *On the Reduction of Jacobian Evaluation in The Performance of Stiff ODE Solvers*, Inter University for Computer Science - University of Indonesia (IUC-CS UI), World Bank funded.
3. 1993, Principal Researcher, *On The Implementaion of Parallel Runge-Kutta Methods on Transputer*, IUC-CS UI,, World Bank funded.
4. 1992-1994, Co Researcher, *Ground Water Simulation*, CS - UI, funded by Schlumberger.
5. 1991, Co Researcher, *On The Solution of Indefinite Sparse Liniar System*, IUC-CS UI, funded by World Bank.

- Teaching
  1. Numerical Methods, CS-UI, 1991–1994.
  2. Compiler Construction, CS-UI, 1991-1994, 1998.
  3. Optimization, CS-UI, 1992-1994.
  4. Combinatorial Algorithm, CS-UI, 1992.
  5. IVPs in ODEs, CS-UI, 1992-1993, 1998.

- Computing Experiences:
  1. Operating System: DOS, Win95, Unix, and Linux
  2. Programming Language: Extensive works on symbolic computation with Maple, numerical computation with Matlab, C, Fortran 77, Fortran 90, High Performance Fortran with public domain numerical libraries available at internet
  3. High Performance Computation: Parallel Programing using Fortran 90 directive and Parallel Programming using Message Passing Interface (MPI) on parallel machines such as Silicon Graphic Inc (SGI) Power Challenge and SGI Origin 2000
  4. Internet: Netscape, Internet Explorer, and Web publishings.
  5. Typesetting: Latex with their tools on Win95 and Unix-liked based machines.

- Publication
  1. with (K. Burrage), *Parallel Iterated Methods based on Variable step-size Multistep Runge-Kutta Methods* , to appear at Advances Computational Mathematics.

2. with K. Burrage, *NSIMRK : The Parallel Non-Stiff ODEs solvers based on IMRK,* submitted for publication,
3. with K. Burrage, *SIMRK : The Parallel Stiff ODEs solvers based on Variable Step MRK*, submitted for publication,
4. with (K. Burrage), *A matrix-free implementation of Multistep Runge-Kutta methods for solving DAEs/ODEs*, in preparation.
5. with (K. Burrage), *Parallel Iterated Methods based on Multistep Runge-Kutta (PIMSRK) Methods of Radau type*, Advances Computational Mathematics, 1997.
6. with (K. Burrage), *PIMSRK Methods for Stiff Problems* , Advances Computational Mathematics, 1997.
7. with K. Burrage, *Solving Differential Algebraic Equations using Parallel Multistep Runge-Kutta methods*, in preparation.
8. *The effect of Jacobian Evaluation Reduction for Stiff IVPs*, Proceeding of National Symposium on Computational Methods in Applied Science, ITB, Bandung, 1994.
9. (With W.H. Enright) *Detecting and locating a singular point in the numerical solution of IVPs for ODEs*, Computing, 48, 161-175, 1992.

- Presentation at meetings

1. *Multistep Runge-Kutta methods for solving Differential Algebraic Equations*, SCICADE 1999 International Conference, Fraser Island, Australia,
2. *Parallel Iterated Multistep Runge-Kutta methods for solving Ordinary Differential Equations*, (invited speaker), SCICADE 1997 international conference, Grado, Italy,
3. *Automatic Grammar Checker for Bahasa Indonesia*, Seminar on The Role of Information Technology in Bahasa Indonesia, UI, Jakarta, 1994.
4. *On the performance improvement of ODE solvers*, Seminar Komputasi Numerik dan Aplikasi Industri IV, ITS, Surabaya, 1994.
5. *On the Performance of Parallel Runge-Kutta Methods*, Workshop Komputasi Sains dan Teknologi Nuklir IV, Batan, Jakarta, 1994.
6. *Decompilation from Machine Code to Source Code: a proposal* , Konferensi Komputer Nasional VIII, IPKIN, Jakarta, 1993.
7. *Parallelism in the numerical solution of IVPs for ODEs*, Seminar Komputasi Numerik dan Aplikasi Industri III, UGM, Jogyakarta, 1993.

8. *Implementation strategies for improving the performance of ODE solver*, Workshop Komputasi Sains dan Teknologi Nuklir III, Batan, Jakarta, 1993.
9. *Estimating local error with interpolants*, Seminar Komputasi Numerik dan Aplikasi Industri I, PAU-IK-UI, Jakarta, 1991.