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Asim Munawar

Personal Information	**First Name:**	Asim
	Family Name (Last Name):	Munawar
	Nationality:	Pakistani
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	Affiliation:	Hokkaido University, Graduate School of Information & Technology, Division of Synergetic Information Science.
	Date of Birth:	April 15th 1981 (Age 29 yrs)
	Languages (Skill Level):	English (Excellent – IELTS score 8.0/9.0), Japanese (Fluent), Hindi (Native), Urdu (Native), Punjabi (Fluent), Arabic (Beginner)
Technical Proficiencies	**Platforms:**	Android, UNIX (Open Solaris), Windows NT/2000/XP/Vista/7, Linux (Red Hat, Fedora, Yellow Dog, Debian), Sun SPARC.
	Frameworks:	TCP/IP, SSH, NFS, SSL, MPI, RPC, OpenMP, OOP, OpenGL
	Languages:	C, C++, C#, Java, XML, HTML, PHP, VB, ASP.NET, CUDA, Matlab, Octave.
	Hardware:	Clusters, Grid computing, Cell Broadband Engine, Intel Core 2 Duo, AMD QuadCore, nVidia CUDA compatible GPUs, Sun Ultra SPARC.
	Tools:	mySQL, Microsoft Office Suite, FrontPage, OpenOffice, Latex, Adobe Photoshop, Eclipse, NetBeans, SunSPOT, Visual Studio.
Education	Oct 2008 – Sep 2011 Expected Graduation Date	**PhD Student** Graduate School of Information & Technology Hokkaido University, Sapporo, Japan
	Oct 2006 – Sep 2008	**Masters Student** Graduate School of Information & Technology Hokkaido University, Sapporo, Japan Grade A+
	April 2005 – Sep 2006	**Research Student** Hokkaido University, Sapporo, Japan
	Dec 1999 – June 2003	**Bachelors of Computer Systems Engineering** National University Of Sciences & Technology (NUST) College Of E&ME, Rawalpindi, Pakistan Cumulative GPA 3.875 / 4.0 (2nd Position)

	1997 – 1999	**FSc (Equivalent to A Levels)** FG Sir Syed College (Federal Board) Rawalpindi, Pakistan 899/1100, Grade A+
	1995 – 1997	**Matriculation (Equivalent to O Levels)** FG Public School (Federal Board) Mangla, Pakistan 682/850, Grade A+
Work Experience	Dec 2005 – Dec 2010	**Self Employed Web and Android developer** During this time I worked on several web development projects as a part time job. I gained expertise in Scripts, PHP, MySQL and other web development tools. I have worked with several content management systems. I developed the web page for our laboratory, Hokkaido university international student's organization, Pakistan students association Japan, e commerce website for a company selling handicrafts and several other small projects. Recently, I have been learning Android OS and working on several small scale android applications.
	Oct 2010 - March 2011	**Research Assistant at Hokkaido University** My responsibilities includes: ● Development and testing of a Genetic algorithm to solve complex mixed integer non linear (MINLP) problems.
	Oct 2008 - Feb 2010	**Sun Campus Ambassador at Sun Microsystems** Sun Microsystems was a company widely known as developers of Java. In Aug 2008 they asked for applications for Sun Campus Ambassador program. Out of many applications from our University, I was the only one selected. It was a great opportunity to work with Sun Microsystems until its merger with Oracle. My responsibilities included: ● Holding seminars on Sun and Open source technologies once every month at my university (i.e. Hokkaido University, Sapporo, JAPAN). ● Leading the open source university meet up (OSUM) group at the university. ● Promoting open source software's and helping students install them.
	Spring 2008 & Spring 2009	**Teaching Assistant at Hokkaido University** I assisted Dr. Masaharu Munetomo, who was also my supervisor for Masters and PhD in the subject on evolutionary computation. My responsibilities included: ● Assisting my professor with practice workshops. ● Helping the students in programming, debugging and conceptual problems.
	June 2003 - March 2005	**Design Engineer at CARE** CARE stands for Center for Advanced Research in Engineering. It is a leading IT and research company based in Islamabad, Pakistan.

		With over 100 employees and 15 PhDs they have the unique experience in the area of circuit design, FPGAs, and signal processing. My job as a design engineer included the following responsibilities ● Design and development of image matching system and its implementation on DSPs and FPGAs. ● GIS based antitheft vehicle tracking system using GSM/GPRS and VHF as redundant communication channels. Development of central monitoring center was also part of the project.
	Fall 2003 - Spring 2005	**Teaching Assistant at CASE** CASE stands for Center for Advanced Studies in Engineering. CASE is affiliated with one of the top universities of Pakistan. During my tenure at CASE I worked with Dr. Imtiaz Taj as a teaching assistant in the following subjects: ● Pattern Classification ● Computer Vision ● Digital Image Processing (DIP)
	May 2002 - July 2002	**Internship at "Enabling Technologies (ET)"** 3 months internship at ET. My responsibilities during the tenure included: ● Testing and verification of a compiler for a VLIW DSP engine. ● Developed automatic compiler tester application. ● Analysis of the Deja GNU test cases to evaluate compiler performance.
	June 2002 - Aug 2002	**Internship at "RIMS (Remote Intelligence Monitoring System)"** During this internship I working on software for speed detection of vehicles and recognition of their license plate number and finally maintaining a database. All of this was done by using a simple high resolution video camera.
Certifications	1. Sun Certified Associate for Java Platform, Standard Edition (March 2010)	
Publications	**Conferences:** 1. M. Fahd Javed, Asim. Munawar,. Omer Qadir, Shoab A. Khan: Design and implementation of a programmable processor optimized for table driven solutions and its application in MANETs (mobile ad-hoc networks), Proceedings of IEEE INMIC 2003. 7th International Multi-topic Conference, Pakistan (2003) 2. Asim Munawar, Arslan Mehboob, Farhan Riaz, Shoab A. Khan: Working MANET of Location Aware Nodes & Frame Work to Monitor Nodes in an Interactive Manner, IBCAST, Bhurban, Pakistan (2004) 3. M. Ali Tahir, Asim Munawar, Imtiaz A. Taj: Efficient use of multipliers in microprocessor implementation of Hamming distance for binary image matching, IEEE, Proceedings of International Networking and Communications Conference 2004 (INCC), Lahore, Pakistan (2004) 4. Farhan Riaz, Asim Munawar, Arslan Mehboob and Wajahat Baig: A new algorithm for reconstruction of 3-D coordinates from a 2-D image using a projected pattern, IEEE, Proceedings of INMIC 2004. 8th International Multitopic Conference, Pakistan (2004) 5. Masaharu Munetomo, Asim Munawar, Kiyoshi Akama: A Framework of GRID Problem-Solving Environment Employing Robust Evolutionary Search, Proceedings of	

the Eleventh International Conference on Computer Aided Systems Theory (EUROCAST2007), pp.177-178 (2007)

6. Masaharu Munetomo, Asim Munawar, Kiyoshi Akama: A Framework of GRID Problem-Solving Environment Employing Robust Evolutionary Search, Computer Aided Systems Theory - EUROCAST2007, Lecture Notes in Computer Science 4739, pp.473-480, Springer (2007)
7. Asim Munawar, Mohamed Wahib, Masaharu Munetomo, Kiyoshi Akama: Standardization of Interfaces for Meta-Heuristics based Problem Solving Framework over Grid Environment, Proceedings of the HPC Asia 2007, pp.129-136, Seoul, South Korea (September 2007)
8. Asim Munawar, Masaharu Munetomo, Akama Kiyoshi: Optimization problem solving framework employing GA with linkage identification over a GRID environment, Proceedings of the 2007 IEEE Congress on Evolutionary Computation, pp.1191- 1198, Singapore (September 2007)
9. Mohamed Wahib, Asim Munawar, Masaharu Munetomo, Kiyoshi Akama: MHGrid: Towards an Ideal Optimization Environment for Global Optimization Problems using Grid Computing, Proceedings of the Eighth International Conference on Parallel and Distributed Computing Applications and Technologies (PDCAT'07), pp.167-168, Springer, Australia (December 2007)
10. Mohamed Wahib, Asim Munawar, Masaharu Munetomo, Kiyoshi Akama: A General Service-Oriented Grid Computing Framework For Global Optimization Problem Solving, Proceedings of Service Computing Conference, SCC '08, Hawaii, USA (July 2008)
11. Asim Munawar, Mohamed Wahib, Masaharu Munetomo, Kiyoshi Akama: Solving Large Instances of Capacitated Vehicle Routing Problem over Cell BE, The 10th IEEE International Conference on High Performance Computing and Communications (HPCC-08), Dalian, China (September 2008)
12. Mohamed Wahib, Asim Munawar, Masaharu Munetomo, Kiyoshi Akama: SOAG: Service Oriented Architectured Grids and Adoption of Application specific QoS Attributes. Grid 2008, Tsukuba, Japan (October 2008)
13. Mohamed Wahib, Asim Munawar, Masaharu Munetomo, Kiyoshi Akama: Model for Dynamic Grain Sizing Through Compound Parallelization for an Optimization Problem Solving Grid Application. Grid2008, Tsukuba, Japan (October 2008)
14. Asim Munawar, Mohamed Wahib, Masaharu Munetomo, Kiyoshi Akama: gBOA: Parallel Bayesian Optimization Algorithm over nVidia GPU using CUDA, Super Computing 2009 (SC'09), Portland, OR, USA (November 2009)
15. Mohamed Wahib, Asim Munawar, Masaharu Munetomo, Kiyoshi Akama: A Bayesian Optimization Algorithm For De Novo Ligand Design Based Docking Running Over GPU, IEEE CEC 2010, Barcelona, Spain (July 2010)
16. Mohamed Wahib, Asim Munawar, Masaharu Munetomo, Kiyoshi Akama: A Light Framework for the Unified Representation and Execution of Variant Tasks in a Grid Based Environment, Mathematical Modeling and Problem Solving, 2010 International Conference on Parallel and Distributed Processing Techniques and Applications, USA (PDPTA'10: July 12-15, 2010)
17. Asim Munawar, Mohamed Wahib, Masaharu Munetomo, Kiyoshi Akama: Adaptive Resolution Genetic Algorithm to solve MINLPs over nVidia Fermi GPU using CUDA, Super Computing 2010 (SC'10), New Orleans, LA, USA (November 2010)
18. Asim Munawar, Mohamed Wahib, Masaharu Munetomo, Kiyoshi Akama: Solving extremely difficult MINLP problems using Adaptive Resolution micro-GA with Tabu Search, Learning and Intelligent OptimizatioN, Rome, Italy (LION5: Jan 17-21, 2011)
19. Asim Munawar, Mohamed Wahib, Masaharu Munetomo, Kiyoshi Akama: Solving Chemical Batch Plant Design Problems using Adaptive Resolution Genetic Algorithm, The 4th International Symposium on Global COE Program of Center for Next-Generation Information Technology Based on Knowledge Discovery and Knowledge Federation , Sapporo, Japan (GCOE-NGIT 2011: Jan 18-19, 2011)

Workshops & Research Meetings (Peer Reviewed):

1. Asim Munawar: A Framework to Solve Complex Optimization Problems Using Robust EAs over a GRID Environment. EvoPhD, EvoStar, Valencia, Spain (April 2007)
2. Asim Munawar, Mohamed Wahib, Masaharu Munetomo, Kiyoshi Akama: A Survey: Genetic Algorithms and the Fast Evolving World of Parallel Computing, 2008 International Workshop on Parallel Algorithm and Parallel Software (IWPAPS'08), Dalian, China (September 2008)
3. Asim Munawar, Mohamed Wahib, Masaharu Munetomo, Kiyoshi Akama: Theoretical

	and Empirical Analysis of a GPU based Parallel Bayesian Optimization Algorithm, Proceedings of the Tenth International Conference on Parallel and Distributed Computing Applications and Technologies (PDCAT'09), International Workshop on Parallel and Distributed Algorithms and Applications (PDAA), Springer, Hiroshima Japan (December 2009) **Workshops & Research Meetings (Without Reviews):** 1. Asim Munawar, Mohamed Wahib, Masaharu Munetomo, Kiyoshi Akama: A Grid based Unified Framework for Optimization, Information Processing Society of Japan, Mathematical Modeling and problem solving, Kyoto, Japan (May 2008) 2. Asim Munawar, Mohamed Wahib, Masaharu Munetomo, Kiyoshi Akama: Introducing Adaptive Resolution Technique to solve Mixed Integer Non-Linear Optimization Problems using Genetic Algorithms, 第 4 回進化計算フロンティア研究会(SIG-ECF), Tokyo, Japan (June 2010) *3.* Mohamed Wahib, Asim Munawar, Masaharu Munetomo, Kiyoshi Akama: Novel Evolutionary Algorithm for Flexible Protein Docking Using Fragment-based de Novo Ligand Design Over GPU, 第 5 回進化計算フロンティア研究会(SIG-ECF), Sapporo, Japan (Oct 2010) ***(Best paper award)*** **Book Chapters:** 1. Asim Munawar, Mohamed Wahib, Masaharu Munetomo, Kiyoshi Akama: Parallel GEAs with Linkage Analysis over Grid, Linkage in Evolutionary Computation, Springer (2008), Page 159-187. 2. Mohamed Wahib, Asim Munawar, Masaharu Munetomo, Kiyoshi Akama: EA-based Problem Solving Environment over the GRID, Advances in Evolutionary Algorithms, INTECH (2008) 3. Mohamed Wahib, Asim Munawar, Masaharu Munetomo, Kiyoshi Akama: A framework for problem specific QoS based scheduling in Grids, Advances in Grid Computing, INTECH (2010) (accepted - in process) **Journals:** 1. Asim Munawar, Mohamed Wahib, Masaharu Munetomo, Kiyoshi Akama: Hybrid of Genetic Algorithm and Local Search to solve MAX-SAT problem using nVidia CUDA Framework, Genetic Programming and Evolvable Machines, SI: Parallel and Distributed Evolutionary Algorithms, Volume 10, Issue 4 (2009), Page 391-415, DOI: 10.1007/s10710-009-9091-4. 2. Asim Munawar, Mohamed Wahib, Masaharu Munetomo, Kiyoshi Akama: Implementation and Optimization of cGA+LS to solve Capacitated VRP over Cell/B.E., International Journal of Advancements in Computing Technology, Volume 1, Number 2, December (2009), Page 16-28, DOI: 10.4156/ijact.vol1.issue2.2 3. Asim Munawar, Mohamed Wahib, Masaharu Munetomo, Kiyoshi Akama: The Design, Usage, and Performance of GridUFO: A Grid based Unified Framework for Optimization, Elsevier, Future Generation Computer Systems 26 (2010), pp. 631-642, DOI: 10.1016/j.future.2009.12.001 4. Asim Munawar, Mohamed Wahib, Masaharu Munetomo, Kiyoshi Akama: Adaptive resolution Genetic Algorithms for solving Mixed Integer Non Linear (MINLP) Problems (In Process) **Dissertations:** 1. Asim Munawar: Design and implementation of a programmable processor optimized for table driven solutions and its application in MANETs (mobile ad-hoc networks), BE. Dissertation, EME College Rawalpindi, National University of Science and Technology, Pakistan (May 2003) 2. Asim Munawar: Parallel Optimization System over a Grid Computing Environment, MSc. Dissertation, Hokkaido University, Japan (August 2008)
Invited Talks	**Study in Japan** IEEE Society, College of Electrical and Mechanical Engineering, National University of Science and Technology (NUST) , Rawalpindi, November, 2007 **Genetic Algorithms and their Applications** SEECS, National University of Science and Technology (NUST), Lecture, September 2010

Hobbies	Swimming, Watching Movies, Android application development.
Awards	• Best paper award for SIG-ECF conference held in Sapporo, Japan (Oct 2010). • Out of many applicants I was the only one selected as Sun Microsystems Campus Ambassador for Hokkaido University from October 2008 to February 2010 (until the merger of Sun Microsystems with Oracle). • I am selected for Japanese Government Monbukagakusho Scholarship for MS/PhD year 2005-2011. • I was awarded Ministry of Science and Technology, Pakistan Scholarship during BE • I got merit certificate from NUST(National University of Sciences & Technology) • *All Pakistan 2nd Inter Universities Software Exhibition & Competition in year 2000:* We (me and my group members) placed our software CALCA (Computer Aided Linear circuit analysis) won complementary prize. • *Softcom 2002:* I represented NUST (E&ME College) in Quiz competition and we won first prize.
References	**Dr. Masaharu Munetomo** Associate Professor, Information System Design Laboratory Information Initiative Center, Hokkaido University, Sapporo, Japan **Phone:** 011-706-3759 **Email:** munetomo@iic.hokudai.ac.jp **Dr. Kiyoshi Akama** Professor, Information System Design Laboratory Information Initiative Center, Hokkaido University, Sapporo, Japan **Phone:** 011-706-3760 **Email:** akama@iic.hokudai.ac.jp **Dr. Imtiaz A Taj** Professor, Muhammad Ali Jinnah University (MAJU) Islamabad, Pakistan **Phone:** 92-51-111878787 **Email:** imtiaztaj@jinnah.edu.pk **Dr. Shoab Khan** Computer Engineering Department College of Electrical & Mechanical Engineering, National University of Sciences and Technology, Rawalpindi, Pakistan. **Phone:** 92-300-8568714 **Email:** kshoab@yahoo.com