NDSU DEPARTMENT OF COMPUTER SCIENCE AND OPERATIONS RESEARCH

ANNUAL REPORT 2005-2006

Primary Contact:
Dr. Kenneth Magel, Interim Chair
Kenneth.Magel@ndsu.edu

Dr. Anne Denton, Assistant Professor
PhD, University of Mainz, Germany 1996

Dr. Denton teaches courses in database management, bioinformatics, problem solving and foundations of computer science. Her research interests include data mining, bioinformatics, course management systems for distance education, and computational physics.

Dr. Xiaojiang (James) Du, Assistant Professor
PhD, University of Maryland, 2003

Dr. Du joined the faculty in the summer of 2004. He teaches courses in comparative programming languages, networks, network security, and software engineering. His research program concerns computer networks, network security, and intrusion detection.

Dr. D. Bruce Erickson, Associate Professor and
Undergraduate Program Coordinator
PhD, Yale, 1973

Dr. Erickson teaches courses in programming, data structures and data abstraction, discrete mathematics for computer science, files for database systems, and mathematical foundations of programming. As undergraduate program coordinator, Dr. Erickson serves on the undergraduate curriculum committee, advises on transfer course equivalencies, ensures that national accreditation principles are followed, and makes recommendations on scholarship recipients. Dr. Erickson retired following the first summer session of 2006.,

Dr. Paul Juell, Associate Professor
PhD, Ohio State University, 1981

Dr. Juell is interested in Artificial Intelligence, Multimedia and distance education. He teaches courses in artificial intelligence, computer graphics, operating systems, and comparative languages. He is working with the use of video conferencing to facilitate partnerships with universities around the world, including synchronous delivery of courses over the internet. Paul served as Associate Department Chair in 2005-06.

Dr. Sung Kim, Assistant Professor
PhD, University of Texas at Dallas, 2004

Dr. Sung Kim is interested in the development of software decomposition and composition methodologies to construct highly dependable software systems. He teaches courses in Distributed Systems and Computer organizations.

Dr. Honglin Li, Assistant Professor
PhD, Ohio State University, 2003

Dr. Li is interested in multi-media systems, including annotation of video information data sources. He is also interested in the use of signal processing analyses in bioinformatics. He teaches courses in computer science foundations and computer engineering, including signal processing.

Dr. Kenneth Magel, Professor and Interim Chair
PhD, Brown University, 1977

Dr. Magel teaches a wide variety of courses, including software engineering, programming languages, and social implications of computing. His software engineering research activities explore what makes programming difficult and programs complex. Dr. Magel conducts seminars and courses in in XML, C# and .net technologies. He coordinates the graduate programs in software engineering.

Dr. John Martin, Associate Professor and
Graduate Program Coordinator
PhD, Rice University, 1971

Dr. Martin teaches computer science foundations, theoretical computer science and algorithm analysis. He is interested in formal languages and automata theory and computational complexity. Dr. wrote the textbook Introduction to Languages and the Theory of Computation, which is widely adopted by universities around the country. He serves as freshman advisor and graduate coordinator for the department. Starting in summer, 2006, he will give up the graduate coordinator position and become undergraduate coordinator.

Dr. Kendall E. Nygard, Professor
PhD, Virginia Polytechnic Institute and State
University, 1978

Dr. Nygard teaches courses in simulation, social implications of computing, mathematical modeling, network optimization, systems analysis and design, and software testing and maintenance. His research interests include software systems for military mission planning for cooperative control of autonomous aircraft systems, software agents, and geographic information systems (GIS) for school transportation. Primary sponsors of his research are the Air Force and Navy. Starting in summer, 2006 he will serve as graduate coordinator for the Department.

Dr. William Perrizo, Engberg Presidential
Professor
Ph.D., University of Minnesota, 1972

Dr. Perrizo teaches courses in database systems, data mining, bioinformatics, and networks. His research interests include database and information systems, data mining, data warehousing, distributed database systems, bioinformatics, precision agriculture, and remotely sensed data management and visualization. His research has been funded by many federal and private sources. Dr. Perrizo is a co-founder of the worldwide Virtual Conference on Bioinformatics. Dr. Perrizo has served in leadership roles for many conferences and on many boards and has a strong international reputation in research. In 2005-06, he was Department Director of Research. He will be on developmental leave in 2006-07.

Dr. Akram Salah, Associate Professor
PhD, University of Alabama at Birmingham 1985

Dr. Salah is interested in software engineering and database management, and is teaching and developing courses in those areas. He has developed a partnership program with Cairo University under sponsorship of the bi-national Fulbright Commission.

Dr. Brian M. Slator, Professor
Ph.D., New Mexico State University, 1988

Dr. Slator teaches courses in artificial intelligence (AI), multimedia educational systems, computer science problem solving, and comparative languages. His research interests revolve around active environments for learning, including the use of software agents, case-based reasoning, knowledge representation, multimedia systems, distance education, synthetic environments, and multi-user educational games. He is a recipient of the Meier sponsored professorship. Dr. Slator is a recipient of the Ernest L. Boyer International Award for Excellence in Teaching, Learning and Technology

Dr. Vasant Ubhaya, Professor
Ph.D., University of California, Berkeley, 1971

Dr. Ubhaya teaches courses in Discrete Mathematics, Algorithm Analysis, Performance Evaluation, Mathematical Programming, and Dynamic Programming. He does research in Algorithms, Optimization and Approximation, and publishes his results regularly in journals. He is often invited by professional societies to organize and chair sessions, and give talks at their meetings. His research has been supported by the National Science Foundation and EPSCoR.

Dr. Dianxiang Xu
Ph.D., Nanjing University, China, 1995

Dr. Xu is interested in formal methods in software engineering, software security, aspect-oriented programming, and intrusion prevention and detection. He is leading departmental initiatives in computer forensics. He also teaches courses in computer science foundations and in software testing.

LECTURERS

Ms. Dana Johnson, Senior Lecturer
MS, University of Denver, 1980

Ms. Johnson teaches and coordinates the offering of introductory courses in application software (Microsoft Office), programming languages (Visual Basic, COBOL), and online courses

in electronic commerce.   She retired following the fall, 2005 semester, but continues to teach distance education courses for the Department from her mansion in Colorado.

Mr. Pratap Kotala, Lecturer
MS, North Dakota State University, 2002

Mr. Kotala teaches courses in systems analysis and design and foundations of programming for MIS majors. He also teaches the summer governor's school for high school students, and has research interests in database management.

Richard Rummelt, Lecturer
MS, Grand Valley State University, Michigan, 2005

Mr. Rummelt teaches courses in Java and the advanced Visual Basic .NET courses. His research interest has been in the area of requirements engineering. He is an active Ph.D. student. Starting in spring,2006, he is the faculty advisor for our new chapter of UPE, the Computer Science Honor Society.

Dean Knudson, Adjunct Professor
PhD

Dr. Knudson is coordinator of the capstone program for bachelor of science students in CS and MIS. In this role he develops external sponsors for projects and mentors the student teams in project management. He teaches CSci 415, Capstone: Software Projects. Dr. Knudson has extensive experience working as a development executive for Microsoft and several other companies.

STAFF

Lynn Thorp, Systems Support

Ms. Thorp administers department systems, maintains the departmental web site, and handles configurations for the departmental instructional laboratories.

Carole Huber, Administrative Assistant

Ms. Huber coordinates the administrative functions of the department, including managing research and appropriated funds, and facilitating the work of the faculty and students.

Mimi Monson, Part-time Administrative Secretary

Ms. Monson carries out office support functions, including maintaining departmental data and student records and survey information, and assisting students and faculty.

Betty Opheim, Part-time Administrative Secretary

Ms. Opheim carries out office support functions, including data development, reporting, survey work, and assisting students and faculty.

A. INSTRUCTION AND STUDENT SUCCESS

1. *Capstone Projects:*

The 2005-06 academic year marked the fourth year in which capstone projects for seniors in CS and MIS have been sponsored by external constituencies, primarily private corporations. The intent is to help students develop a strong background in real software development issues, learn software project management skills, and develop the ability to work in teams. The sponsors for spring semester 2006 are as follows:

1. IBM
2. Thomson West
3. ATK
4. Polaris
5. Sundog
6. Infinity
7. Honeywell
8. DigiKey
9. Phoenix
10. Noridan
11. NorthStar

Summary tabulation of the Project Sponsor Survey, Compiled May, 2006

PROJECT	OPINION OF CAPSTONE PROGRAM	WILLING TO SPONSOR NEXT YEAR	FINAL GRADE FROM SPONSOR	COMMENTS – SPONSOR/MENTOR
IBM	Very Good	For Sure	A	"Very impressive. We are already hashing out ideas for next year's project...These projects stimulate our business"
Thomson West	Very Good	For Sure	A	"We will continue to use the Capstone program to work on projects and provide experience to students."
ATK	Very Good	For Sure	A	we "already have a great suggestion for next year"
Polaris	Very Good	For Sure	A	"Very positive experience!" "I think this is a terrific program and exactly what is needed to tie the academic world and the business world. The enthusiasm of the students is refreshing and contagious! I am very impressed with NDSU and your students!"
Sundog	Very Good	For Sure	B+	"I think this course is wonderful…I have many project ideas for next year. When I went to NDSU,

				I wish we had such a course in CompSci…I would have taken it a couple times just for the experience." (regarding sponsor/mentor luncheon - "I enjoy the interactions. This is great opportunity to network as well as just learning other perspectives on recruiting and mentorship in surrounding area.")
Infinity	Very Good	Likely	A	"... doing a great job with the class and the students will be better prepared for the 'real world'."
Honeywell	Very Good	Likely	A	"I think this is a great opportunity for both the students and companies to try each other out. I suspect that students that do good in this class would have a small network of contacts within a company, and the company would have seen what someone can do (interviews are not a good way to see what someone can do). This is a win-win."
DigiKey	Very Good	Marginal	B- or C+	"It is a great way for students to get real work experience while companies are able to evaluate possible future employees." "Projects that can be done offsite are difficult to find at Digi-Key. If they can be found, it would be considered for another year."
Phoenix	Good	Likely	B/F	"I think this is a valuable experience for students preparing to enter the real world. Even though we had a bad experience this year, I would be willing to give it another shot. "
Noridan	Good	Likely	A	"... you do a good job with the program! We have been involved with this the past 2 years. Last year things went ok and this year they went great. .. thank you for having Noridian be part of this program. Thank you for giving me such a great group to work with this year."
NorthStar	Good	Marginal	B+	"...I don't think we'd do an MIS project again. While the students did well with what they had and learned quite a bit I think, the return for NorthStar was definitely less than we had hoped. From what I can see, the CompSci areas ones work really well..."

2. _Advising Efforts_:

Anne Denton

Benavidez	Nestor	UDGR	Computer Science
Dorr	Dietmar	PHD	Computer Science
Feist	Matthew	MS	Computer Science
Hanson	Christopher	UDGR	Computer Science
Hauschild	Nicholas	UDGR	Computer Science
Helsene	Adam	UDGR	Computer Science
Imholte	Randy	UDGR	Computer Science
Jain	Harsh	MS	Computer Science
Johanneck	Charles	UDGR	Computer Science
Narayanan Kutty	Shyam	PHD	Computer Science
Nierode	Jerrod	UDGR	Computer Science
Parisian	Dane	UDGR	Computer Science

James Du

Blixt	Mark	UDGR	Computer Science
Brown,	Ken	UDGR	Computer Science
Carr	Joel	UDGR	Computer Science
Gahi	Vandana	UDGR	Computer Science
Gronfur	Justin	UDGR	Computer Science
Gupta	Vikas	UDGR	Computer Science
Harambe	Clement	UDGR	Computer Science
Hazrati	Shashank	UDGR	Computer Science
Hegdahl	James	UDGR	Computer Science
Heltemes	Darin	UDGR	Computer Science
Johnson	Trevor	UDGR	Computer Science
Kube	Alexander	UDGR	Computer Science
Lee	Rikki	UDGR	Computer Science
Levi	Nathan	UDGR	Computer Science
Mercado	Jayme	UDGR	Computer Science
Olson	Michael	UDGR	Computer Science

Paul Juell

Byberg	Travis	UDGR	Computer Science
Helm	David	UDGR	Computer Science
Hodgerson	Eric	UDGR	Computer Science
Joseph	Priva	MS	Computer Science
Katib	Faraz	MS	Computer Science

Kattakindi	Kiran	MS	Computer Science
Kawamura	Satoshi	MS	Computer Science
Kolluru	Sunil	MS	Computer Science
Lee	Michael	MS	Computer Science
Leach	Alexander	UDGR	Computer Science
Lu	Tingda	MS	Computer Science
Mannepali	Vijaya	MS	Computer Science
Nermoe	Preston	UDGR	Computer Science
Oruganti	Ravi	MS	Computer Science
Patil	Archana	MS	Computer Science
Rehm	Brad	UDGR	Computer Science

Sung Kim

Hoff	Garrett	MS	Computer Science
Huber	Patrick	UDGR	Computer Science
Nagahawatte	Pandu	MS	Computer Science
Natarajan	Ramesh	MS	Computer Science
Schuler	Jonathan	UDGR	Computer Science
Sivanandam	Dinesh	MS	Computer Science

Honglin Li

Deglmann	Thomas	UDGR	Computer Science
Dong	Aijuan	PHD	Computer Science
Johnson	Tyler	UDGR	Computer Science
Kalvoda	Justin	UDGR	Computer Science
Longanecker	Joel	UDGR	Computer Science
Mart	David	UDGR	Computer Science
Schweyen	Andrew	UDGR	Computer Science
Tufton	Patrick	UDGR	Computer Science

Kenneth Magel

Abufardeh	Sameer	PHD	Software Engineering
Aceituna	Daniel	MS	Software Engineering
Addy	Noah	MS	Software Engineering
Asgar	Talukdar	PHD	Software Engineering
Ashila	Saikrishna	MS	Software Engineering
Banga	Surjeet Singh	MS	Software Engineering
Beyer	Ronald Dean	UDGR	Computer Science
Borchelt	Kristopher	UDGR	Computer Science
Boyko	Gregory	MS	Software Engineering
Chauhan	Anuj	MS	Software Engineering
Cimic	Senad	MS	Software Engineering
Conklin	Russell	UDGR	Computer Science
Cook	Adam	UDGR	Computer Science
Eda	Ravi	MS	Software Engineering
Haugen	Andrew	UDGR	Computer Science

Herath	Shanaka	MS	Software Engineering
Ketcher	Kevin	MS	Software Engineering
LaBelle	Nathan	MS	Software Engineering
Maresca	Louis	MS	Software Engineering
Mbuba	Kenfrey	UDGR	Computer Science
McGinnity	Steve	MS	Software Engineering
Mistry	Dilip	MS	Software Engineering
Mohammad	Ashraf	MS	Software Engineering
Murugaiyan	Elangovan	MS	Software Engineering
Nweemuu	Samuel	MS	Software Engineering
Oberoi	Inderjeet	MS	Software Engineering
Osmani	MD Golam	MS	Software Engineering
Paulus	Benjamin	UDGR	Computer Science
Peterson	Jason	MS	Computer Science
Pinagapani	Sathish	MS	Computer Science
Potla	Yaswanth	MS	Computer Science
Rahman	Syed	PHD	Software Engineering
Ren	Suqin	MS	Computer Science
Rummelt	Richard	PHD	Software Engineering
Safi	Syed	MS	Software Engineering
Satter	Mehdi	PHD	Software Engineering
Sharma	Mayukh	MS	Computer Science
Simonson	Peter	MS	Software Engineering
Singh	Sandeep	MS	Computer Science
Smadi	Mohammad	MS	Software Engineering
Srichinta	Pallavi	MS	Software Engineering
Srichinta	Uday	MS	Computer Science
Srivastava	Arun	MS	Software Engineering
Stone	Jason	UDGR	Computer Science
Thalloji	Pramodh	MS	Software Engineering
Tirupathi	Ambika	MS	Software Engineering

John Martin

Aibee	Christopher	UDGR	Computer Science
Alic	Selvedin	UDGR	Computer Science
Alla	Kishore	MS	Computer Science
Arndt	Heather	UDGR	Computer Science
Arora	Barjesh	PHD	Computer Science
Augeson	Brady	UDGR	Computer Science
Aybar	Hector	MS	Computer Science
Baddam	Shireesha	MS	Computer Science
Bakker	Andy	UDGR	Computer Science
Bapanpally	Pravan	MS	Computer Science
Barabanov	Dmitri	UDGR	Computer Science
Barsness	Timothy	UDGR	Computer Science
Baskerville	Patrick	UDGR	Computer Science
Basu	Samidip	MS	Computer Science
Beeram	Jagadish	MS	Computer Science
Bergstrom	Clinton	UDGR	Computer Science
Blattner	David	UDGR	Computer Science

Boomgaarden	Jacob	UDGR	Computer Science
Boone	Benjamin	UDGR	Computer Science
Borra	Raghavender	MS	Computer Science
Bouret	Megan	UDGR	Computer Science
Braaten	Evan	UDGR	Computer Science
Brown	Jeremy	MS	Computer Science
Buchfink	Derek	MS	Computer Science
Bukkapatnam	Sharath	MS	Computer Science
Carnes	Ashlie	UDGR	Computer Science
Chakravarthi	Satheesh	MS	Computer Science
Challagolla	Srinivas	MS	Computer Science
Chandrasekaran	Arun	MS	Computer Science
Cherukuri	Chandrasekhar	MS	Computer Science
Chintapalli	Veera	MS	Computer Science
Choi	Meegeum	MS	Computer Science
Christenson	Anna	UDGR	Computer Science
Christiansen	Zachariah	UDGR	Computer Science
Cosmano	Robert	MS	Computer Science
Dandey	Santosh	MS	Computer Science
Dass	Pranav	MS	Computer Science
Devina	Laiphangbam	MS	Computer Science
Dhalli	Vamsikrishna	MS	Computer Science
Dischinger	Benjamin	MS	Computer Science
Dorr	Dietmar	PHD	Computer Science
Dischinger	Benjamin	UDGR	Computer Science
Dosso	Vamorris	UDGR	Computer Science
Driscoll	Troy	UDGR	Computer Science
Dutta	Tridib	PHD	Computer Science
Engleson	Kyle	UDGR	Computer Science
Erhardt	Eric	MS	Computer Science
Erickson	Kellie	MS	Computer Science
Falah	Bouchaib	MS	Computer Science
Fazal	Nazeer	MS	Computer Science
Feist	Matthew	MS	Computer Science
Fisher	Scott	UDGR	Computer Science
Flatt	Paul	UDGR	Computer Science
Forseth	Christopher	UDGR	Computer Science
Foster	James	MS	Computer Science
Fowler	Demeatric	UDGR	Computer Science
Ganapa	Sireesha	MS	Computer Science
Ganesan	Arjun	MS	Computer Science
Gangannagari	Rajendar	MS	Computer Science
Gangaraju	Kumalesh	MS	Computer Science
Gorla	Vijaya	MS	Computer Science
Green	Joshua	UDGR	Computer Science
Griggs	Ryan	MS	Computer Science
Grueneich	Kent	UDGR	Computer Science
Guduru	Vasumathi	MS	Computer Science
Gurram	Samyuktha	MS	Computer Science
Gussiaas	Brian	UDGR	Computer Science

Haaland	Randy	UDGR	Computer Science
Halvorson	Jacob	MS	Computer Science
Hansen	Justin	UDGR	Computer Science
Haque	Md Muksiful	MS	Computer Science
Hartleib	Joel	UDGR	Computer Science
Haukedahl	Nathaniel	UDGR	Computer Science
Hays	Avery	UDGR	Computer Science
Helaly	Tanjina	MS	Computer Science
Helmer	Brady	UDGR	Computer Science
Hoff	Garrett	MS	Computer Science
Hokanson	Guy	MS	Computer Science
Holmes	Derek	UDGR	Computer Science
Honeyman	Matthew	UDGR	Computer Science
Honl	Jeremy	UDGR	Computer Science
Huber	Patrick	UDGR	Computer Science
Huq	Shamima	MS	Computer Science
Jain	Harsh	MS	Computer Science
Jain	Jenender	MS	Computer Science
Jinka	Vasuprakash	MS	Computer Science
Jonnalagadda	Vindhya	MS	Computer Science
Kaale	Ikania	UDGR	Computer Science
Kaber	Brett	UDGR	Computer Science
Kallam	Lakshmi	MS	Computer Science
Kambhampaty	Krishna	MS	Computer Science
Kanipakam	Vishnu	MS	Computer Science
Kautzman	Michael	UDGR	Computer Science
Kerber	Dustin	UDGR	Computer Science
Kinneberg	Joshua	UDGR	Computer Science
Kondakindi	Swathi	MS	Computer Science
Konieska	Adam	UDGR	Computer Science
Konze	Michael	UDGR	Computer Science
Kotala	Pratap	PHD	Computer Science
Kunz	Jeremiah	UDGR	Computer Science
Kurapati	Venkata	MS	Computer Science
Langlois	Fanny	UDGR	Computer Science
Lanke	Ramesh	MS	Computer Science
Laplante	Kyle	UDGR	Computer Science
Lin	Chen	MS	Computer Science
Lorentz	Michael	UDGR	Computer Science
Lynch	Anthony	UDGR	Computer Science
Madsen	Mathew	UDGR	Computer Science
Makosky	Matthew	UDGR	Computer Science
Mamidi	Rajsheel	MS	Computer Science
Mason	Matthew	UDGR	Computer Science
Middleton	Nathan	UDGR	Computer Science
Mueller	Benjamin	UDGR	Computer Science
Namasivayam	Karthik	MS	Computer Science
Narayanan Kutty	Shyam Kumar	MS	Computer Science
Natarajan	Ramesh	MS	Computer Science
Nelson	Edith	UDGR	Computer Science

Ness	Mia	UDGR	Computer Science
Netland	Michael	UDGR	Computer Science
Nordsven	Benjamin	UDGR	Computer Science
Novotny	Steven	UDGR	Computer Science
Olson	Nathan	UDGR	Computer Science
Parthasarathy	Senthil	UDGR	Computer Science
Parvathaneni	Rohit	UDGR	Computer Science
Peabody	Matthew	UDGR	Computer Science
Perubhotla	Sritej	MS	Computer Science
Prosje	Jason	UDGR	Computer Science
Pullagurala	Praveen	MS	Computer Science
Pushpala	Vijay Manoj	MS	Computer Science
Radermacher	Alex	UDGR	Computer Science
Rahman	Moin	MS	Computer Science
Ramakrishna	Gooduru	MS	Computer Science
Ramamurthy	Durga	MS	Computer Science
Rapuri	Sravanthi	MS	Computer Science
Reinhardt	Lee	UDGR	Computer Science
Richardson	Joseph	UDGR	Computer Science
Robinson	Robert	UDGR	Computer Science
Rosecrans	Aaron	UDGR	Computer Science
Samanta	Alex	UDGR	Computer Science
Samarasinghe	Malith	UDGR	Computer Science
Schaff	Cordell	UDGR	Computer Science
Schelkoph	Daniel	UDGR	Computer Science
Scherling	Nicholas	UDGR	Computer Science
Schuldt	Michael	UDGR	Computer Science
Serheinko	David	UDGR	Computer Science
Sivanandam	Dinesh	MS	Computer Science
Smith	Matthew	UDGR	Computer Science
Seelig	Celton	UDGR	Computer Science
Seifert	Bradley	UDGR	Computer Science
Somavarapu	Murali	MS	Computer Science
Sorenson	Jeffrey	UDGR	Computer Science
Stack	Jordan	UDGR	Computer Science
Su	Chang	MS	Computer Science
Suarez	Virginia	UDGR	Computer Science
Sunkari	Aravind	MS	Computer Science
Swenson	Darin	UDGR	Computer Science
Tang	Jingpeng	PHD	Computer Science
Torgerson	David	UDGR	Computer Science
Triplett	Jeffrey	UDGR	Computer Science
Vanga	Sundeep	MS	Computer Science
Vellaswamy	Chelaiah	MS	Computer Science
Verret	Riley	UDGR	Computer Science
Wahlund	Colin	UDGR	Computer Science
Wang	Yan	PHD	Computer Science
Wegener	Deven	UDGR	Computer Science
Wiest	Wallace	UDGR	Computer Science
Zaman	Mahbub	MS	Computer Science

Kendall Nygard

Abraham	Rina	MS	Computer Science
Alsmadi	Izzat	PHD	Software Engineering
Anantha	Raman	MS	Computer Science
Balasubramanian	Arun	MS	Computer Science
El Ariss	Omar	MS	Computer Science
Goli	Swathi	MS	Computer Science
Kadam	Ramchandra	MS	Computer Science
Lua	Chin	PHD	Software Engineering
Lundell	Martin	PHD	Software Engineering
Pandey	Shivendushital	MS	Computer Science
Paturu	Suresh	MS	Computer Science
Raavi	Sandeep	MS	Computer Science
Rajan	Deepan	MS	Computer Science
Rajaraman	Thilak	MS	Computer Science
Sachdev	Rajeev	MS	Computer Science
Vinta	Naveen	MS	Computer Science
Vuyyuru	Vishnu	MS	Computer Science

William Perrizo

Abidin	Taufik	PHD	Computer Science
Canton	Maria	PHD	Computer Science
Carlson	Saul	UDGR	Computer Science
Dockter	Anthony	UDGR	Computer Science
Hamer	George	PHD	Computer Science
Jockheck	William	PHD	Computer Science
Kramer	Anthony	UDGR	Computer Science
Nelson	Brady	UDGR	Computer Science
Perera	Amal	PHD	Computer Science
Sanchez	Julio	PHD	Computer Science
Tadasina	Sumanth	MS	Computer Science
Vasepalli	Srikanth	MS	Computer Science
Velupula	Sampath	MS	Computer Science
Vijayan	Dhinuraju	MS	Computer Science
Wu	Qipeng	MS	Computer Science

Akram Salah

Brewer	Galen	UDGR	Computer Science
Carroll	Christopher	UDGR	Computer Science
Cook	Matthew	UDGR	Computer Science
Faught	David	UDGR	Computer Science
Harmon	Ryan	UDGR	Computer Science
Iqbal	Tanzeem	PHD	Computer Science
Larsen	Kara	UDGR	Computer Science
Manan	Megha	MS	Computer Science
McNally	Ryan	UDGR	Computer Science
Olson	Stefan	UDGR	Computer Science

Ramsdell	David	UDGR	Computer Science
Serfling	Roger	UDGR	Computer Science
Singh	Satwant	UDGR	Computer Science
Summers	Kelly	UDGR	Computer Science
Swan	Mark	UDGR	Computer Science
Trana	Jesse	UDGR	Computer Science
Verna	Jacob	UDGR	Computer Science
Welch	Jacob	UDGR	Computer Science
Woinarowicz	Chad	UDGR	Computer Science

Brian Slator

Borchert	Otto	PHD	Computer Science
Christianson	Michael	UDGR	Computer Science
Elmaraghy	Mohamad	UDGR	Computer Science
Fangsrud	Charles	UDGR	Computer Science
Groesbeck	Gabriel	UDGR	Computer Science
Hight III	Harry	UDGR	Computer Science
Kuvaas	Douglas	UDGR	Computer Science
Lemke	Todd	UDGR	Computer Science
Li	Mei	MS	Computer Science
Peterson	Charles	UDGR	Computer Science
Schwan	Kyle	UDGR	Computer Science

Vasant Ubhaya

Ferderer	Tyler	UDGR	Computer Science
Heyne	Christopher	UDGR	Computer Science
Ketcher	Kevin	UDGR	Computer Science
Kumar	Pankaj	UDGR	Computer Science
Larson	Gregory	UDGR	Computer Science
Mehinagic	Damir	UDGR	Computer Science
Norton	George	UDGR	Computer Science
Odegaad	Eric	UDGR	Computer Science
Olson	Michael	UDGR	Computer Science
Pathak	Neelmani	UDGR	Computer Science
Sharma	Aman	UDGR	Computer Science
Sheoran	Varun	UDGR	Computer Science
Vafadar	Mohammad	UDGR	Computer Science
Veit	Michael	UDGR	Computer Science

Dianxiang Xu

Anderson	Spencer	UDGR	Computer Science
Creasy	Matthew	UDGR	Computer Science
Davidson	Christopher	UDGR	Computer Science
Decoteau	Renita	UDGR	Computer Science
Erhardt	Eric	MS	Software Engineering
Goel	Vivek	MS	Computer Science

Hillium	Parker	UDGR	Computer Science
Kou	Zhifeng	UDGR	Computer Science
Nelson	Matthew	UDGR	Computer Science
Pauli	Joshua	PHD	Software Engineering
Rebenitsch	Lisa	UDGR	Computer Science
Schmalenberg	John	UDGR	Computer Science
Sell	Robert	UDGR	Computer Science
Swenson	Webster	UDGR	Computer Science
Xu	Weifeng	MS	Software Engineering

3. *Curriculum and course development and changes*:

Curriculum review continued during 2005-06. We developed a preliminary version of a Bachelor of Applied Computing degree proposal as part of our efforts to make our undergraduate degrees more accessible and more attractive to potential students. This curriculum differs from our present B.S. in Computer Science primarily by reducing theory courses and increasing software engineering courses.

We explored alternative ways of organizing our introductory B.S. course sequence to better retain qualified students. We decided to further pursue a games-based approach.

Under the leadership of Associate Vice President Sudhir Mehta, the Department introduced several new delivery mechanisms for our degree programs. These include a three years in India followed by one year at NDSU version of our B.S. and a one year in India and one year at NDSU version of our M.S. in Computer Science and M.S. in Software Engineering. The first students from the Ansal Institute of Technology will be arriving at NDSU in fall, 2006.

The Department is moving towards delivery of our graduate programs through distance education. The Graduate Certificate in Software Engineering will be offered starting fall, 2006 with the M.S. in Software Engineering expected to follow within a year. Substantial interest in these programs are at several institutes in India shows promise that these programs will be popular within two years of their introduction.

At the graduate level, three new bioinformatics courses and graduate degrees in bioinformatics were proposed. One of these courses received final approval while the other two are waiting for letters of support from concerned departments, primarily Mathematics. The bioinformatics graduate programs are being held after College review to ensure that the interdisciplinary graduate program in Genomics and Bioinformatics has a good chance to succeed. Bioinformatics efforts within the Department are being redirected to focus on this interdisciplinary program.

4. *Accreditation and reviews*:

The B.S. in Computer Science has been accredited since 1986, the first year that accreditation was available. During fall, 2005 the Department had a visit by a review committee from ABET. This review was successful in large part due to substantial revision to our assessment procedures and the change to release time for those doing the majority of the assessment. These changes were made in August and September 2005 just before the visit. Our B.S. in Computer Science continues to be accredited through June, 2009 by which time an extensive self-study and site visit will be completed.

This is the only degree in Computer Science eligible for accreditation. ABET is the only organization that accredits programs in Computer Science.

5. *Activities in student recruitment/retention, enrollment management, and other student activities:*

The Department undertook two initiatives in 2005-06. At the undergraduate and graduate levels, we started a chapter of UPE, the only nationally recognized honor society in Computer Science. Our first initiation of new members occurred in spring, 2006. At the graduate level we began to offer teaching assistantships to prospective new students to encourage them to attend NDSU.

At the undergraduate the Department recognizes that it has a retention problem. During 2005-06 we gathered information to identify and characterize the problems. Several alternative potential solutions were identified and discussed. Improvement of student retention will be a major activity during 2006-07.

Senior professors teaching freshman and transfer students:

Nearly all of the courses for CS majors, including those in the lower division, are taught by tenured or tenure-track professors, in accordance with ABET accreditation principles. Entry level courses are regularly taught by senior professors.

Summer school activities:
The department typically offers at least two graduate-level courses each summer, including at least one of the four graduate core courses. At least two courses for undergraduate majors are also offered. Service courses, such as CSci 114 and 116 are also offered. The department offers several courses each summer under the self-support program. The self-support program is very beneficial for the department. Some distance education courses are presented as well.

Career Center student employment

CS Bachelor students employment rate is 81% at a salary range of Low-Average-High being 26-45-60K. We believe these figures significantly underestimate the real employment rate since many graduating students do not go through the Career Center to procure employment.

6. *Distance Education and use of Technology in Courses:*
The Department offers distance versions of CSci 114, and 116 every semester and in the summer. Other service courses are offered via distance less frequently. Starting fall, 2006, we will be offering the Graduate Certificate in Software Engineering including four courses and a seminar through distance to students in India and elsewhere. We hope to expand our graduate distance education offerings to the M.S. in Software Engineering within the next two years. Starting late summer of 2006, we will advertise the Certificate program regionally as well.

Every Computer Science course uses technology extensively. Courses use the Internet for delivery and many courses require extensive computer work. We are heavy users of Blackboard.

7. *Assessment*

The Department reorganized our assessment procedures during the fall of 2005. We have been gathering data on our achievement of our program-specific objectives in both fall, 2005 and spring, 2006. Specific changes undertaken during 2005-06 as a result of these assessments include:

1. Moved our capstone projects activity from being a part of CSci 489: Societal Ethics to a separate course, CSci 445: Capstone: Software Projects. Our capstone now consists of two courses: CSci 445, and CSci 489;
2. Considered repackaging our introductory course sequence, CSci 160 and 161 to provide more relevant presentation of the material to our students. We expect to implement our new approach starting in fall, 2006;
3. Discussed a new approach for our theory courses, CSci 235, 236, and 708. A new approach to 708 will be implemented in fall, 2006 with 235,236 changes coming later;
4. Updated the material in CSci 713 and 715;
5. Added a graduate seminar on new research in software engineering for spring, 2007;
6. Considering requiring an undergraduate seminar for the B.S. degree.

B. RESEARCH/CREAVTIVE ACTIVITY

1. *Research overview:*

While almost all tenure track faculty regularly publish in high-quality media, external grants continue to be concentrated among too few faculty. The Department started a research enhancement program for junior faculty during 2005-06. This program used salary savings dollars ($12,000) to send junior faculty to visit funding agencies and to explore collaboration possibilities with more established researchers at other universities. Expectations for junior faculty in research publishing and grantsmanship were made more explicit in our proposed new tenure and promotion policy.

Our long range goal for the next three to five years is to improve the visibility and prestige of the Department's research programs nationally. We believe the rather low prestige of the Department outside our region (where we are widely imitated as a research and teaching leader) hurts our grant acquisition capability from federal funding agencies and from large corporations.

The Department has active research programs in data mining, software engineering, computer systems, software security, and bioinformatics. These programs should continue to achieve more visibility within the profession.

2. *Grants/Contracts/Research*:

**COMPUTER SCIENCE DEPARTMENT GRANTS AND CONTRACTS, PART 1
PROJECTS INITIATED PRIOR TO JULY 1, 2005, AND CONTINUING INTO THE 2005-
2006 ACADEMIC YEAR**

YEAR	GRANT #	PRINCIPAL INVESTIGATOR	TITLE	FUNDING SOURCE	AMOUNT
4/05 to 4/07	10466	Denton	Tools and Applications of Gene-by Gene Sequencing in Common Bean	USDA/ CSEES	61,955
5/15/05 to 6/1/05		Denton Co/PI	Analytical Methods for Optically Stimulated Luminescence (OSL) Dating Techniques. Co-PI: Anne Denton, Research Collaboration and Proposal Preparation, Amount: 0.5 month summer salary	NDSU-ECS Summer Support	3,615
1/05 to 7/05	10215	Du	Secure Communications for NASA Hybrid Satellite Networks	EPSCoR	16,733
6/03 to 3/06	4102	Fu/Nygard	Cyber Security Capacity Building at NDSU	National Science Foundation	199,921
11-20-01 to 11-19-06	4205	Nygard	Virtual Archival Storage Terminal	US Dept. of Housing and Urban Dev.	249,450
5-1-02 to 10-05	4871	Nygard	Near Real-time Mission Planning for Autonomous Vehicles	Office of Naval Research	354,829
12/03	5280	Nygard	Microsoft Business	Microsoft Business Solutions	19,500
3/04 to 4/06	5287	Nygard	Data Development Analysis for ND School Transportation	ND Dept of Public Instruction	40,000
1/05 to 7/05	10437	Nygard	Software Agent Control of Autonomous Rovers	NASA/UND	2,700
5/03 to 7/05	4951	Perrizo	Center for High Performance Computing CHPC	General Services Admin.	225,000
1/04 to 7/05	5177	Perrizo	Doctorial Dissertation Award	EPSCoR	19,680
7/93 ----	5512	Perrizo	Residual Value Surrogates	Dakota Race Mgmt.	16,469
8/04 to 7/05	8513	Perrizo	Virtual Genomics & Bioinformatics Conference Participant Support	National Science Foundation	27,968

YEAR	GRANT #	PRINCIPAL INVESTIGATOR	TITLE	FUNDING SOURCE	AMOUNT
00-05		Slator	Systems for Learning Science and Assessing Student Learning;	NSF-ITR	1,940,000
TOTAL					**3,177,820**

COMPUTER SCIENCE DEPARTMENT GRANTS AND CONTRACTS
PROJECTS INITIATED DURING THE JULY 1, 2005 TO JUNE 30, 2006 TIME PERIOD

YEAR	GRANT #	PRINCIPAL INVESTIGATOR	TITLE	FUNDING SOURCE	AMOUNT
7/05 to 6/08	10693	Denton	Data Mining in the Presence of Quantitatively Diverse Information	NSF	272,557
1/06 to 9/06		Denton	Semi-Global Computational Analysis of Gene Regulation	NDSU CSM/AES	9,926
7/05 to 6/06	10793	Perrizo	EPSCoR State Doctoral Dissertation Award – Abidin	EPSCoR	6,560
7/05 to 6/06	10789	Perrizo	EPSCoR State Doctoral Dissertation Award – Abidin	EPSCoR	13,726
4/1/06 to 7/06	11759	Xu	NSA EPSCoR State Match	EPSCoR	11,000
Totals					**313769**

3. Articles/Books/Publications and Presentations:

Anne Denton

Publications

1. William Perrizo, Qin Ding, Anne Denton, Kirk Scott, Qiang Ding, and Maleq Khan, "Exploiting edge semantics in citation graphs using efficient, vertical ARM," International Journal of Business Intelligence and Data Mining 2(1), 2006 (in print).

2. Birgit M. Prüß, Christopher Besemann, Anne Denton, and Alan J. Wolfe "Transcriptional networking: A FlhD/FlhC-centric example," Journal of Bacteriology (in revision)

3. Anne Denton, "Kernel-density-based clustering of time series subsequences using a continuous random-walk noise model," In Proc. of the Fifth IEEE Int'l Conf. on Data Mining, Houston, TX, Nov. 27-30, 2005.

4. Christopher Besemann and Anne Denton, "Integration of profile hidden Markov model output into association rule mining," In Proc. of the 11th ACM SIGKDD Inter'l Conf. on Knowledge Discovery and Data Mining, Chicago, IL, Aug. 21-24, 2005.

Presentations

1. 28 Nov. 2005: Fifth IEEE International Conference on Data Mining, Houston, TX, "Kernel-density-based clustering of time series subsequences using a continuous random-walk noise model".

2. 13 Oct 2005. Local student ACM chapter, NDSU, "Computer Science, Data Mining, and Bioinformatics – Research at the Boundary to the Natural Sciences".

3. 5 Oct. 2005: Local student ACM chapter, NDSU, "Computer Science, Data Mining, and Bioinformatics – Research at the Boundary to the Natural Sciences".

4. Computational Sciences at NDSU Poster Session, Poster: Christopher Besemann and Anne Denton "Association rule mining in bioinformatics".

5. 22 Aug. 2005: 11th ACM SIGKDD International Conference on Knowledge Discovery and Data Mining, Chicago, IL. Poster: "Integration of profile hidden Markov model output into association rule mining".

6. 23 Feb. 2005: Remote Lecture / Presentation with the University of Cairo, Egypt: Networks in Bioinformatics

7. 17 Jan. 2005: Plant & Animal Genomes XIII Conference, Town & Country Convention Center, San Diego, CA. Posters:
   - Anne M. Denton, Christopher A. Besemann, "Which definition of a domain works best?"
   - Nathan J Olson, Christopher Besemann, Anne Denton, Phillip McClean, Shahryar Kianian "Identifying plant paralogs and orthologs using complete linkage hierarchical clustering"

Xiaojiang Du

Publications

1. X. Du, Y. Xiao, H. H. Chen, and Q. Wu, "Secure Cell Relay Routing Protocol for Sensor Networks," *John Wiley Journal of Wireless Communications and Mobile Computing (WCMC)*, accepted in Oct. 2005, to appear

2. X. Du and D. Wu, "Adaptive Cell-Relay Routing Protocol for Mobile ad hoc Networks," *IEEE Transactions on Vehicular Technology*, pp. 270-277, Vol. 55, Issue: 1, Jan. 2006.

3. X. Du, D. Wu, W. Liu, and Y. Fang, "Multi-Class Routing and Medium Access Control for Heterogeneous Mobile Ad Hoc Networks," *IEEE Transactions on Vehicular Technology*, pp. 278-285, Vol. 55, Issue: 1, Jan. 2006.

4. X. Du, "Identifying Control and Management Plane Poison Message Failure by K-Nearest Neighbor Method," *Journal of Network and Systems Management*, accepted in July 2005, to appear.

Conference Papers

1. X. Du, M. Zhang, H. H. Chen, and K. Nygard, "Distributed Decision Making Algorithm for Self-Healing Sensor Networks," *IEEE ICC 2006*, Istanbul, Turkey, June 2006, to appear.

2. M. Zhang, X. Du, and K. Nygard, "Improving Coverage Performance in Sensor Networks by Using Mobile Sensors," in *Proceedings of IEEE Military Communication (MILCOM) 2005,* Atlantic City, NJ, Oct. 2005.

3. X. Du and D. Wu, "Efficient Multi-Class Routing Protocol for Heterogeneous Mobile Ad Hoc Networks", in *Proceedings of The Second IEEE International Conference on Broadband Networks(BroadNets 2005),* Boston, MA, Oct. 2005.

4. X. Du, "Efficient Energy Management Protocol for Target Tracking Sensor Network", in *Proceedings of The Ninth IFIP/IEEE International Symposium on Integrated Network Management (IM 2005),* Nice, France, May 2005.

5. X. Du, "Improving Routing in Sensor Networks with Heterogeneous Sensor Nodes", in *Proceedings of IEEE VTC Spring 2005,* Stockholm, Sweden, May 2005.

Presentations

1. Improving Coverage Performance in Sensor Networks by Using Mobile Sensors, *IEEE Military Communication (MILCOM) 2005,* Atlantic City, NJ, Oct. 2005.

Paul Juell

Publications

1. Shanmugasundaram, V., Juell, P., Aalderks, D.R., Dimich,M.T., Wilder, A.D., Westhoff, M.G., Features of Visualization that Help Object Oriented Programming Learning. IED-MEDIA 2005-World Conference on Educational Multimedia, Hypermedia & Telecommunications, Association for the Advancement of Computing in Education (AACE), Montreal, Canada. June 27- July 2, 2005.

Other Refereed Publications

1. Juell, Paul and Jagadish Beeram, Distributed Hierarchical Indexing of Publications, The 2005 International Symposium on Web Services and Applications ISWS'05, June 27-30, Las Vegas, 2005.

2. Juell, P., Sreekantaradhy, M., Shanmugasundaram, V., and Malakhov, V., Visualizations and Concept Intergration in Learning Algorithms. The 2005 International Conference on Modeling, Simulation and Visualization Methods (MSV'05), Las Vegas, USA. June 27-30, 2005.

Presentations

1. Technoligies to support interaction for capstone courses, presented to NDSU ECE department Nov. 8, 2005

Sung Kim

Publications

1. **Sung Kim** and Farokh Bastani, "Towards Automated Synthesis of Dependable Application-Oriented Frameworks," submitted to *ACM Transactions on Software Engineering and Methodology*.

2. **Sung Kim**, "Application of AI Planning Technique in Software Engineering," submitted to *15th International Conference on Software Engineering and Data Engineering (SEDE-2006).*

3. **Sung Kim** and Garrett Hoff, "Realization of Systematic Reliability Analysis of Decomposable Systems," submitted to *IEEE 30th Annual International Computer Software and Application Conference (COMPSAC 2006).*

Honglin Li

Publications

1. "Multi-ontology Based Multimedia Annotation for Domain-specific Information Retrieval", Aijuan Dong and Honglin Li, The **IEEE** International Workshop on Multimedia Technology and Ubiquitous Computing (MTUC 2006), Taichuag, Taiwan, June 2006 (Accepted)

2. "Efficient Image Classification on Vertically Decomposed Data", Taufik Abidin, Aijuan Dong, Honglin Li, and William Perrizo, the First **IEEE** International Workshop on Multimedia Databases and Data Management, Atlanta, Georgia, April 2006 (Accepted)

3. "Integrated Documentary Video Access for Education", Aijuan Dong, and Honglin Li, The ISCA 21st International Conference on Computers and Their Applications, Seattle, Washington, March 2006 (Accepted)

4. "Ontology-based Information Integration in Virtual Learning Environment", Aijuan Dong, and Honglin Li, The 2005 **IEEE**/WIC/ACM International Conference on Web Intelligence, Compiegne, France, September 2005

5. "Ontology-based Multimedia Access in Virtual Learning Environment", Aijuan Dong, and Honglin Li, The 9th World Multi-Conference on Systemics, Cybernetics and Informatics, Orlando, Florida, USA, July 2005

6. "Educational Documentary Video Segmentation and Access through Combination of Visual, Audio and Text Understanding", Aijuan Dong, and Honglin Li, The 5th **IEEE** International Symposium on Signal Processing and Information Technology, Athens, Greece, December 2005

Kendall Nygard

Publications

1. Martin Lundell, Jingpeng Tang, Thaddeus Hogan, and Kendall E. Nygard, Agent-oriented Simulation of Cooperative UAV Missions,WSEAS Transactions on Systems, 5(4), April, 2006 (accepted in 2005)

2. Dianxiang Xu, Priti Borse, Karl Altenburg, and Kendall E. Nygard, Distributed Control of Self-organizing Systems with Petri Nets, WSEAS Transactions on Systems, 5 (4), April, 2006 (accepted 2005)

Presentations

1. Dianxiang Xu and Kendall Nygard. A Threat-Driven Approach to Modeling and Verifying Secure Software. The IEEE/ACM International Conference on Automated Software Engineering (ASE 2005), California, November, 2005.

2. Martin Lundell, Jingpeng Tang, Thaddeus Hogan, and Kendall E. Nygard, An Agent-based Heterogeneous UAV Simulator Design, The 5th International Conference on Artific ial Intelligence, Knowledge Engineering, and Databases (AIKED), February, 2006 (accepted in 2005).

3. Ming Zhang, Xiaojiang Du, Hsiao-Hwa Chen and Kendall Nygard, Distributed Decision Making Algorithm for Self-Healing Sensor Networks, IEEE International Conference on Communications, 2006, (accepted in 2005)

4. Dianxiang Xu, Priti Borse, Karl Altenburg, and Kendall E. Nygard, A Petri Net Simulator for Self-organizing Systems, The 5th International Conference on Artificial Intelligence, Knowledge Engineering, and Databases (AIKED), February, 2006 (accepted in 2005).

5. Ming Zhang, Xiaojiang Du, Kendall Nygard, Improving Coverage Performance in sensor Networks by using Mobile Sensors, The IEEE Military Communication Conference, 2005.

6. Ramaswamy, Sanjay, Huirong Fu, and Kendall E. Nygard, Simulation Study of Multiple Black Holes Attack on Mobile Ad Hoc Networks, The 2005 International Conf. on Wireless Networks, June, 2005

7. Dianxiang Xu, Weifeng Xu, and Kendall E. Nygard. A State-Based Approach to Testing Aspect-Oriented Programs, The 17th International Conference on Software Eng. and Knowledge Eng., Taiwan, July, 2005.

8. Najadat, Hassan, Nygard, Kendall E., and Schesvold, Doug, Clustering-Based Method for Data Envelopment Analysis, The 2005 International Conference on Scientific Computing, June, 2005.

9. Lua, Chin A., Altenburg, Karl, and Nygard, Kendall E., ANTS with Firefly Communication , The International Conference on Artificial Intelligence, June, 2005

William Perrizo

Publications

1. Podium Inc. Neighbor Classifier", Int,l Jour. of Bus. Int. & DM, *Accepted* 2005 Q.Ding, M.Khan, A.Denton, Q.Ding, W.Perrizo.

2. "Eff. Consid. for kNN Text Categorization", Knowledge and Info. Systems Journal, 2005, I. Rahal, H. Najadat, W. Perrizo.

3. "Local Support Vector Classification for Spatia l Data", Int'l Journal on Computers and Their Apps, 2005, F. Pan, W. Perrizo.

4. "Eff. Vertical Quant. Freq. Pattern Mining", Int'l Journal on Comp. and Apps, V12:4, 2005, B. Wang, F. Pan, Y. Cui, W. Perrizo

5. "Efficient Proximal SVM for Spatial Data", The Journal of Biomedical Informatics, 2005, F. Pan, W. Perrizo.

6. "Vert. Set Squared Dis. for Vertical DM" Int'l Journal of Comp. and Apps, 2005, T. Abidin, A. Perera, M. Serazi, W. Perrizo.

7. "Scalable Vertical ARM" Journal of Information and Knowledge Management, World Scientific, V4:3, I. Rahal, W. Perrizo.

8. "Exploiting Edge Sem. in Citation…", Kn. & Info. Sys. J., 2005, I. Rahal, D. Ren, W. Wu, A. Denton, C. Besemann, W. Perrizo

9. "Read-Commit for Conc. Control in High Perf. DBS", Information, Int'l Journal, V7:1, pp95-106, 2004, V. Shi. W. Perrizo.

10. "Cluster Analysis of Spatial Data Using P-trees", Information: An Int'l Journal, V7:1, pp15-26, 2004, Q. Ding, W. Perrizo.

11. "Eff. Image Classification on Vert. Data", IEEE MDB and Data Mgmt., Atlanta, 2006, T. Abidin, A. Dong, H. Li, W. Perrizo.

12. "SMART-TV: NN Classifier for DM", ACM, Symposium on Applied Computing, 2006, Dijon, France, T. Abidin, W. Perrizo.

13. "Incr. Int. Mining of ARM from Biol. Data" ACM Symposium on Applied Computing, 2005, Santa Fe, I. Rahal, W. Perrizo.

14. "Comp. Hier.l Clust. for Gene Expr. Data" ACM, Symposium on Applied Computing, 2005, Santa Fe, B. Wang, W. Perrizo.

Other Refereed Publications

1. "Stat. Preserving Steganography..", Int'l Conference on Computers and Applics, Seattle, March, 2006, G. Hamer, W. Perrizo.

2. "Vertical K-Median Clustering", Int'l Conference on Computers and Applics, Seattle, March, 2006, A. Perera, W. Perrizo.

3. "Symmetric Datasets for Vertical Clustering Algs", Int'l Conf. on Computers and Applics, Seattle, 2006, T. Abidin, W. Perrizo.

4. "Aggregate Func. Comp. & Iceberg Querying..", Int'l Conference on Computers and Applics, Seattle, 2006, Y. Cui, W. Perrizo.

5. "Clustering Microarray Data based on Density and SNN", Int'l Conf. on Comp. & Apps, Seattle, 2006, R. Syamala, W. Perrizo.

6. "Unified Theory of Data Mining based on Uni and Bipartite Graphs", Int'l Conf. on Comp. & Apps, Seattle, 2006, W. Perrizo.

7. "Lossless Image Comp. using PPM -trees", Int'l Conf. on Computer & Info. Tech, Bangeladesh, 2005, K. Hussain, W. Perrizo.

8. "Alg. for Shifting Images in P-Trees", Int'l Conf. on Computer & Info. Tech, Bangeladesh, 2005, K. Hussain, W. Perrizo

9. "Steganography-1", Int'l Conf. on Intelligent and Adaptive Systems and SE, Toronto, July, 2005, G. Hamer, W. Perrizo.

10. "Steganography-2", Int'l Conf. on Intelligent and Adaptive Systems and SE, Toronto, July, 2005, G. Hamer, W. Perrizo.

11. "VSSD Clust. w/o Prior.." Int'l Conf. Int. and Adap. Sys. & SE, Toronto, 2005, T. Abidin, M. Serazi, G. Hamer, W. Perrizo.

Brian Slator

Publications

Journals

1. Brandt, Lisa, Otto Borchert, Kimberly Addicott, Bob Cosmano, Justin Hawley, Guy Hokanson, Dan Reetz, Bernhardt Saini-Eidukat, Donald P. Schwert, Brian M. Slator, Shannon Tomac (In Press). Roles, Culture, and Computer Supported Collaborative Work. Journal of Advanced Technology for Learning. 3(2).

2. Slator, Brian M., Harold Chaput, Robert Cosmano, Ben Dischinger, Christopher Imdieke and Bradley Vender (In Press). A Multi-User Desktop Virtual Environment for Teaching Shop-Keeping to Children. Virtual Reality Journal, 9, pp. 49-56. Springer-Verlag..

3. McClean, Phil E, Christina Johnson, Roxanne Rogers, Lisa M. Daniels, John Reber, Brian M. Slator, Jeff Terpstra, and Alan R. White (2005). Molecular and cellular biology animations: development and impact on student learning. Cell Biology Education. 4(2) pp. 169-179.

4. Slator, Brian M., Curt Hill, Dayna Del Val (2004). Teaching Computer Science with Virtual Worlds. IEEE Transactions on Education, 47(2), May, pp. 269-275.

Books Accepted for Publication

1. Slator, Brian M. and Associates (2006). Electric Worlds in the Classroom: teaching and learning with role-based computer games. New York: Teachers College Press.

Conference Papers

1. Hill, Curt, Brian M. Slator, Vijayakumar Shanmugasundaram and Lisa M. Daniels. (In Press). An Online Computer Science Instructional Resource. IASTED International Conference on Web Based Education (WBE 2006), Puerto Vallarta, Mexico, January 23-25.

2. Slator, Brian M., Aijuan Dong, Kellie Erickson, Deb Flaskerud, Jacob Halvorson, Oksana Myronovych, Phil McClean, Bernhardt Saini-Eidukat, Donald P. Schwert, Alan R. White, Jeff Terpstra (2005). Comparing Two Immersive Virtual Environments for Education. Proceedings of E-Learn 2005, World Conference on E-Learning in Corporate, Government, Healthcare, & Higher Education, Edited by Griff Richards, October 24-28, Vancouver BC, Canada, pp. 2394-2401.

3. Brandt, Lisa, Otto Borchert, Kimberly Addicott, Bob Cosmano, Justin Hawley, Guy Hokanson, Dan Reetz, Bernhardt Saini-Eidukat, Donald P. Schwert, Brian M. Slator, Shannon Tomac (2005). Roles, Culture, and Computer Supported Collaborative Work on Planet Oit. Proceedings of the Eighth

IASTED International Conference on Computers and Advanced Technology in Education (CATE-05), Oranjestad, Aruba, August 29-31, pp. 129-134.

4. Hill, Curt, Brian M. Slator, Lisa M. Daniels (2005). The Grader in ProgrammingLand. Proceedings of the National ACM Computer Science Education Conference. St. Louis, MO: Sheridan Publishing. February, 23-27.

5. McClean, P., Daniels, L., Slator, B., Terpstra, J., White, A. (2005) *Effects of Molecular and Cellular Biology Animations on Student Learning.* Proceedings of the Hawaii International Conference on Education, January 4-7, Honolulu, HI, pp. 2898-2904

6. Hill, Curtis D., Brian M. Slator, and Lisa M. Daniels (2004). Using and Validating Programming Land. Proceedings of the 7th IASTED International Conference on Computers and Advanced Technology in Education (CATE-04), V. Uskov (Ed.), August 16-18, Kauai, HI, pp. 291-296.

7. Hill, Curt, Brian M. Slator, Lisa M. Daniels (2004), An Online Resource for the Introductory Programming Class. In Proceedings of the 2nd International Conference Information Technology Research and Education (ITRE '04), (London Metropolitan University, London, UK, June 28 -July 1). T. Boyle, P. Oriogun and A. Pakstas (Eds.), pp. 101-105.

Book Chapters

1. Daniels, Lisa M, Phil McClean, Bernhardt Saini-Eidukat, Donald P. Schwert, Brian M. Slator, Jeff Terpstra, Alan R. White, Kimberly Addicott (2005). Effects of teaching Science through immersive virtual environments. In Ma, Z (ed), Web-based Intelligent e-Learning Systems: Technologies and Applications, Idea Group, Inc., Hershey, PA. Chapter XIV, pp. 271-290.

Published Abstracts

1. Saini-Eidukat, B., Schwert, D.P., Slator, B., Daniels, L., and Terpstra, J., (2005), Research on authentic assessment using a virtual world for learning geology. Geological Society of America North-Central Section, 39th Annual Meeting, 19-20 May 2005, Minneapolis, MN.

Presentations

1. Slator, Brian M. (2005). Challenges and Opportunities in Game-based Learning. Presentation at the Challenges and Opportunities in Game-based Learning Workshop, National Academies of Science, Washington, DC, Nov. 2.
2. Johnson, W. Lewis (Panel Chair), Brian M. Slator, Jan Canon-Bowers (2005). PANEL: Artificial Intelligence for Serious Games. Artificial Intelligence for Interactive Digital Entertainment Conference (AIIDE), AAAI, June 1–3, 2005 at the Marriott Hotel in Marina del Rey, California. http://www.aaai.org/Conferences/AIIDE/2005/aiide05-program.pdf
3. Johnson, W. Lewis (Panel Chair), Idit Caperton, Carrie Heeter, Yasmin Kafai, Brian M. Slator (2005). Lessons Learned From Games for Education. Educators Program, SIGGRAPH 2005, the 32nd International Conference on Computer Graphics and Interactive Techniques.

Thursday, 4 August, 9 - 10 am.
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Dianxiang Xu

Publications

Dianxiang Xu, Richard A. Volz, Michael S. Miller, and Jesse Plymale. Knowledge-Based Human-Agent Teamwork for Distributed Training. *International Journal of Intelligent Control and Systems*. Accepted.

Dianxiang Xu, Priti Borse, Karl Altenburg and Kendall Nygard. A Petri Net Simulator for Self-organizing Systems. *WSEAS Transactions on Systems*. Feb. 2006.

Junhua Ding, Dianxiang Xu, Xudong He, and Yi Deng. Modeling and Analyzing a Mobile Agent-based Clinical Information System. *International Journal of Intelligent Control and Systems*. Vol. 10, No. 2, pp. 143-151, June 2005.

Sen Cao, Richard. A. Volz, Jamison Johnson, Maitreyi Nanjanath, Jonathan Whetzel, and Dianxiang Xu, Development of a Distributed Multi-Player Computer Game for Scientific Experiment of Team-Training Protocols, *The Electronic Library – The Int. J. for the Applications of Technology in Information Environments*, Vol. 22 No. 1, 2004, pp. 43-54.

Dianxiang Xu and Weifeng Xu. State-Based Incremental Testing of Aspect-Oriented Programs. In *Proc. of the 5th International Conference on Aspect-Oriented Software Development (AOSD' 2006),* March 20-24, 2006. Bonn, Germany. ACM Press. (Acceptance rate: 20/95=21%). To appear.

Dianxiang Xu and Kendall Nygard. A Threat-Driven Approach to Modeling and Verifying Secure Software. In *Proc. of the 20th IEEE/ACM International Conference on Automated Software Engineering (ASE 2005),* pp. 342-346, Nov. 2005. California, USA. ACM Press. (Acceptance rate: 63/291=21.7%)

Dianxiang Xu and Kendall Nygard. Threat-Driven Modeling and Verification of Secure Software Using Aspect-Oriented Petri Nets. *IEEE Trans. on Software Engineering*. Revised and re-submitted in Dec 2005.

Junhua Ding, Dianxiang Xu, Yi Deng, Peter J. Clarke, Xudong He. Design an Interoperable Mobile Agent System Based on Predicate Transition Net Models. *Multi-agent and Grid Systems: An International Journal*. Submitted in Sept 2005.

Dianxiang Xu and Joshua Pauli. Threat-Driven Design and Analysis of Secure Software Architectures. *Journal of Information Assurance and Security*. Submitted in Dec. 2005.

Other Referred Publications

Dianxiang Xu, Priti Borse, Karl Altenburg, and Kendall Nygard. A Petri Net Simulator for Self-organizing Systems. In *Proc. of the 5th WSEAS International Conference on Artificial Intelligence, Knowledge Engineering, Data Bases (AIKED'06)*, Feb. 15-17, 2006, Madrid, Spain.

Dianxiang Xu, Weifeng Xu, and Kendall Nygard. A State-Based Approach to Testing Aspect-Oriented Programs. In *Proc. of SEKE'2005,* pp. 366-371, July 14-16, Taiwan.

Junhua Ding, Dianxiang Xu, Yi Deng, Peter J. Clarke, Xudong He. Design an Interoperable Mobile Agent System Based on Predicate Transition Net Models. In *Proc. of SEKE'2005,* pp. 560-565, July 14-16, Taiwan.

Publishing rates for graduate students,
compiled May, 2006

Name of Student	Degree Program
Abidin, Taufik	Ph.D. in progress
Addicott, Kimberly	BS
Beeram, Jagadish	MS
Besemann, Christopher	PhD in progress
Borchert, Otto	MS in progress
Borse, Priti	MS in progress
Cosmono, Robert	MS in progress
Cui, Yue	MS
DeVal, Dayna	MS in progress
Ding, Qiang	Ph.D.
Ding, Qin	Ph.D.
Dischinger, Benjamin	MS in progress
Dong, Aijuan	Ph.D. in progress
Erickson, Kellie	MS in progress
Halvorson, Jacob	MS in progress
Hamer, George	Ph.D. in progress
Hill, Curt	Ph.D.
Hoff, Garrett	MS in progress
Hokanson, Guy	MS in progress
Imdieke, Christopher	BS
Khan, Maleq	MS
Lua, Chin	Ph.D. in progress
Lundell, Martin	Ph.D. in progress
Malakhov, Vasiliy	MS
Myronovych, Oksana	MS in progress
Najadat, Hassan	Ph.D.
Pan, Fei	Ph.D.
Pauli, Joshua	PhD in progress
Perera, Amal	Ph.D. in progress
Rahal, Imad	Ph.D.
Ramaswamy, Sanjay	Ph.D. in progress
Ren, Dongmei	Ph.D.
Scott, Kirk	Ph.D. in progress

Serazi, M	Ph.D
Shanmugasundaram, Vijay	MS
Sreekantaradhy, M	MS
Tang, Jingping	Ph.D. in progress
Tomac, Shannon	BS
Vender, Bradley	MS
Wang, Baoying	PhD.
Wu, Weihua	MS
Xu, Wiefeng	PhD in progress
Zhang, Ming	PhD in progress

C. OUTREACH

1. *Professional Service:*
The Department continues to be very active in service to the profession. Most faculty regularly review for conferences and journals. Seven faculty review for national funding agencies. Three faculty review Ph.D. dissertations internationally.

2. *Alumni Events and other community related activities:*
The Department needs to rethink our approach to this area. We have a web site that we hoped would be a resource for alumni, but it is not used very much.

3. *Fund-raising accomplishments and other outreach activities:*
We received a little over $3,400 from alumni and friends this academic year in money and equipment. We need to do better. During the next academic year, we will make an effort to contact successful alumni. Our goal is to increase alumni giving to $25,000 per year within five years.

4. *Cooperative Education:*

Placement Summary Summer 2006:

Student	Employer	Job Type
Alsmadi, Izzat	Volt Technical Resources Fargo, ND	Full-time Coop
Asgar, Talukdar	MAXIMUS INC Rancho Cordova, CA	Full-time Coop
Banga, Surjeet	Thomson West St. Paul, MN	Full-time Coop
Chauhan, Anuj	Bobcat Company Gwinner, ND	Full-time Coop
Osmani, Morshed	Volt Technical Resources Fargo, ND	Full-time Coop
Srichinta, Pallavi	Sun Microsystems	Full-time Coop

	Santa Clara, CA	
Srivastava, Arun	ProKama (formerly Esymbiosis) Omaha, NB	Part-time Coop

D. SPECIAL INITIATIVES

1. *Diversity:*
The Department has started to offer twinning programs (start in India and spend the last year at NDSU) at the undergraduate and graduate levels to students in India. We hope to expand these programs to Egypt (with which we have a faculty-student exchange) and China within a year.

2. *Cooperation programming/Interinstitutional activities:*
We are active participants in several interdisciplinary efforts. Our faculty are significant members of the interdisciplinary graduate program in Genomics and Bioinformatics. One of our largest research groups, Use of Technology in Education involves faculty and students from departments across this campus. Our cooperation with Electrical and Computer Engineering in offering three undergraduate courses continues well into its third decade.

3. *International activities:*
Dr. Ken Magel spent two weeks in India during March, 2006 helping to establish several programs with Indian institutes. These programs start fall, 2006 including:
1. twinning programs at the undergraduate and graduate levels involving only the last year of a degree being spent at NDSU;
2. distance offering of our Graduate Certificate in Software Engineering to students at several Indian institutes;
3. offering of one of our undergraduate/graduate courses through distance by Indian faculty at the Ansal Institute of Technology;
4. potential faculty exchanges.

Our existing program of faculty exchange with Cairo University in Egypt continues.

4. *Interdisciplinary activities:*
The NDSU Computer Science department is the largest and most prominent department of its kind over a wide geographical area that includes all of North and South Dakota and much of Montana and Minnesota. Given the increasingly prominent role of computing and information technology in our society, it is also of high importance for the department to grow and thrive, producing well-educated computing professionals. We believe that our graduates do leave the university well prepared and competitive anywhere in the country.

The department fully participates and supports the quest of the university to become a Carnegie research extensive university. During 2005-06, the Department awarded five Ph.D. and eighteen M.S. degrees (September 1, 2005 through June 30, 2006 only).

5. *Economic Development Efforts:*

The Department sent Paul Juell on a trip to visit several California companies with personnel from the State Department of Economic Development in November, 2005. We cooperated with more than one dozen local firms on student projects important to those companies.

6. *Assessment:*

We revamped our assessment procedures during fall, 2005. Assessment of learning objectives for service, undergraduate, and graduate programs was formalized and greatly expanded. Faculty with primary roles in assessment were given release time to perform these roles.

Much assessment data was collected and analyzed. We will consider proposals for curricular changes resulting from these analyzes in the fall.

E. Planning

The fundamental strength of the department lies in the rigor of its academic programs. The BS degree, in particular, is by far the most rigorous in the region. Although difficult, the programs are well supported by faculty and open opportunity for our graduates. Major future plans have been basically described elsewhere in the report, but are succinctly summarized as follows:

- In research and within graduate programs, strengthen and expand in network security, information assurance, bioinformatics, and software engineering,. Continue to maintain excellence in core areas of computer science.
- At the undergraduate level, develop a program that is a more applied alternative to the BS degree in computer science for students intending to enter the job market with a bachelor's degree. The program would expand existing elements of software engineering and information systems.
- Improve the quality of M.S. and Ph.D. students while reducing the total number of graduate students
- Diversity funding sources
- Continue to foster international programs, such as the ones underway with Egypt and India.
- Expand departmental research funding and reputation
- Take steps to become a designated Center of Excellence in Information Assurance and security.

F. Enrollment and FTE Data

Student Credit Hours and FTEs Generated

	2001-2002		2002-2003		2003-2004		2004-2005		2005-2006	
	Credit hours	FTE	Credit hours	FTE	Credit hours	FTE	Credit hours	FTE	Credit hours	FTE
100-200	9097	11.37	8159	10.20	7999	10.0	7098	8.87	7769	9.71
300-400	3504	6.44	3279	6.03	2467	4.53	2307	4.24	1806	3.32
600-700	1506	5.23	1502	5.22	1795	6.23	2095	7.27	1791	6.22
TOTAL	14307	23.04	12940	21.44	12261	20.76	11500	20.39	11366	19.25

SUMMER II SCHEDULE
2005

COURSE HOURS	CLASS TITLE	INSTRUCTOR	STUDENT ENROLL	CREDIT
122	Programming in Basic	P. Kotala	13	3
159	Computer Science Prob. Solv	J. Pikalek	5	4
235	Theoretical Computer Sc. 1	J. Martin	7	3
372	Comparative Languages	V. Shanmugasadaram	12	3
459/659	Foundations of Computer Networks	X. Du	16	3
489/689	Social Implications of Computers	A. Kamel	9	3
760	Dynamic Programming	V. Ubhaya	12	3
797	Master Paper	Staff	7	R-3
798	Master Thesis	Staff	9	R-10
799	Doctoral Dissertation	Staff	19	R-15

FALL SEMESTER SCHEDULE
2005

COURSE HOURS	CLASS TITLE	INSTRUCTOR	STUDENT ENROLL	CREDIT
114	Microcomputer Packages	H. Aybar	52	3
114	Microcomputer Packages	S. Elhassani	47	3
114	Microcomputer Packages	M. Pushpala	50	3
114	Microcomputer Packages	I. Alsmadi	50	3
114	Microcomputer Packages	R. Eda	56	3
114	Microcomputer Packages	R. Eda	54	3
114	Microcomputer Packages	D. Johnson (Cont Edu)	70	3
116	Business Use of Computers	G. Hoff	51	4
116	Business Use of Computers	D. Nagahawatte	54	4
116	Busine ss Use of Computers	B. Johnson	53	4
116	Business Use of Computers	S. Herath	53	4
116	Business Use of Computers	L. Mrudula	53	4
116	Business Use of Computers	L. Mrudula	53	4
116	Business Use of Computres	P. Kotala (Cont. Edu)	56	4
122	Program in BASIC	S. Rahman	40	3
155	Immigration (JAVA)	M. Naznin	2	3
159	CS Problem Solving	K. Nygard	31	2
159	CS Problem Solving	K. Nygard (Cont Edu)	12	3
160	Computer Science I	J. Martin	39	4
160	Computer Science I	J. Martin	38	4
160	Computer Science I	D. Xu	36	4
161	Computer Science II	H. Li	14	4

Course	Title	Instructor	Enrollment	Credits
161	Computer Science II	S. Kim	15	4
172	Intermediate Basic/Visual	R. Rummelt	7	3
214	Self-Paced C	S. Abufardeh	18	1
222	Discrete Mathematics	B. Erickson	18	3
222	Discrete Mathematics	V. Ubhaya	38	3
227	Computing Fund. I	P. Kotala	30	3
227	Computing Fund. I	P. Kotala	6	3
235	Theoretical CS I	J. Martin	47	3
277	Introduction to UNIX	J. Latimer	10	3
277	Introduction to UNIX	J. Latimer	10	3
315	System Anal & Design	D. Dorr	14	3
315	System Anal & Design	P. Kotala	37	3
366	Files/Database System	A. Denton	49	3
372	Comparative Languages	V. Shanmugasundaram	40	3
373	Assembly Programming	T. Asgar	30	3
413	Principles/Software Engineering	A. Salah	9	3
426	Intro/Artifical Intelligence	B. Slator	22	3
453	Linear Program Network	V. Ubhaya	6	3
469	Network Security	J. Du	15	3
474	Operating Systems Conc.	P. Juell	44	3
499	ST/Foundations of Digital Enter.	D. Johnson	7	3
613	Principles/Software Engineering	A. Salah	0	3
626	Intro/Artifical Intelligence	B. Slator	0	3
653	Linear Program Network	V. Ubhaya	0	3
469	Network Security	J. Du	6	3
708	Foundations of Programming	B. Erickson	19	3
713	Software Engineering I	K. Magel	40	3
715	Software Req/Definition/Analys	A. Salah	23	3
730	Office Information Systems	*Cancelled*	0	3
765	Intro to Database Systems	W. Perrizo	41	3
773	Foundations of Digital Enterprise	K. Nygard	31	3
778	Computer Networks	J. Du	10	3
783	Topics/Sftwre Sys/Adv Bio Sy	W. Perrizo	2	3
783	Topics/Sftwre Image Process	H. Li	4	3
790	Sem/Artifical Intelligence	P. Juell	3	1
790	Sem/Computer Forensics	D. Xu	8	1
790	Sem/Data Mining in Science	A. Denton	4	1
790	Sem/Database Systems	W. Perrizo	10	1
790	Sem/Educational Media	B. Slator	2	1
790	Sem/Formal Met/Software Engr	A. Salah	7	1
790	Sem/XML.	K. Magel	11	1
790	SEM/Software Engineering Conference	A. Salah	0	1
793	IS/Software Projects	K. Magel	6	R-3
797/797R	Masters Paper	Staff	32	R-10
798/798R	Master Thesis	Staff	15	R-10
799/799R	Doctoral Dissertation	Staff	29	R-15

SPRING SEMESTER SCHEDULE
2006

COURSE HOURS	CLASS TITLE	INSTRUCTOR	STUDENT ENROLL	CREDIT
114	Microcomputer Packages	S. Elhassani	57	3
114	Microcomputer Packages	H. Aybar	56	3
114	Microcomputer Packages	M. Pushpala	54	3
114	Microcomputer Packages	I. Alsmadi	56	3
114	Microcomputer Packages	R. Eda	57	3
114	Microcomputer Packages	R. Eda	57	3
114	Microcomputer Packages	D. Johnson (Cont Edu)	74	3
116	Business Use of Computers	G. Hoff	54	4
116	Business Use of Computers	S. Herath	57	4
116	Business Use of Computers	N. Addy	57	4
116	Business Use of Computers	R. Natarajan	55	4
116	Business Use of Computers	L. Kallam	53	4
116	Business Use of Computers	L. Kallam	56	4
116	Business Use of Computers	P. Kotala (Cont Edu)	72	4
122	Beginning BASIC/Visual BASIC	O. Myronovych	42	3
125	Beginning COBOL	S. Kaliki	35	3
159	Computer Sc. Problem Solving	S. Rahman	19	3
159	Computer Sc. Problem Solving	S. Rahman (Cont Edu)	14	3
160	Computer Science I	A. Denton	37	4
160	Computer Science I	R. Rummelt	35	4
161	Computer Science II	R. Rummelt	29	4
161	Computer Science II	H. Li	28	4
212	Self-Paced C++	S. Abufardeh	13	1
228	Computing Fundamentals II	P. Kotala	25	3
236	Theoretical CS II	J. Martin	37	3
299	St/Sys/Server Admin	J. Latimer	7	3
316	System Testing & Maintenance	D. Dorr	7	3
316	System Testing & Maintenance	P. Kotala	28	3
345	Topics on Personal Computers	B. Slator	22	3
345	Topics in Computer Forensics	D. Xu	13	3
372	Comparative Prog Languages	B. Erickson	16	3
373	Assembly Programming	M. Jones	23	3
374	Computer Organization	S. Kim	22	3
374	Computer Organization	F. Dai	10	3
418	Simulation Models	K. Nygard	8	3
459	Found/Computer Networks	J. Du	33	3
467	Algorithm Analysis	J. Martin	32	3
468	Database Systems Design	A. Salah	21	3
475	Operating Systems Design	P. Juell	5	3
489	Social Implications of Comp	V. Shanmugasundarm	50	3

COURSE HOURS	CLASS TITLE	INSTRUCTOR	STUDENT ENROLL	CREDIT
496	FE/Capstone Software Projects	D. Knudson	5	2
496	FE/Capstone Software Projects	D. Knudson	7	2
618	Simulation Models	K. Nygard	5	3
659	Found/Computer Networks	J. Du	15	3
667	Algorithm Analysis	J. Martin	4	3
668	Database Systems Design	A. Salah	10	3
716	Software Design	K. Magel	18	3
718	Software Testing/Debugging	D. Xu	11	3
724	Survey/Artificial Intelligence	P. Juell	31	3
732	Intro to Bioinformatics	A. Denton	21	3
746	Districuted Systems Implement	S. Kim	21	3
766	Database Systems Internals	W. Perrizo	7	3
783	Topics/Computer Forensics	D. Xu	19	3
783	Topics/Virtual Environments	B. Slator	4	3
783	Topics/Software Design	K. Magel	7	3
790	Sem/Database Systems	W. Perrizo	11	1
790	Sem/Educational Media	B. Slator	0	1
790	Sem/Formal Methods in Software Engr.	A. Salah	12	1
790	Sem/XML	K. Magel	9	1
790	Sem/Artificial Intelligence	P. Juell	4	1
790	Sem/Building Secure Softwre	D. Xu	9	1
790	Sem/Image & Video Processing	H. Li	7	
790	Sem/Comb. Optim in Bioinformatics	K. Nygard	3	1
793	IS/Software Projects	K. Magel	7	3
793	IS/Software Project	H. Li	1	3
796	Topics/Comp Meth in Bioinform	V. Uhaya	5	3
797/797R	Master Paper	Staff	40	R-3
798/798R	Master Thesis	Staff	15	R-10
799/799R	Doctoral Dissertation	Staff	18	R-15

SUMMER I SCHEDULE
2006

COURSE HOURS	CLASS TITLE	INSTRUCTOR	STUDENT ENROLL	CREDIT
114	Microcomputer Packages	P. Kotala	35	3
114	Microcomputer Packages	D. Johnson **(Cont Edu)**	32	4
116	Business Use of Computers	P. Kotala	15	4
116	Business Use of Computers	P. Kotala **(Cont Edu)**	34	4
160	Computer Science I	S. Kim	16	4
227	Computing Fund. I	*Cancelled*	0	3
459/659	Foundations of Computer Networks	X. Du	3/17	3
708	Foundations of Programming	B. Erickson	6	3
797/797R	Master Paper	Staff	12/3	R-3

| 798/798R Master Thesis | Staff | 2/0 | R-10 |
| 799/799R Doctoral Dissertation | Staff | 6/3 | R-15 |

STUDENT RATING OF INSTRUCTION RESULTS 2005-2006

FALL, 2005 and SPRING 2006

Questions	VG	G	IB	P	VP	OMIT	DEPARTMENT LEVEL		
							Mean	S.D.	#R
100 TO 200 LEVEL									
1. Your satisfaction with the instruction in this course.	32.5	42.7	18.1	4.8	1.6	.02	3.994	0.952	1573
2. The instructor as a teacher.	34.4	43.8	15.5	5.0	1.2	0.0	4.067	0.941	1575
3. The ability of the instructor to communicate effectively	27.5	40.5	20.8	8.7	2.1	0.3	3.909	0.986	1572
4. The quality of this course	23.0	45.3	22.9	6.4	2.1	0.2	3.819	0.975	1572
5. The fairness of procedures for grading this course.	44.2	40.5	12.6	1.9	0.6	0.1	4.220	0.826	1572
6. Your understanding of the course content.	26.7	47.2	19.7	4.6	1.3	0.4	3.967	0.861	1568
300 TO 400 LEVEL									
1. Your satisfaction with the instruction in this course.	24.9	42.4	19.7	7.8	4.9	0.3	3.994	0.952	1573
2. The instructor as a teacher.	30.3	40.5	17.6	6.5	4.9	0.3	4.067	0.941	1575
3. The ability of the instructor to communicate effectively	24.3	45.4	20.0	6.5	3.5	0.3	3.909	0.986	1572
4. The quality of this course	20.3	39.5	24.9	8.6	6.2	0.5	3.819	0.975	1572
5. The fairness of procedures for grading this course.	32.4	44.9	17.0	4.1	1.4	0.3	4.220	0.826	1572
6. Your understanding of the course content.	20.8	52.7	19.2	4.3	2.2	0.8	3.967	0.861	1568
600 TO 700 LEVEL									
1. Your satisfaction with the instruction in this course.	49.8	41.6	6.2	0.5	1.0	1.0	3.994	0.952	1573
2. The instructor as a teacher.	59.8	34.0	3.3	1.0	1.0	1.0	4.067	0.941	1575
3. The ability of the instructor to communicate effectively	55.0	37.8	4.8	1.0	0.5	1.0	3.909	0.986	1572
4. The quality of this course	42.1	45.0	8.6	2.9	0.5	1.0	3.819	0.975	1572
5. The fairness of procedures for grading this course.	51.2	35.4	8.1	2.4	1.0	1.9	4.220	0.826	1572
6. Your understanding of the course content.	39.7	48.8	9.1	0.5	0.5	1.4	3.967	0.861	1568

Department Employment of graduates:

Fall 2005
Graduate Teaching Assistants - 20
Graduate Assistants (Graders) - 19

Spring 2006
Graduate Teaching Assistants - 17
Graduate Assistants (Graders) – 21

GRADUATE STUDENTS 2005-2006

Masters Students:

Alla, Kishore
Aybar, Hector
Baddam, Shiresha
Balakrishnan, Prashanth
Bandaru, Narendra
Basu, Samdip
Beeram, Jagadish
Borse, Priti
Bukkapatnam, Sharath
Chakravarthi, Satheesh
Challagolla, Srinivas
Cherukuri, Chandrasekhar
Choi, Meegeum
Cosmano, Robert
Dhalli, Vamsikrishna
Dischinger, Benjamin
Dixon, John
Dutta, Tridib
Erhardt, Eric
Erickson, Kellie
Fazal, Nazeer
Feist, Matthew
Foster, James
Ganapa, Sireesha
Ganesan, Arjun
Gangannagari, Rajendar
Goel, Vivek,
Gorla, Vijaya
Griggs, Ryan
Guduru, Vasumathi
Gurram, Kiran
Gurram, Samyuktha
Halvorson, Guy
Hoff, Garrett
Hokanson, Guy Eric
Huq, Shamima
Iqbal, Tony

Jian, Harsh
Jinka, Vasuprakash
Jonnalagadda, Vindhya
Joseph, Priya
Kallam, Lakshmi Mrudula
Kar, Angshu
Katib, Faraz
Kattakindi, Kiran
Kawamura, Satoshi
Kolluru, Sunil
Kurapati, Venkata
Lee, Michael
Li, Mei
Lu, Tingda
Malakhov, Vasiliy
Mannepalli, Aditya
Mehto, Vikram
Miteva, Martina
Moses, Joseph
Namasivayam, Karthik
Nanam-Kumar, Sunil
Narayanan Kutty, Shyam Kumar
Natarajan, Ramesh
Oruganti, Ravi
Padmanabhan, Ganesh
Patil, Archana
Peterson, Jason
Pikalek, Jonathan
Pinagapani, Sathish
Pushpala, Manoj
Ren, Suqin
Sharma, Mayukh
Singh, Sandeep
Sivanandam, Dinesh
Somavarapu, Murali
Srichinta, Uday
Sun, Wei

Syamala, Ranapratap
Tadasina, Sumanth
Thamizh Pandian, Elampiraii
Vanga, Sundeep
Vasepalli, Skrikanth

Velpula, Sampath
Vijayan, Dhinuruu
Wu, Qipeng
Zhang, Gendong

SOFTWARE ENGINEERING MASTERS

Aceituna, Daniel
Banga, Surjeet
Boyko, Gregory
Carlson, Ryan
Chauhan, Anuj
Eda, Ravi
Elhassani, Salaheddine
Gunderson, Karl
Herath, Shanaka
Hovet, Craig
Johnson, Bryce
Kazeck, Jerilyn

Mamun, Abdullah
Menan, Megha
Maresca, Louis
McGinnity, Steve
Miteva, Martina
Murugaiyan, Elangovan
Nweemuu, Samuel
Oberoi, Inderjeet
Preisler, Benjamin
Srichinta, Pallavi
Srivastava, Arun

PHD STUDENTS:

Abidin, Taufik
Abraham, Rina
Ahmed, Md Benzir
Arora, Baresh
Besemann, Christopher
Borchert. Otto
Borse, Priti
Canton, Maria
Dong, Aijuan
Dorr, Deitmar
Helaly, Tanjina
Hamer, George
Jockheck, William

Kambhampaty, Krishnan
Kotala, Pratap
Lin, Fengjing
Nanda, Rekha
Nath, Anupam
Naznin, Mahmuda
Pathirana, Dilsara
Perera, Amal
Sanchez, Julio
Serazi, MD Masum
Tang, Jingpeng
Yang, Ying
Zhang, Ming

SOFTWARE ENGINEERING PHD

Abufardeh, Sameer
Alsmadi, Izzat
Asgar, Talukdar
Gomaa, Mohammed
Kaliki, Srikanth
Lua, Chin
Lundell, Martin
Myronovych, Oksana

Osmani, Md Golam
Pauli, Joshua
Pauli, Jeremy
Rahman, MD Syed
Rummelt, Richard
Satter, Medhi
Smadi, Mohammad
Xu, Weifeng

Computer Science Department Enrollment Data

AY	Enrollment (Fall 2005 to Spring 2006)					Total UG	Total Grad	Degree		
	1st FR	2nd SO	3rd JR	4th SR				BS	MS/CS Software	PhD/ CS Software
2005-2006	50	30	46	64		190	128	37	11/1	5/0
2004-2005	49	37	47	84		217	178	45	22/5	4/0
2003-2004	82	64	48	86		280	178	108	24	0
2002-2003	96	69	51	91		397	90	110	20	3
2001-2002	127	92	63	106		388	104	113	19	3
2000-2001	142	95	73	96		406	116	70	30	2

Graduate Degrees Awarded, 2005-06

Summer Semester, 2005	Degree
Stephen Krebsbach	Doctor of Philosophy CS
Deepak Seth	MS, CS
Dheeraj Seth	MS, CS
Imad Rahal	Doctor of Philosophy CS
Dongmei Ren	Doctor of Philosophy CS
Bradley Vender	MS, CS
Baoying Wang	Doctor of Philosophy CS
Fall Semester, 2005	**Degree**
Vasiliy Malakhov	MS, CS
MD Masum Serazi	Doctor of

	Philosophy CS
Walid Saeed	MS, SE
Spring Semester, 2006	**Degree**
Hector Aybar	MS, CS
Jagadish Beeram	MS, CS
Yue Cui	MS, CS
Harish Mukhami	MS, CS
Jonathan Pikalek	MS, CS
Wei Sun	MS, CS
Rana Pratap Syamala	MS, CS
Aceituna, Daniel	SE Certificate
Ewinglee, Gregory	SE Certificate
Kazeck, Jerilyn	SE Certificate
Mukhami, Harish	SE Certificate
Preisler, Benjamin	SE Certificate