

GRADUATE PROGRAM PROFILE

COMPUTING AND
INFORMATION
SCIENCES

Kansas State University

PROGRAM DESCRIPTION

The Department of Computing and Information Sciences is active in research in areas of database systems, distributed, and parallel systems and algorithms, formal specifications, knowledge-based systems, logic programming, programming languages, and software engineering. Both the M.S. and Ph.D. degrees in Computer Science are offered. The Department encourages a balance of computing theory and system implementation. The department has 17 full-time faculty, approximately 60 M.S. students, 20 Ph.D. students, and an additional 60 students enrolled in a 5-year summer M.S. program.

ADMISSION REQUIREMENTS

GRE scores are required for all applicants. TOEFL score is required for applicants with degrees from most schools outside of the U.S. Applicants for the M.S. program are expected to have a B.S. degree in Computer Science or equivalent academic or work experience; normally this should include some senior level courses such as data structures and analysis of algorithms. Applicants for the Ph.D. program usually have an M.S. degree in Computer Science, but admission for Ph.D. studies can be granted to exceptionally well qualified students with an undergraduate degree.

DEGREE REQUIREMENTS

The Master's degree includes at least one theory course, one implementation course, three breadth courses (artificial intelligence, database systems, operating systems, programming languages, software engineering), the graduate seminar course, an advanced level course, and either a thesis, report, or additional course. The Ph.D. degree requires approximately one year's course work, completion of written comprehensive exams, and a dissertation.

FINANCIAL ASSISTANCE

Most Ph.D. students and about half of all Master's students receive graduate assistantships from the department. Graduate Teaching Assistantships carry stipends of about \$1,000 per month for nine months work at one half time assignment. Teaching Assistants must pass the Test of Spoken English with a score of 240. Assistantships may provide a waiver of non-resident fees and tuition. A few Graduate Research Assistantships are usually available for exceptional students and are in effect for the full year. Applicants for financial assistance are due by February 15th of each year for support beginning in fall. A few assistantships become available beginning in January.

COMPUTING FACILITIES

The Department of Computing and Information Sciences maintains a large network of minicomputers, workstations, and graphics display terminals for graduate study and faculty research. Servers include a Solbourne symmetrical multi-processor and systems manufactured by Sun, Harris, and AT&T. Access to these servers is available in offices and laboratories equipped with over 120 work stations, including Sun workstations, Window System terminals, PCs, Macintoshes, and data terminals. Direct access to NSFNet and the Internet permit communication with computer science researchers worldwide. Programming languages include Ada, C, C++, Concurrent C, FORTRAN-77, LDL, LISP, Miranda, ML, OBJ3, Parlog, Pascal, Prolog, and Scheme. Many other software packages are available, including CASE tools, databases, simulation, expert systems, and document publishing. Additional campus-wide computer facilities are provided by the central Computing and Network Services organization. These facilities include an IBM 3084 mainframe, a Solbourne symmetrical multiprocessor, Sun workstations, and several labs throughout campus with PCs, Apple Macintoshes, and data terminals.

CONTACT

For additional information, please contact:

*Director of Graduate Studies
Department of Computing and Information Sciences
Kansas State University
234 Nichols Hall
Manhattan KS 66506*

GRADUATE FACULTY AND RESEARCH INTERESTS

MYRON CALHOUN, Associate Professor. Ph.D., Arizona State University. Computer architecture, computer-aided design, digital systems design, microcomputer applications.

JAN CHOMICKI, Assistant Professor. Ph.D., Rutgers. Databases, programming languages and environments, logic programming.

DAVID A. GUSTAFSON, Associate Professor. Ph.D., University of Wisconsin, Madison. Software engineering methodologies, software physics, validation techniques, AI techniques in software development, software measures, expert systems, software testing.

WILLIAM J. HANKLEY, Professor. Ph.D., Ohio State University. Software engineering (environments, specifications, verification), languages (Ada, PROLOG, object-oriented programming), graphic interaction.

GRADUATE FACULTY AND RESEARCH INTERESTS (*continued*)

RODNEY R. HOWELL, Assistant Professor. Ph.D., University of Texas, Austin. Design and analysis of algorithms, computational complexity, parallel and distributed computing, Petri nets, real-time scheduling.

MASAAKI MIZUNO, Assistant Professor. Ph.D., Iowa State University. Operating systems, distributed systems.

K. RAVINDRAN, Assistant Professor. Ph.D., British Columbia. Distributed systems, distributed programming languages, high-speed computer networks, real-time systems, computer architectures.

DAVID A. SCHMIDT, Associate Professor. Ph.D., Kansas State University. Denotational semantics, applicative programming, natural deduction theorem proving.

GURDIP SINGH, Assistant Professor. Ph.D., SUNY at Stony Brook. Operating systems, distributed systems.

ALLEN STOUGHTON, Associate Professor. Ph.D., Edinburgh University. Programming language semantics.

ELIZABETH A. UNGER, Professor. Ph.D., University of Kansas. Databases, programming languages, computer science instruction, concurrency, office automation.

MAARTEN VANSWAAY, Associate Professor. Ph.D., Princeton. Computer architecture, microprocessors, instrumentation.

VIRGIL WALLENTINE, Professor. Ph.D., Iowa State University. Operating systems, computer networks, programming languages, concurrent programming languages, knowledge engineering.

MARIA ZAMFIR-BLEYBERG, Assistant Professor. Ph.D., UCLA. Parallel distributed computing theory, neural networks, mathematical foundations of databases, artificial intelligence applications.