February 1987
KANSAS STATE UNIVERSITY
INFORMATION SCIENCES
DEPARTMENT OF COMPUTER AND
IN THE
DOCTOR OF PHILOSOPHY DEGREE
FOR THE
GUIDELINES
I. INTRODUCTION

II. GENERAL REQUIREMENTS

The PhD program in Computer Science is offered jointly by Kansas State University in Manhattan and the University of Kansas in Lawrence. According to the University's rules, the PhD program is considered an integral part of your PhD program. If becomes evident that

definitive written evidence is needed to complete the degree and submit a thesis proposal to become a PhD candidate. A candidate must submit and

Formal writing is considered an integral part of the degree.

The PhD normally requires at least three years of full-time graduate study beyond the

III. (To be your research advisor. The main advisor is approved by the Department of Computer Science at KSU to oversee the application of student's progress is written. The evaluation is transmitted to the student and a

The Graduate Studies Committee promises to keep you informed of the committee's view

Graduate Student Handbook. Published by the Graduate Student Council and in the "Graduate Student Handbook" which is available in the

These guidelines are published by the Department of Computer Science. You are expected to adhere to these

Endnotes:

1. Exceptions are warranted. Your advisor must be consulted to determine eligibility.
For an extension must be made before the end of the first semester.
the program from other universities if they have not had similar core courses. The request
does not all possibilities. Extensions of the time limit may be made for students entering
program. (You are encouraged to take the exam even earlier, if the end of your MS 1st-
You are required to take the comprehensive exam by the end of your first semester in the PhD-

Write must approve the substitution.

The course prepares you for taking the comprehensive examination, which covers the

- COMPSC 761 Data Base Systems (includes formal relations and graph models)
- COMPSC 740 Software Engineering (includes object models and tools)

- COMPSC 720 Operating Systems (includes concurrent programming and

- COMPSC 720 Compiler Design (includes grammars and automata)

III. SPECIFIC REQUIREMENTS FOR THE PHD DEGREE

In the usual case, you must earn a Master’s degree in
Computer Science at Kansas State University. To
requirements for admission to a PhD program in Computer Science, you must have
Graduate School of Computer Science. If you have

- COMPSC 710 Programming Science (includes symbolic logic, program specification, and

includes coursework in the Graduate School of Computer Science, a student must complete coursework in the

When the minimum coursework has been completed, the student must pass the comprehensive examiniation. You are required to take the comprehensive exam by the end of your first semester in the PhD-year. You need to improve your writing skills, you will be required to complete English

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Issue the ballot form. The permission to schedule the exams will not be granted
the exam will not be scheduled in advance. You must apply to take the Graduate School
at the end of your second year of PhD studies. You must submit a written request to take
the exam. You and your advisor must also plan your Preliminary exams. The exams must be taken

Your advisor should be chosen for his/her appropriateness to your research topic. Each
member must be a Graduate Faculty member from the Department of Computer Science. One
member must be from the Graduate Faculty. Each member must be from the Graduate Faculty.
Your advisor selects a Supervisory Committee. Your Supervisory Committee must include at
least one faculty member from the Graduate Faculty. At the same time that you and your research advisor formulate your Program of Study,

- The Graduate course credits must include the following:
  - At least 60 hours of graduate course credits
  - At least 30 hours of PhD research
  - At least three 900-Level courses

The Graduate Studies Committee reserves the right to determine equivalency (unless equivalency courses were taken at another institution)

- The KSI-W core courses (unless equivalency courses were taken at another institution)

- All graduate course credits (at least 90 hours)
- The three PhD requirements (see the paragraph below)
- General area of research
- Members of the Supervisory committee (see the paragraph below)
- Major Professor (that is, the research advisor)

Study the following information. The Program of Study. (Obtain the Program of Study form from the Graduate School.) The Program of

Once you have obtained a research advisor, work with your advisor to plan a Program of

Science Department and will be placed on probation.

If you have not obtained a research advisor, you will receive a written warning from the
Computer Science Department. If you have not obtained a research advisor, you will receive a written warning from the
Computer Science Department. No faculty member is obligated to accept you as an advisor; the section

When you pass the Comprehensive Exam, you become a PhD student. Obtain a Declaration of Intent.
Committee will be present. The committee will vote to pass or fail. If you pass the exam, you must schedule a research presentation with the Graduate School. You cannot proceed with the dissertation until the Graduate School issues the final form. Your dissertation committee must receive a copy of your dissertation. Each member of the supervisory committee must complete the form. Your dissertation committee must receive a copy of the dissertation. Each member of the supervisory committee must complete the form.

You must work closely with your advisor on your research. Each year, you must present your research in writing. The final oral examination is conducted by the supervisory committee, who will serve as the examiners. At this point in the Graduate School curriculum, an additional exam is administered to the Graduate School. The exam is a comprehensive test of your knowledge and skills. You must pass all three exams to continue with your research. If you fail any exam, you must retake that exam. If you fail all exams, you will not be awarded a degree.

Your hours in length (one or two days) work. The exam is offered in two-week periods (typically two to three weeks). You must meet with your advisor at least once a week to discuss your progress. You must submit a written exam, and you must pass all three exams to continue with your research. If you fail any exam, you must retake that exam. If you fail all exams, you will not be awarded a degree.

The term examination is offered in three written examinations and may be supported by readings and topics. Your research area, preparation for each exam must consist of at least 900-1200 words. The examinations are taken in three separate areas. You will be informed of the specific requirements for each exam, both in terms of reading and topics.
Any issues not covered in this document will be resolved by the Graduate Studies Committee.

You pass the oral examination.

A maximum of seven years is allowed from when you begin PhD course work until when you submit the required dissertation copies, fees, and address information to the Graduate School. See the Graduate School for details.
FACULTY RESUMES
15. Automatic Generation of Data Base Systems 1980
12. Communication Techniques 1976
11. Investigation of Network 1978
9. Heterogeneous Mini-Computer Network with Distributed Data Base Resources
8. System 1975
6. Reliable Software Workshop 1974-1975
3. Application of the Exegetible Programming System (EPS) to General Software
2. NSF Regional Conference 1970
1. NSF Regional Conference 1970

Grants:

Automatic Generation of Data Base Systems and Application Software
Special Purpose—Functional Architecture
Distributed Data Base Management Systems
Networks
Distributed Processing
Computer Architecture
Data Base Management Systems
Languages and Language Implementation

Teaching and Interests:

Arizona State University
University of Utah

Computer Science
Mathematics
Mathematics

1969
1965
1963

Education:

Office Tel. (913) 332-6350
Manhattan, Kansas 66506
Kansas State University
Department of Computer Science
Professor

Paul's Poster
Books


Research Interests:

There are two major problems in which I am presently interested. The first problem is dealing with understanding and the utilization of information and the understanding of the distribution of information. The objective is to develop a framework for the concept of systems in a family of possible environments. For example, a data base consists of data of three kinds: modifiable, non-modifiable, and derivable. This is a framework for moving the data base and the corresponding applications over this range in an automatic fashion.

The second problem, as indicated, deals with understanding information. For example, a typewriter which types from verbal input is a case in point. This area borders upon AI, mathematics, and information processing. We are well along into this area using a mathematical framework for describing such problems. This class of sequences can be used to describe regular phenomena. The typewriter is such a phenomenon.
networks, communication and associated languages for such systems.

data bases, especially those with irregular internal structures, such as text data bases.

Hence, I am interested in problems in several distributed processing and

Both of these areas are couched in larger areas of interest, especially the data base
Programs for Learning, (Co-author, 1983-1989) 
Aronline, Corp. (1984: Scribecross Systems Design) 
(1981: Tenergy, Inc., concurrent systems design) 
Computer Science Corp. 
(1979: Recognition of TPS, Austin) 
US Army Topographic Command (1978: Recognition of TPS) 
Computer Information Sciences Corp. (1978-1982) 
NCR Corporation (1977: Network Simulation) 
General Electric Corporation (1978: Programming Languages) 
Computer Sciences Corp. (1977: Intelligent Recognition) 
Kemenkes Coppy Corp. (1970: Process control simulation) 
(1969: System design) 
International Research Medical Program, U. of Calif. 
(Physiology Dept., U. of Calif. (1968: Pattern recognition) 
Consulting 
Assistant Professor, Computer Science 
Kansas State University (1967-1972) 
Associate Professor (1972-1980) 
National Bureau of Standards 
Programmaron Sciences Division 
many years of computer science Teaching 
PhD (Computer Science), Ohio State U. 
EE (Information Sciences), Northwestern U. 
BS (Electrical Engineering), Northwestern U. 
Education 
Illinois (19), Connecticut (16), Kansas (12) 


Resume 
William J. Hanks 

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Projects

1967-68
Software

Color graphics packages for KSU teaching labs
Graphix Kernel System subset, Pascal, 1972-74, Pascal 1978-80
Packet switching software for KSU network
Simulation package and network simulation tool

Intermediate representation of programs (NBS, 1981)

Intermediate Representation of Programs

Reliable Software (US Army, 1975-76)
Computer Network Simulation (US Army, 1977-78)

Computer Network Software (US Army, 1975-76)

Courses

KSU students
32 MS students, 2 PhD students

Societies
Association for Computing Machinery (SIGPLAN, SIGSOFT)
IEEE Computer Society

Reference
Dr. Paul Fisher, President, Computer & Information Sciences, Manhattan, KS (913-537-6013)
Dr. Virgil Wallentine, Head, Dept. of Computer Science, Nichols Hall, Kansas State University, Manhattan, KS 66506

Publications


AEM 70-11, W. Hankey, "A Simulator, NEISIM - Network Simulation Sys-

CS 79-02, W. Hankey, W. Waltenirte, A. Skidmore, NEISIM - Network Simulation Sys-

CS 79-05, W. Hankey, "A Mobile, SIMMON - A Concurrent Pas-

PMDS, Case Study, 23 pp., December 1976.

CS 77-12, P. Finger, W. Hankey, P. Marquardt, Parting Software to Multiple Platforms.

CS 77-01, W. Waltenirte, W. Hankey, G. Anderson, M. Callahan, R. Gardner, Progress in Par-


CS 76-10, W. Hankey, J. Rawson, Sequential Pascal, Supplement for PASCAL Pro-


CS 76-03, A. Corner, W. Hankey, EPs II - An Extension of MLI/Urser Primer.


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