Department of Computer and Information Sciences

Indiana University South Bend
1700 Mishawaka Ave.
South Bend, IN 46615

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Phone: 574.237.6521
The department began offering degrees in computer science in 1983. Currently the department has nine full-time faculty members and a number of part-time instructors. It offers a full range of courses in computer science and information technology. Today we have over 240 declared majors in computer science. We offer a Bachelor of Science degree, an Associate of Science degree, three certificate programs, a minor in computer science, a minor in cognitive science, and a minor in informatics. In addition, our department offers a Master of Science degree in Applied Mathematics and Computer Science jointly with the Department of Mathematical Sciences. We also provide key computing courses for the Master of Science degree in Management of Information Technology (MS-MIT), offered by the School of Business and Economics.
Mission

Our mission is to provide the highest quality education in the most enjoyable and friendly atmosphere possible. In pursuing this mission we work hard to attract the most highly qualified faculty to our program. Our faculty play an essential role in our ability to develop and maintain a high quality computer science program at IUSB. Accordingly, we seek to attract faculty with strong applied research potential, instructional ability and communication skills necessary for the mutual benefit of the university, business, scientific and engineering communities. Our goal is to bridge the gap between theories and concepts presented in the classroom and real life business and industry needs and practices.

We have charted a course to develop many exciting and challenging projects over the next five years. Some of these are given below:

- Develop a masters program in computer science.
- Develop a bachelors program in Informatics.
- Prepare for accreditation of our B.S. in Computer Science by the Computer Science Accreditation Board (CSAB). Accreditation will externally validate the quality that already exists in our programs.
- Continue to refine our joint masters program with the Department of Mathematics Sciences (M.S. in Applied Mathematics and Computer Science).
- Continue to refine our joint masters program with School of Business and Economics (MS-MIT).

In addition to the above, we will continue to

- improve our teaching and research environment for our students and faculty, and aggressively recruit the best and brightest faculty to our department.
- improve our laboratories.
- expand our community outreach program.
- mentor our students, and support their learning, research and creative activities.
The faculty

Hakimzadeh, Hossein, Ph.D. in Computer Science (North Dakota State University, 1993). Research interests: database management systems; operating systems; distributed systems, object-oriented software engineering.

Matthew D. Holloway, M.S. in Systems Engineering (Oakland University, 1989), BS degree in Electrical Engineering (University of Notre Dame, 1987). Visiting Lecturer in Informatics.


Russo, John, Ph.D. in Mathematics (Florida State University, 1965). Research interests: program efficiency; software engineering.

Scheessele, Mike, Ph.D. in Quantitative and Mathematical Psychology (Purdue University, 2001). Research interests: Cognitive science and artificial intelligence, especially psychologically plausible artificial vision and problem-solving systems. Additional interests include software engineering and information systems.

Schwartz, Ruth, Ph.D. in Business Administration with a double major in Computer Information Systems and Operations Research (Temple University, 1993), M.S. degree in Computer Science (University of California, Los Angeles), BA degree in Liberal Arts with a major in mathematics (Northwestern University). Teaching and research interests: Curriculum development, database systems, enterprise resource planning, and programming languages.

Surma, Dave, Ph.D. in Computer Science and Engineering (University of Notre Dame 1998). Research interests: Parallel and Distributed Computing, Multimedia applications, Computer Architectures, High-Performance Networks, and Software tools for parallel and distributed computing systems.

Vrajitoru, Dana, D.Sci. in Computer Science (University of Neuchâtel, 1997). Research interests: genetic algorithms; scientific visualization; parallel computation; information retrieval; artificial intelligence.

Wolfer, James, Ph.D. in Computer Science (Illinois Institute of Technology, 1993). Research interests: harnessing the power of naturally inspired computation to solve real-world problems, visualization in science and medicine, cognitive science and computer science education.
# Telephone Directory

## Staff:

<table>
<thead>
<tr>
<th>Name</th>
<th>Phone</th>
<th>Office</th>
<th>E-mail</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dekeyser, Jerry (Lab Supervisor)</td>
<td>237-4439</td>
<td>NS 205 B</td>
<td><a href="mailto:dekeyser@cs.iusb.edu">dekeyser@cs.iusb.edu</a></td>
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</tr>
</tbody>
</table>

## Full Time Faculty:

<table>
<thead>
<tr>
<th>Name</th>
<th>Phone</th>
<th>Office</th>
<th>E-mail</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hakimzadeh, Hossein (Associate Professor, Chair)</td>
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</tbody>
</table>

## Associate Faculty:

<table>
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<tr>
<th>Name</th>
<th>Phone</th>
<th>Office</th>
<th>E-mail</th>
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<tbody>
<tr>
<td>Champaigne, James</td>
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<tr>
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<tr>
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</tr>
<tr>
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<td><a href="mailto:cwwolf@iusb.edu">cwwolf@iusb.edu</a></td>
</tr>
</tbody>
</table>
Organization Chart (Functional)
Organization Chart (Personnel)
Current Degree Programs

**Undergraduate:**

<table>
<thead>
<tr>
<th>Program</th>
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<tbody>
<tr>
<td>B.S. in Computer Science</td>
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<tr>
<td>A.S. in Computer Science (2 year degree)</td>
</tr>
<tr>
<td>Certificate in Computer Programming</td>
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<tr>
<td>Certificate in Advanced Computer Programming</td>
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**Graduate:**

<table>
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<tr>
<th>Program</th>
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<tbody>
<tr>
<td>M.S. in Applied Mathematics and Computer Science (Joint program with the Department of Mathematical Sciences)</td>
</tr>
<tr>
<td>M.S. in Management of Information Technology (Joint program with the School of Business and Economics)</td>
</tr>
<tr>
<td>Certificate in Technology for Administration (Joint certificate with the School of Business and Economics)</td>
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## Future Programs

### Undergraduate:

<table>
<thead>
<tr>
<th>Program</th>
<th>Expected Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>B.S. in Informatics (Joint program with numerous other units at IUSB)</td>
<td>Expected for Fall 2003</td>
</tr>
<tr>
<td>Certificate in Informatics</td>
<td>Expected for Fall 2003</td>
</tr>
<tr>
<td>Certificate in Computing for Educators (Joint Certificate with School of Education)</td>
<td>Expected for Fall 2004</td>
</tr>
</tbody>
</table>

### Graduate:

<table>
<thead>
<tr>
<th>Program</th>
<th>Expected Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Certificate in Software Engineering</td>
<td>Expected for Fall 2004</td>
</tr>
<tr>
<td>Certificate in Applied Informatics</td>
<td>Expected for Fall 2003</td>
</tr>
</tbody>
</table>
Hossein Hakimzadeh

- Associate Professor of Computer Science
- Chair, Department of Computer and Information Sciences
- Departmental Internship Director
- Chair, CS Strategic Planning Committee
- Chair, CS External Affairs Committee

Degree:
- Ph.D. Computer Science (North Dakota State University, 1993)

Teaching Interests:
- Database Management Systems
- Systems Analysis and Design
- Operating Systems
- Programming Languages
- Information Organization and Retrieval

Research interests:
- Fine Grained and Object Centered Concurrency Control Algorithms for Object Oriented Database Systems
- Application of Parallel Processing to real world problems
- Client/Server and web enabled applications
- Quality Control and Industrial Applications

Study of computer science and its applications to human problems, life and culture continue to be of great interest to me. Barely 50 years old, our discipline, has made significant progress in developing advanced software systems rivaling many of human kinds scientific and engineering marvels. Today’s operating systems, databases and computer networks are only a few examples. Perhaps, the most progress however, has been realized as the result of contribution of computer science to furthering knowledge and understanding in other disciplines. Indeed we are at the dawn of a new era.

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William Knight

- Associate Professor of Computer Science
- Associate Chair, Department of Computer and Information Sciences
- Committee Chair and Graduate Liaison for the Master of Science in Management of Information Technology (MS-MIT)
- Chair, CS Undergraduate Curriculum Committee

Degree:


Teaching Interests:

- Data Structures
- Analysis of Algorithms
- Logical Foundation of Computing
- Digital Design of Computer Hardware
- Concepts of Programming Languages

Research interests:

- Analysis of algorithms
- Data structures

Contact:

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Matthew D. Holloway

- Visiting Lecturer in Informatics and Computer Science
- The department’s Masked Man

Degree:
- M.S. in Systems Engineering (Oakland University, 1989), BS degree in Electrical Engineering (University of Notre Dame, 1987)

Teaching Interests:
- Programming Languages
- Computer Structures

Research interests:
- Software Engineering

Contact:
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John P. Russo

- Associate Professor of Computer Science
- Founding member of the Department of Computer and Information Sciences
- Founding member of the Department of Mathematics
- Recipient of numerous campus-wide and university-wide teaching awards

Degree:
- Ph.D. in Mathematics (Florida State University, 1965)

Teaching Interests:
- Programming Languages
- Computer Structures
- Operating Systems

Research interests:
- Program efficiency
- Software engineering
- Computer science pedagogy
- User interfaces

Contact:
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- URL: www.iusb.edu/~jrusso
Mike Scheessele

- Assistant Professor of Computer Science
- Faculty advisor for the IUSB Student Chapter of the ACM
- Chair, LAS Cognitive Science Committee

Degree:
- Ph.D. in Quantitative and Mathematical Psychology (Purdue University, 2001)

Teaching Interests:
- Programming Languages
- Artificial Intelligence
- Foundations of Digital Computing

Research interests:
- Artificial intelligence, especially psychologically plausible artificial vision and problem-solving systems.
- Cognitive science
- Software engineering and information systems

Contact:
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Ruth B. Schwartz

- Associate Professor of Computer Science
- Director of Informatics
- Chair of the Departmental Informatics Committee

Degree:
- Ph.D. in Business Administration with a double major in Computer Information Systems and Operations Research (Temple University), M.S. degree in Computer Science (University of California, Los Angeles), BA degree in Liberal Arts with a major in mathematics (Northwestern University).

Teaching Interests:
- System Analysis and Design
- Database Management Systems
- Management of Information Systems
- Programming Languages

Research interests:
- Curriculum development
- Database systems
- Enterprise resource planning
- Programming languages
- Programming languages

Contact:
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Dave R. Surma

- Assistant Professor of Computer Science
- Chair, CS Library Committee and Departmental Liaison to the IUSB Library

Degree:
- Ph.D. in Computer Science and Engineering (University of Notre Dame 1998)

Teaching Interests:
- Programming Languages
- Computer Networks
- Parallel Computing
- Computer Applications

Research interests:
- Parallel and Distributed Computing
- Multimedia applications
- Computer Architectures
- High-Performance Networks and Software tools for parallel and distributed computing systems

The computer has pervaded many aspects of modern day-to-day life. Checking email, browsing news items, and playing games are but a few of the ways people utilize their computers each day. Being able to use computers has become important for everyone and the ability to develop new software, new architectures, and to improve existing systems is important for graduates in the field. I am interested in teaching both existing applications as well as leading students who want to understand and possibly produce leading-edge hardware and software systems.

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Faculty Portfolio

Dana Vrajitoru
- Assistant Professor of Computer Science
- Chair, CS Laboratory Committee

Degree:
- D.Sci. in Computer Science (University of Neuchâtel, 1997)

Teaching Interests:
- Programming Languages
- Computer Graphics
- Parallel and distributed programming
- Artificial intelligence
- Theory of computer science
- Data structures
- Foundations of digital computing

Research interests:
- Genetic and evolutionary algorithms
- Scientific visualization
- Parallel computation
- Information retrieval
- Artificial intelligence and artificial life

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Faculty Portfolio

James Wolfer

- Associate Professor of Computer Science
- Director of Graduate Program (Applied Mathematics and Computer Science)
- Chair, CS Graduate Curriculum Committee
- Chair, Graduate Advising Committee

Degree:
- Ph.D. Computer Science (Illinois Institute of Technology, 1993)

Teaching Interests:
- Artificial Intelligence
- Computer Graphics & Visualization
- Operating Systems
- Computer Structures
- Software Engineering

Research interests:
- Naturally inspired computation.
- Visualization in science and medicine.
- Cognitive science and computer science education.

Contact:
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