SUNY Fredonia Computer Science News

The Department Celebrates Its First Birthday
By Drs. Abu-Jeib and Siddiqui

The department will celebrate its first birthday on Jul 1, 2005. It separated from the Department of Mathematics and Computer Science on July 1, 2004. Dr. Khalid Siddiqui was elected chair for the department. Mrs. Denise Byham is the secretary of the department. The department's main offices are located in Fenton 2154. The department has 10 full-time faculty including the chair and the systems administrator, and 4 part-time faculty.

Here is a brief history of the computer science program at SUNY Fredonia:

The university introduced the Bachelor degree in Computer Science in the fall semester of 1981. Until the spring of 1996, there were only two tracks available, Mathematics and Business. During the academic year of 1995/96, the program was restructured and a new five-track program was introduced. The tracks were: Computer Information Systems, Computer Systems Software, Theoretical Computer Science, Computing in General Sciences, and Computing with Mathematical Modeling. The new tracks were officially launched in the fall semester of 1997. Since that date, the enrollment in the computer science program grew tremendously until it reached the peak in the spring semester of 2001. At that time, the department had over 200 computer science majors.

Drs. Khalid Siddiqui and Tat-Hung Chan and Prof. Bill Leslie made significant contributions to the computer science program at SUNY Fredonia and they are credited for reshaping the program in the late nineties. They led the efforts towards the creation of the new program.

Dr. Chan and Mr. Mazamudar developed the first network on this campus and provided the email and network services to the campus.

Prof. Leslie was the Associate Chair of the Department of Mathematics and Computer Science from 1995 to 1997. At that time the department had only four Computer Science faculty and a systems administrator.

Dr. Siddiqui was the Associate Chair from 1997 to 2001. During his tenure the new Computer Science program was launched and the number of computer science students reached its peak which was above 200. The size of the faculty peaked as well. The computer lab in Fenton 115 was remodeled, air-conditioned, and upgraded with over 30 SGIs and Intel computers. The instructional lab in Fenton 2164 was created and later upgraded. The department received two grants from Microsoft and two grants from SUNY Learning Network and many online courses were introduced.

Dr. Arnavut was the Associate Chair from 2001 to 2004. He instituted the student programming competition program in Spring 2002 and the high school competition in December 2003. The high school competition is organized by Dr. Karen Ehrlich.

In Fall 2004 the Computer Science program was restructured again (see the next page).

The Department Offers a New Degree and a New Track

In addition to a B.S. and a minor in Computer Science, the department started offering a new B.S. and a new minor in Computer Information Systems. The degree in Information Systems prepares graduates for careers in computer information and business systems development, maintenance and management. The majority of the course work in this program is in the area of Computer Information Systems, complemented by several required courses in the areas of accounting, economics, and business administration.

The department also revised its existing tracks and added a new track, General Major, to its Computer Science degree. The department now offers 5 tracks for students to choose from. The tracks are:

1) Computer Theory.
2) Systems Software.
3) Applied Mathematics.
4) Geographic Information Systems.
5) General Major.

The new track is designed to provide students with exposure to a significant range of topics within the computer science field, while at the same time ensuring their ability to select those courses that most interest them.

The core for the computer science degree has been revised as follows:

- CSIT 224 Problem Solving using Objects has been added.
- CSIT 425 Software Engineering has been removed.
- CSIT 431 Introduction to Operating Systems has been removed.
  The following new courses will be offered:
- CSIT 312 Computer Structures.
- CSIT 411 Programming for Embedded Microcontrollers.
- CSIT436 Advanced Network Programming.

For more information on these degree programs, check the 2005-07 catalog and the checklist available on the front desk of the department office.

Computer Science Graduate Courses Are Approved

The department will have a visibility in the Graduate Catalog and will start offering the following four graduate courses:

- CSIT 536: Advanced Network Programming (proposer: Dr. Zubairi)
- CSIT 537: Advanced Operating Systems (proposer: Dr. Siddiqui)
- CSIT 580: Computational Biology (proposer: Dr. Barneva)
- CSIT 591: Selected Topics in Computer Science (proposer: Dr. Siddiqui)

Catalog, CCC, and New Undergraduate Courses

The department revised the catalog in the fall semester. Many courses were revised and new courses will be offered. The new courses are:

1) CSIT 312 Computer Structures. Prerequisite: CSIT 121.
2) CSIT 224 Problem Solving Using Objects. Prerequisite: CSIT 221.
3) CSIT 436 Advanced Network Programming. Prerequisite: CSIT 435.
4) CSIT 411 Programming for Embedded Microcontrollers. Prerequisite: CSIT 221.
5) CSIT496 Special Topics in Computer Science. Prerequisites: CSIT 341 and permission of the instructor.

CSIT 105 was approved to be a CCC course (it joins the list of our CCC classes such as CSIT 120, CSIT 121, CSIT 413, CSIT 425, CSIT 437, CSIT 441, CSIT 462).

Also, all students in the department may take CSIT 105, CSIT 107, CSIT 120. The restriction "for non-majors only" has been removed. CSIT 104 is still restricted to non-majors only. CSIT 104 is submitted for CCC-II category.

Remark: We remind students that they must take at least 66 credits from outside the major.

Summer, SLN, and J-Term Courses

The department offer courses in the J-term and continues to offer SUNY Learning Network (SLN) courses, and summer courses. The computer science division of the Department of Mathematics and Computer Science was the first on the campus to offer SLN courses in 1998.

In the first summer session, the department will be offering: CSIT 105 (with Mr. Pingitore), CSIT 107 (with Mr. Steiger), CSIT 120 (with Dr. Hansen), CSIT 225 (with Dr. Zubairi), CSIT 425 (with Dr. Barneva), and CSIT 455 (with Dr. Siddiqui). In the second summer session, the department will be offering: CSIT 104 (with Mr. Szocki), CSIT 205 (with Mr. Leslie), CSIT 431 (with Dr. Siddiqui), and CSIT 436 (with Dr. Zubairi).

Recruitment
By Dr. Khalid Siddiqui

Concentrated efforts were made to recruit new students. All brochures were rewritten and updated. Admission fact sheets were revised and 10 students were recruited into the program from other departments. Freshmen joining in fall 05 were contacted through personal letters and emails from students to encourage them about our program.

Our Programming Team Takes the First Place
By Drs. Siddiqui and Abu-Jeib

From left to right: D. Bateman, D. Henning, and J. Keeler.

A programming team from the department ranked first in a programming contest at the Consortium for Computing in Small Colleges in the Northeast that took place in Providence, RI, on April 22, 2005. This is the best performance ever of our programming teams. Thirty two teams from 26 colleges participated in the contest including two teams from SUNY Fredonia. The members of the first team were David Bateman from Chili, David Henning from East Amherst, and James Keeler from Fairport. The members of the second team were Josh Becker from Falconer, Steve Morse from Corning, and Bryan Woodard from Webster.

Mr. Mike Szocki, a graduate of the department, who joined the department as a Systems Administrator last fall conducted an open competition among all CS Majors to select the teams. Mr. Szocki was the faculty advisor and the coach of the teams.

The faculty and fellow students of the department could not be happier with the results. "People were impressed with the superb showing of Fredonia students. It gives me great pleasure to see the success of our students. Their success exemplifies the quality of our program at Fredonia." Dr. Siddiqui said.

The department organized an appreciation party to recognize the achievements of the teams. Over 50 students and many professors participated. The department was honored with the participation of the interim Vice President, Dr. Len Faulk, and the interim Dean of Natural and Social Sciences, Dr. Jack Croxton. Both graciously acknowledged the achievement of our programming teams.

In October, 2004, one of our programming teams took the second place in the early stages of a worldwide programming competition sponsored by IBM and organized by the Association for Computing Machinery. The members of the team were Samantha Foley of Williamsville, David Henning of East Amherst, and James Keeler of Fairport. The competition took place at SUNY Oswego. The students were accompanied by Dr. Ziya Arnavut. The good performance of the team enabled it to advance to the Northeast North America finals in which 12 colleges/universities participated. Our team took the sixth place. Dr. Ziya Arnavut was very happy with the performance of the team. "This year, SUNY Fredonia made it to the first six. In the last two years, we ranked 10th and 12th respectively. We are getting much better every year and this year we finished ahead of R.I.T. for the third time."

Upgrading the Labs
By Mr. Szocki and Dr. Abu-Jeib

Our department operates its own Intel based laboratories running MS Windows and various flavors of UNIX. These facilities are dedicated to supporting instruction in computer science. The CS laboratories consist of servers and workstations on a high speed network which is linked to the Internet. CLI and PPP dial-up facilities are also provided. Our laboratory is maintained by a systems administrator and a staff of student assistants. The department utilizes microcomputers in most of its instruction.

The department has two labs in Fenton 115 and Fenton 2164. The lab in Fenton 115 was upgraded this year and the lab in Fenton 2164 will be upgraded in the summer. For more information about the labs and our facilities, see http://www.cs.fredonia.edu/cswebpage/facilities.html.

Dr. Reneta Barneva Receives the Kasling Lecturer Award

Dr. Reneta Barneva won the Kasling Lecturer Award for 2005. This is the highest scholarship award the campus has. Dr. Barneva has 21 refereed journal papers, 7 book chapters, and 27 conference papers. She published in top journals such as Pattern Recognition Letters, Discrete Applied Mathematics, and Theoretical Computer Science. She also was a director of production of several multimedia CD-ROMs and a recipient of many grants. Dr. Barneva's research is mainly in Computer Graphics and Multimedia. However, her research has applications in engineering, medicine, art, pattern recognition systems, data compression, distance learning, computational biology, and many other fields.

Dr. Barneva works on generalizing concepts and results in Computer Graphics and Multimedia, and on solving open problems. She managed to solve a well-known open problem proposed by one of the founders of Discrete Geometry.

Dr. Barneva visited and worked at leading research institutions in several countries such as Bulgaria, France, Italy, and Slovakia. In addition, Dr. Barneva is a referee for a number of journals.

She joined the university in 2001 and in her short stay at Fredonia, she made significant contributions to the department and the campus.

Three other professors from the department received awards from SUNY Fredonia in the past for their distinguished achievements. They are: Dr. Khalid Siddiqui who received the Kasling Lecturer Award in 1998, Dr. John Hansen who received the William T. Hagan Young Scholar/Artist Award in 1998, and Dr. Tat-Hung Chan who won the Professor of the Year award in 2000 and 2001, which was organized by the Computer Science Club only during those two years.

"I'm honored to receive the Kasling Lecturer Award."
Dr. Barneva

Dr. Ziya Arnavut Receives NSF Grant

The Department of Computer Science and the Department of Mathematical Sciences jointly received NSF recruitment and retention grant. Both departments established the MACS scholarship which will be awarded to 15 computer science students and 15 mathematics students every year for a period of 4 years. The amount of the individual scholarship is $3000. The PIs are Drs. Ziya Arnavut and Joseph Straight and the Co-PIs are Drs. Junaid Zubairi and Meral Arnavut.

To qualify for the scholarship, the student must have at least $3000 of unmet financial need. In addition, a current/transfer student must have a GPA of 3.0 or higher, and the freshman must have a high school average of 90 or higher and a minimum combined SAT score of 1120. The opportunity to apply for the scholarship is still open. For more information on the scholarship and on how to apply, visit http://www.cs.fredonia.edu/~macs or contact Dr. Arnavut at arnavut@cs.fredonia.edu or Dr. Zubairi at zubairi@cs.fredonia.edu.

Congratulations to Our Scholarship Recipients!

The following students received scholarships from the department for the year 2005-06:

- **Arthur R. Maytum Scholarship:**
  Franklin Rau
  Gary Bennett
  Steven Morse
  David Mandery
  Edward Parker
- **John Beck Memorial Scholarship:**
  Devin Grady
- **Endowment Scholarship:**
  Jeffrey Satterley

In addition, several students received the MACS scholarship and others may receive it in the next few months.

The Department Holds Its Second Annual High School Contests

On December 19, 2003, the department held its first computer competition for students from Chautauqua and Cattaraugus county high schools. Thirty nine students from 9 high schools participated in several contests. The contests involved programming in C++, Java, or Visual Basic, spreadsheet design, Web design, and a quiz show. During the contests, high school teachers who attended the contests, had the opportunity to hear a talk by Ms. Adrienne Decker from the University of Buffalo on teaching Java and object-oriented design for novices.

Fredonia won the programming contest and the quiz show, Dunkirk won the spreadsheet contest, and Cassadaga Valley won the Web design contest.

This year 5 high schools participated in the contests. The contests were held on December 20, 2004. These events were organized by Dr. Karen Ehrlich and many other members of the department.

Student Research and Creative Endeavors

Many of our students participated in the university's research and creative endeavors exposition this year. The students were David Bateman, Max Catelin, Andre Davcev, Steve Morse, Zach Krause, Dave Mandery, Steven Kindlon, Ryan Leonard, Mark McAllister, Brian Francis, Matt Wallace, Edd Parker, Robert Olson, Michael Mendez, Cameron MacVean, Jeff Satterly, Justin Francisco, and Jacob Tara. They were supervised by Dr. Reneta Barneva. The projects they worked on were:

- Iterated Function System.
- Relations Between Discrete Object Components.
- The Network Simulator.
- Virtual Tour of the Computer Science Department.
- Project Linguistic Intelligence Deduction Interpretation Architecture.
- My SQL Database Access Via the Web.

A New Computer Science Club is Elected

A new Computer Science Club was elected at the end of the fall semester. The members are:

- Jim Keeler - President.
- Dave Bateman -Vice President.
- Amy Sak - Treasurer.
- Andre Davcev - Secretary.
- Anne Interlicchia - Publicity Chair.

In addition to its weekly meeting, the Computer Science Club was involved in many activities in the spring semester such as attending MSDN conference, programming team tryout competition, and CCSCNE conference/programming competition. The club also conducted two C# lectures and a weekly Win32 API programming lecture.

Elections were held online at the beginning of May 2005 for a new Computer Science Club. The newly elected club consists of

- Brian Sak - President.
- Jordan Bommelje - Vice President
- Steve Morse - Secretary
- Dave Mandery - Treasurer
- Garrett Raymond - Webmaster

For more information about the Computer Science Club, see the club's website http://www.cs.fredonia.edu/~csclub.

Internships and Jobs
By Dr. Khalid Siddiqui

The department continued to offer internships and employment opportunities both on and off campus. During the academic year 2004/05 five students did the internship, four students were sponsored for employment and nine student were hired as proctors for Lab 115 for each semester. The department chair continued to help prepare student resumes. All graduating seniors are encouraged to seek help from the Career Development Office and their advisors in building a professional resume and obtaining good recommendation letters.

Our Seniors Say Goodbye

Approximately 25 of our students will be graduating this year. Two of the graduates Maxime Catelin and Dave Bateman were nominated for the Lanford Presidential Prize. Both of them will be graduating with a GPA of approximately 3.7. Max and Dave are outstanding students who were involved in many activities on and off campus. They worked as proctors in the computer science lab, tutors in the Learning Center, and as lab assistants for CSIT 121 and CSIT 221.

Max (from Grenoble, France) was a member of SUNY Fredonia hockey team since he joined Fredonia about 4 years ago. He is a member of the Student Athlete Advisory Committee which is involved in many community services. Here are a few comments from Max. He says "The teachers really love what they do and are passionate about teaching. The facilities are really nice, I love our computer lab. It's a nice place for us to exchange ideas and learn more outside the classroom. I'm graduating this year so I won't be able to do that anymore but hopefully the atmosphere that I found here carries on the real world."

Dave (from Chili, NY) helped DFT Communications last year to start a museum where he did all of the computer related work. He was a member of the SUNY Fredonia cross country running team and the indoor and outdoor track team. At present, he is the vice president of the Computer Science Club. Here are a few comments from Dave about his experience at SUNY Fredonia. He says "It has been a great experience. The teachers are always willing to help you succeed and they are very knowledgeable. The resources that we have had at our disposal are great such as the lab. We have an amazing president at this school."

Samantha Foley (from Williamsville, NY), a former member of our programming teams who graduated in the fall semester, says "I love Fredonia. I was able to be a part of a caring and supportive academic community that was open and encouraged new ideas. Because of the small class size and personal attention from the faculty, I and my fellow classmates were able to excel at our studies and form lasting friendships." Samantha joined the Ph.D. program at Indiana University at Bloomington.

One of our graduating students is Mamado Balde (from Guinea). He is the only student on campus who successfully completed three majors in Computer Science, Business, and Economics while maintaining above 3.0 GPA. Mamado worked as a proctor in the CS Lab. He said "I feel like I'm just born again; thanks Fredonia"

Jim Keeler, the President of the Computer Science Club and a member of our programming teams,

says "The Computer Science program at Fredonia State has enlightened and challenged me during my college education. I am eager to put my acquired skills and experiences to use in the corporate world."

The department will organize a graduation and appreciation party for our graduates and our scholarship recipients. The party will take place on May 13, 12:00 - 2:00 PM, in the Faculty Lounge (Fenton 116). All students are invited.

Other News and Events

1) The department's web site http://www.cs.fredonia.edu has been updated.
2) A new systems administrator, Mr. Mike Szocki, was hired. Mr. Mike Szocki graduated from the department last year.
3) Dr. Ziya Arnavut was on sabbatical leave during Spring 2005.
4) Dr. Junaid Zubairi will be on sabbatical leave during 2005-06.
5) Dr. Junaid Zubairi was elected for the Graduate Council, but because he will be on sabbatical leave next year, Dr. Iyad Abu-Jeib will take over.
6) Dr. Karen Ehrlich was elected at-large representative of the Natural and Social Sciences for the University Senate.
7) Mr. Tom Taylor was elected to represent the department in the University Senate.
8) Dr. Iyad Abu-Jeib rejoined the department.
9) Dr. Barneva served as a Governance Officer of the University Senate in 2004-05. She was reelected for 2005-06. She was also elected as a member of the Faculty and Professional Affairs committee.
10) After serving the department for 4 years, Mr. Joel Greutman resigned from the department. The department wishes him best for his future endeavors. The process to replace him has begun.
11) The department organized in the fall semester a picnic in the Pioneers Park in Dunkirk for the students and the faculty of the department.
12) Drs. Khalid Siddiqui, Reneta Barneva, and Junaid Zubairi are working on international cooperation programs between the department and other departments overseas.
13) A three-year master plan was announced by Dr. Siddiqui, and a five-year review process is in progress.
14) One of our former students, Paul Gestwicki received a Ph.D. in Computer Science from the University of Buffalo.

Letter from the Chair
By Dr. Khalid Siddiqui

It has been an exciting and productive year for me, for my valuable colleagues and I hope it has for you too. As most of you know we have been trying to establish the separate Computer Science department for many years. We submitted the proposal for separation back in Spring of 2001, that eventually came to fruition in Spring 2003. We officially became an independent department beginning July 1, 2004. The department's organizational structure comprised of a number of very important and fairly independent committees, each of which is administered by a member of the department. For example, the curricular changes that you saw in the Computer Science programs this year were brought to you by the Undergraduate Curriculum Committee led by Dr. Hansen. The graduate courses that you see in another news brief were possible because of the tireless work of the Graduate Committee headed by Dr. Barneva. The smooth functioning of the CS Lab 115 and the system that you must have noticed is due to the hard work of the Systems Administrator and the Computer Systems and Facilities Committee jointly chaired by Dr. Zubairi and Mr. Szocki along with the head Proctor Dave Mandrey. The facelift of our website was supervised by Dr. Abu-Jeib. The high school contests were organized by Dr. Ehrlich. It is not possible to list the contribution of all the committees here. I'm glad we started on a strong footing, continuously benefiting with our most valuable resources -- our faculty and you.

The department will continue to provide you with a state-of-the-art curriculum that will prepare you for employment or post-graduate study. We will continue to develop and administer programs which serve not only the industrial computer scientist and researcher but also the computer applications and information systems specialist. The discipline of computer information sciences provides indispensable tools for these careers.

It has been said that education is what remains after you forget everything you learned in school. This definition may be particularly appropriate to computer science. Rapid changes mean that the specific computer technology you learn in your course of undergraduate education may be obsolete in a few years. Our goal is to provide you with the skills to compete in today's job market, and the fundamental background to continue growing in a field that promises a future of continuing change, challenge, and new opportunities.

It is our mission to offer you a high-quality liberal arts education in the art and science of computing. We are preparing you to become a productive citizen of the society and for career opportunities in the areas requiring a high level of technical knowledge and skill.

The department offers two distinct degree programs: Bachelor of Science in Computer Information Systems, and Bachelor of Science in Computer Science. Both programs prepare you for the future by combining the study of general, fundamental aspects of computing with the study of an area of application at the current state of computer science and information systems. The various options available can prepare you for an assortment of career objectives and academic goals. All members of the department are available to help you succeed; do not hesitate to knock at our doors.

It is always both a sad and happy occasion as we say farewell to our graduating seniors. It has been great having you with us. Stay in touch and keep us informed what you are doing.

In the last, I on behalf of the department thank Drs. Croxton, Faulk and Hefner for providing their full support to our programs and in accomplishing many of our objectives throughout the year.

SUNY Fredonia
Computer Science
News
Newsletter for the SUNY Fredonia Department
of
Computer and Information Sciences

Computer Science Endowment

The department thanks many alumni and sponsors who have contributed to our endowment and scholarship accounts. As the support from the state is dwindling down every year, we have in many ways become a private institution. We need more of your support to provide that margin of excellence in our programs. Your support has helped us provide scholarships and awards to deserving students. So THANK YOU and please continue your support. You can send your donations to the Fredonia Foundation's office or the department.

Editor and Writer: Dr. Iyad Abu-Jeib
Contributing Writer: Dr. Khalid Siddiqui
Web Site: http://www.cs.fredonia.edu/newsletter
Send your comments and suggestions to Dr. Siddiqui or Dr. Abu-Jeib
Emails: siddiqui@cs.fredonia.edu, abu-jeib@cs.fredonia.edu
Department of Computer and Information Sciences
2154 Fenton Hall
SUNY Fredonia
Fredonia, NY 14063
Phone: (716) 673-4820
Fax: (716) 673-4821