CS@UCF

Probing the Unknown

Gary T. Leavens
Professor
Department Chair

"To teach, to serve, to probe the unknown, our University!" [1] These words are part of the rousing chorus of a song which has been on my mind lately. I heard it sung by the University of Michigan's Men's Glee Club at my graduation in December 1979. The words summarize our charge, both as a university and as faculty members. The chorus rises to a great crescendo on the words "to probe the unknown," which underlines an emphasis on research, and on striking out in new directions. The phrase which I quoted, has been on my mind lately because of two efforts we have underway to strike out in new directions.

The first effort is a new degree program, a Master of Science (MS) in Data Analytics. This degree program will be offered jointly by the department of Computer Science and the department of Statistics, starting in Fall 2016. It will be offered face-to-face, with a cohort of about 30 students each taking 2 classes per semester for a year and 2 semesters. The program is aimed at working professionals in the Orlando area. The idea of the new degree is to give students the ability to develop algorithms and computer programs for discovery of information from large amounts of data. This includes the architecture of programs, as well as technical details of algorithm development. Students are expected to be able to write and maintain novel computer programs that make efficient use of cutting-edge computer technology. This MS degree program is designed to be available to graduates from our Computer Science and Information Technology bachelor's degree programs, as well as graduates of the UCF Statistics bachelor's degree program who have sufficient programming skills. Not only will this provide educational advancement to these working professionals, but we expect it to promote the growing computer industry in Orlando and the state of Florida, as well as leading to interesting research for our faculty in this burgeoning area.

The second effort is a faculty cluster in cyber security and privacy. Following the tremendous success of our Collegiate Cyber Defense Competition (CCDC) team in winning the national CCDC in both of the past two years, we submitted a proposal to the UCF administration to fund a faculty hiring cluster in cyber security and privacy. The cluster aims to conduct world-class and impactful research on:

- Security and privacy for the Internet of Things (IoT),
- Tools and methods for preventing, discovering, and mitigating:
    - Security and privacy breaches,
    - Insider threats, and
    - Privacy risks and source-based self-censoring, and
- Evaluation techniques for determining the efficacy, efficiency, and usability of such tools and methods.

The cluster emphasizes a blend of the human and technological causes of security and privacy problems. In order to produce comprehensive solutions, the work will span many disciplines, including Computer Science, Computer Engineering, Industrial Engineering and Management Systems, Legal Studies, Mathematics, Optics and Photonics, Philosophy, Poloitical Science, Psychology and Statistics.. Integrating the technical and human aspects will set us apart. More details on the cluster can be found at http://www.ucf.edu/faculty/cluster/cyber-security-and-privacy/. While cyber security and privacy are not unknown at UCF, the cluster will help us significantly strengthen our teaching, service, and especially our research in this vital area. In addition to myself, the cluster includes the following faculty members from Computer Science: Cliff Zou, Ratan Guha, Mainak Chatterjee, Damla Turgut, Pamela Wisniewski, Mostafa Bassiouni, Sumit Jha, Joseph LaViola, Mubarak Shah, Guo-Jun Qi, and Thomas Nedorost.

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[1] From a song titled "The University", with words by Jerry H. Bilik, according to https://ummgc.org/about/lyrics.

New Faculty

Boqing Gong

Dr. Boqing Gong is an Assistant Professor in the Department of Computer Science and the Center for Research in Computer Vision at University of Central Florida. His research lies at the intersection of machine learning and computer vision, and has been focusing on domain adaptation, zero-shot/transfer learning, and visual analytics of objects, attributes, and human activities.

Boqing received his Ph.D. in Computer Science from the University of Southern California, where his work was partially supported by the Viterbi School of Engineering Doctoral Fellowship. He holds a Master of Philosophy degree from the Chinese University of Hong Kong and a Bachelor of Engineering degree from the University of Science and Technology of China.

Boqing Gong

Boqing's research has provided a comprehensive set of techniques with multiple levels of focus on domain adaptation, an emerging statistical machine learning paradigm. Advances in domain adaptation will significantly increase our capability to deploy autonomous and intelligent systems in challenging environments where uncertainty prevails. One of the algorithms he developed with his collaborators has been used by the Jet Propulsion Laboratory (JPL), NASA, in a project. Boqing was invited to JPL to present the algorithms. Boqing has published 11 scientific papers with 407 citations, h-index of 8, and i10-index of 7 (according to Google Scholar), since his first scientific paper at 2009.

Fei Liu

Dr. Fei Liu is an assistant professor of Computer Science at University of Central Florida. Fei's research areas are in natural language processing, machine learning, and data mining, with special emphasis on automatic summarization and social media. From 2013 to 2015, Fei was a postdoctoral fellow at Carnegie Mellon University and a member of Noah's ARK. From 2011 to 2013, she worked as a senior research scientist at Bosch Research, Palo Alto, California, one of the largest German companies providing intelligent car systems and home appliances.

Fei Liu

Fei received her Ph.D. in Computer Science from the University of Texas at Dallas in 2011. Prior to that, she obtained her Bachelors and Masters degrees in Computer Science from Fudan University, Shanghai, China. Fei has published over twenty peer reviewed articles. She serves as a referee for leading conferences and journals, including Association for Computational Linguistics (ACL), North American Chapter of ACL (NAACL), Empirical Methods in Natural Language Processing (EMNLP), IEEE/ACM Transactions on Audio, Speech, and Language Processing, and Journal of Artificial Intelligence Research.

Liqiang (Eric) Wang

Liqiang (Eric) Wang

Dr. Liqiang (Eric) Wang joined the Department of Computer Science at the University of Central Florida as an associate professor in 2015. He was a faculty member (2006-2015) in the Department of Computer Science at the University of Wyoming . He received a Ph.D. in Computer Science from Stony Brook University in 2006. He was a visiting Research Scientist at the IBM T.J. Watson Research Center during 2012-2013.

Dr. Wang's research interest is the design and analysis of parallel systems for big-data computing, which includes two aspects: design and analysis. For design, he is currently working on optimizing performance, scalability, resilience, and load balancing of data-intensive computing, especially on Cloud, GPU, and multicore platforms. For the aspect of analysis, he focuses on using program analysis to detect programming errors and performance defects in large-scale parallel computing systems.

Dr. Wang received an NSF CAREER Award in 2011, a Wyoming Castagne Faculty Fellowship (2013-2015), and an Overseas Scholars Collaborative Research Award by Natural Science Foundation of China (NSFC) in 2014. He has graduated 4 Ph.D. students.

Pamela Wisniewski

Dr. Pamela Wisniewski is an Assistant Professor of Information Technology in the Department of Computer Science at the University of Central Florida. She was recently a post doctoral scholar of Information Sciences and Technology at the Pennsylvania State University. In 2012, Dr. Wisniewski graduated from the University of North Carolina at Charlotte with a Ph.D. in Computing and Information Systems and a concentration in Human-Computer Interaction. She also holds a MS/BS from the University of Florida in Decision and Information Sciences. She has over 6 years of industry experience as a systems developer/business analyst; has taught 9 undergraduate courses and 1 graduate level course; and has published research in both the Human-Computer-Interaction (HCI) and Management Information Systems (MIS) communities.

Dr. Wisniewski's research interests are situated at the juxtaposition of Human-Computer Interaction, Social Computing, and Privacy. An emerging theme across her research has been regulating the boundaries between how individuals manage their relationships with technology and how they manage their social interactions with others through the use of technology. In addition, her research examines how individuals cope once these boundaries have been violated. She uses an interdisciplinary approach to address these research questions by integrating literature in HCI, social psychology, and information systems in order to develop relevant theories and suggest design practices that better support how humans engage with and through technology. Her goal is to frame privacy as a means to not only protect end users, but more importantly, to enrich online social interactions that individuals share with others. Her work has won best paper (top 1%) and best paper honorable mentions (top 5%) at premier conferences in her field.

New book from Department Researchers Reaches Far Beyond Computer Science

In May 2015 associate professor Kenneth Stanley and UCF CS doctoral graduate Joel Lehman (a former PhD student of Stanley) published their new book, *Why Greatness Cannot Be Planned: The Myth of the Objective*, with Springer International Publishing. The book has an interesting story that explains why it covers many more subjects and implications than a typical computer science publication.

Stanley and Lehman were initially working on algorithms in artificial intelligence and machine learning when they hit upon the surprising discovery that it is possible for an algorithm to solve a problem that it is not trying to solve. In fact, such an algorithm can actually sometimes solve the problem better and more reliably than an algorithm that is trying to solve it! Put another way, an algorithm without an explicit objective can perform better at achieving that very objective than an algorithm tasked with the same objective. This highly counter-intuitive result is embodied in their novelty search algorithm, which searches for novelty rather than for an explicit objective.

To make this idea concrete, image that we have a humanoid robot controlled by a computer that we hope will learn to walk. The conventional approach to this problem is to express stable walking as an objective and then to ask the computer to optimize the robot's performance with respect to that objective. In contrast, in novelty search, the robot is instead asked simply to try to generate novel behaviors. Remarkably, what Stanley and Lehman showed is that under some conditions the robot can more effectively learn to walk through seeking novelty than through trying to walk.

This result naturally surprised researchers in Stanley and Lehman's immediate research area, which led to many invited talks for Stanley on the subject of novelty search. And that's where the story gets interesting. In these talks, Stanley began to notice that the idea of achievement without explicit objectives resonated for audiences beyond just its algorithmic implications. In other words, people could see that this principle might apply to many areas of life. After all, many people have a sense that their best ideas and achievements are serendipitous. Stanley realized that this initially algorithmic insight might explain these kinds of serendipitous achievements as well.

As Stanley began to broaden his talks to address the broader implications of the theory to individuals and to society, it became increasingly clear that there was a message worth sharing with more than only computer scientists. The implications seemed continually to be expanding: How should we allocate funds for scientific research if declaring an objective can actually in some cases impede progress? How should we improve education if measuring objective progress can lead in fact to missing the most exciting opportunities for revolutionary innovation? How should individuals pursue their dreams if making their dreams into objectives can counter-intuitively make those dreams less likely? How should we interpret natural evolution if we realize that it is inherently successful because it is not an objective process? The implications were so unexpectedly wide and so intriguing that Stanley and Lehman decided that the best vehicle to reach the broadest audience and share their insights was a book.

The result is *Why Greatness Cannot Be Planned: The Myth of the Objective*, one of the few existing examples of insights from artificial intelligence and machine learning extending to broader social and institutional commentary. The book is currently available through Amazon, Springer, and other online book sellers.
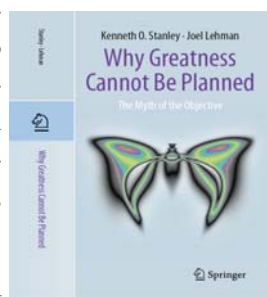
Standing Room Only at Cybersecurity Club Meetings

The Collegiate Cyber Defense Club @ UCF (aka Hack@UCF) continues to attract strong student interest. The student club, established in October 2012, kicked off its fourth year with a record-breaking 280 students attending the meeting on August 21st. Club meetings are open to the general public but membership is only available to currently enrolled UCF students. The club meets every Friday from 4:30 to 6:30 pm in ENG2-102 during the Fall and Spring semesters. Come early if you want a seat!

At the general membership meetings, students discuss recent cybersecurity news and events, demonstrate forensics tools and techniques, and teach each other skills needed to compete in cyber competitions. The club is home to Knightsec, a team that competes in over a dozen virtual Capture The Flag competitions each year, and the UCF Collegiate Cyber Defense Competition Team, a 12-member defensive security team that participates in the National Collegiate Cyber Defense Competition series.

The 2015-2016 academic year is off to a great start for cyber competitions! UCF won 1st Place in the Network CTF Challenge, 1st Place in the Social Engineering Challenge, and 2nd Place in the Internet of Things Challenge at CSI CyberSEED 2015 sponsored by Comcast and the University of Connecticut. UCF's Team was also one of Finalists in the National Cyber Analyst Challenge sponsored by Lockheed and Temple University. In October, 32 club members entered the National Cyber League Competition and student Jonathan Lundstrom finished 3rd in the Gold (top) bracket out of a field of over 2,000 participants. To close out our Fall semester, UCF finished in 1st Place for both days of Panoply competition at the ALM CyberSecure Conference in New York City. Throughout the Fall semester, 52 students have been training and preparing to try out for our 2016 CCDC Team.

UCF's back-to-back National Championship CCDC team: (kneeling left to right) Kevin Colley, Kevin DiClemente, Carlos Beltran, Austin Brogle, Alex Davis, (standing left to right) Jack Harrington (Raytheon Sponsor), Conner Brooks, Jason Cooper, Tyler Dever, Jonathan Lundstrom, and Dr. Tom Nedorost (Coach)

CCDC Team Continues Reign as National Champions

The National Collegiate Cyber Defense Competition, held in San Antonio each April, brings the winning team from each of the 10 regional competitions together to battle for the National Championship. More than 200 colleges and 2,400 students competed in regional qualifying events this year. Although the National Collegiate Cyber Defense Competition was established in 2005, UCF did not enter a team until 2013. UCF remains undefeated in the 7-state Southeast CCDC region.

In addition to winning bragging rights for another year, all 12 team members received job offers from Raytheon, the competition sponsor. Raytheon also flew the entire UCF team to Washington, DC this past summer for a 3-day victory tour. The team toured Raytheon's Cyber Operations and Development Evaluation (CODE) center; took an after-hours tour of the U.S. Capitol lead by U.S. Rep Jon Mica (R-Florida); visited the White House twice: once for a private tour of the West Wing and another visit to meet with Michael Daniel, President Obama's Cybersecurity Coordinator; visited the National Cryptologic Museum; toured the NSA Threat Operations Center; visited the Defense Cyber Crime Center (DC3), a USAF forensics lab; visited the Immigration and Customs Enforcement (ICE) Cyber Crime Center; and participated in training exercises at the U.S. Secret Service's James J. Rowley Training Center.

Club member Ditmar Wendt explaining how to solve a CTF Challenge at the August 21st meeting

The UCF Programming Team

In previous issues of this newsletter, we reported on the UCF students participating in the International Collegiate Programming Contest (ICPC) and also on the initiatives taken to encourage female participation in the competitive programming. In this issue, we would like to report on another programming team activity: the Annual UCF High School Programming Tournament (HSPT).

This event (contest) is modeled after ICPC, with the problem difficulty at a level appropriate for high school students. UCF is the first university in Florida (if not in the nation) to organize such an event (29 years now). The contest is intended to challenge the students' problem solving skills but we also make sure it is a fun day for the participants. This event has also been very effective in attracting talented students to UCF. Indeed, many of the students that participated in the contest have attended (or are attending) UCF. These students almost always become members of the UCF Programming Team.

As an example, Tyler Brazill, a member of the team that competed in the ICPC World Finals in Morocco in June 2015, was one such student. He participated as a member of the team from Tavares High School, and then chose to attend UCF (and then represented UCF well on our team). Tyler is currently working at Google.

As another example, Steven Batten also participated in the UCF HSPT and decided to attend UCF and join our programming team. Steven joined Microsoft upon completing his MS degree in CS.

There are many other examples (and two of our current coaches even competed as high school students in the very first contest back in 1987!). In fact, the UCF High School Programming Tournament has been a valuable resource in attracting the best computer science students across Florida to UCF and as members of the UCF Programming Team.

Approximately 6 years ago, we expanded the competition to include a separate, individual-based online contest. While providing another contest for high school students, it is open for all high school students across the nation, and further helps to identify potential future UCF Knights. This year the online contest will take place as a part of Computer Science Education Week, with the contest itself occurring on Saturday, December 5, 2015.

Please feel free to contact the team faculty advisor, Dr. Ali Orooji (phone: 407-823-5660, email: orooji@cs.ucf.edu), for more details.

UCF High School Programming Tournament: The Oldest and the Largest of Its Kind in Florida

Charlie Hughes, Goldie Hawn and a Shared Goal of Wiser, Better-educated Children

Working for the last decade with Lisa Dieker and Mike Hynes, two dedicated faculty members in Education, Charlie Hughes has led the computer science part of an effort to provide aspiring teachers the opportunity to rehearse their skills in a virtual environment where no harm can come to children and no teacher's mistakes go unforgiven. The technical core of this effort is a system called TeachLivE™ (Teaching and Learning in a Virtual Environment). TeachLivE presents a virtual classroom populated by virtual students, each of whom has a distinct personality and backstory. These characters exhibit real human behaviors because there is a human orchestrating their performances. That human, called an interactor, plays a set of fictional roles with distinct objectives for achieving desired emotional and behavioral responses in teacher-learners. To the right is a picture of Dr. Hughes interacting with TeachLivE.

Well, how you ask, does this relate to the actress Goldie Hawn? That connection started when Goldie saw the power our virtual students have in real conversations and nonverbal interactions with other young people as well as teachers. You see, Goldie had observed a child with autism having direct eye contact with our virtual children and, in the process, rehearsing social skills that he later used with non-virtual people. Goldie is, herself,

an innovator and a passionate advocate for children. She believes that knowledge of how the brain functions allows children to control their emotions, making more effective use of their pre-frontal cortexes to dampen the amygdala's urges. Yeah, that's two too many brainy words for one sentence, but simply put, people can use their minds to change their brains, an old Buddhist truth. The beauty of such an approach to controlling emotions is that it is you, in this case the child, who is in control, not some other entity telling him or her to be calm. That empowerment is central to Goldie's philosophy and goal.

But, now what has Goldie done with these virtual kids? The answer lies in the desert of Arizona – well maybe in one of its oases, Phoenix. There, one finds the Arizona Science Center, one of the nation's most successful

hands-on learning environments. And there, one now finds the TeachLivE virtual students helping young visitors take a brain break as part of Goldie's MindUP program. These brain breaks help the visitors calm down and, with that calmness, absorb more knowledge.

1937—2015

Amar Mukherjee

In Memory of Dr. Amar Mukherjee (Mukhopadhyay)

Dr. Amar Mukherjee, a Fellow of the IEEE, joined the Department of Computer Science at UCF in 1979 when the first PhD program in Computer Science in the State Universities of Florida was approved. He was the first faculty recruited by UCF with the approval of the PhD program in the department. He and the chair Dr. Terry Frederick completed all necessary paperwork for the program. The first PhD student in computer science Ali Hurson, a Fellow of the IEEE, graduated from UCF under his supervision in 1980.

Amar was born in Kolkata, India, where he received his undergraduate and graduate degrees from the University of Calcutta. He received a B. Sc. with honors in Physics, M. Sc. (Tech) in

Radio Physics and Electronics, and D. Phil. (Sc) [1962] from the Institute of Radio Physics and Electronics. His dissertation was "Studies in Combinational Switching Circuit Theory" under the supervision of Dr. Arun Chaudhuri. Professor Emeritus at Stanford University; Edward J. McCluskey was his external dissertation examiner. At that time Professor McCluskey was at Princeton University. After examining his dissertation, Professor McCluskey invited him to come to Princeton University as an instructor. Amar came to Princeton University as an Instructor in the Department of Electrical Engineering in 1963. However, due to expiration of his visa, he had to leave the country in June, 1964.

Amar was to return to India via London, but while in London, used his resourcefulness to find a job there as a research engineer for English Electric Leo Marconi Computers Ltd., where he worked for a year. Then he returned to India as a Visiting Scientist, in the Computer Group of Tata Institute of Fundamental Research, Bombay, India and worked there from 1965 to 1967.

Amar returned to the US as an Assistant Professor in the Department of Electrical Engineering at Montana State University in 1967. He had served as a Research Associate at the Stanford Research Institute during the summer of 1968, at which time Professor McCluskey had already joined Stanford University. Then he joined the department of computer science at the University of Iowa as an Associate Professor in 1969. He became a Professor and stayed there before joining UCF in 1979.

At UCF, Amar first served as the graduate program coordinator and then as the department head from 1984 to 1988. During his tenure as Chair, he had the undergraduate Computer Science program accredited by CSAB (Computer Science Accreditation Board). Since then, the undergraduate CS program has always been an accredited program. He established the first industrial affiliates program at UCF. He also developed special VLSI graduate courses for UCF graduate students in the early 80's working with the faculty members at the University of California, Berkeley. Based on his courses, he published "Introduction to nMOS and CMOS VLSI Systems Designs" in1986 published by Prentice Hall, Inc. At that time, there were only a very few universities which offered courses on VLSI. He also recruited the Charles N. Millican Endowed chair professor Narsingh Deo, and Mubarak Shah, Agere Professor of Computer Science who is also director of CRCV. As faculty, Dr. Mukherjee has graduated 16 Ph.D. students. One of his PhD students, Dr. Alan Eustace, is a Senior Vice President at Google. As UCF started to introduce a Bioinformatics program, Amar was involved with the development of this program.

Amar held Visiting Scientist/Professor positions with several universities, institutions and laboratories worldwide. Some of them are Stanford Research Institute (1968),GMD, Germany(1974), LAAS, France(1974), Hiroshima University(1982), Hsinchu University, (1982), IBM Research Center(1985), Indian Institute of Technology, (Kharagpur, Mumbai, Chennai, Delhi), Jadavpur University and University of Calcutta(1989-90), Johns Hopkins University, University of Maryland (1990), National Science Foundation (1994,1995), and the Indian Statistical Institute (1982,1999). He was a Fulbright Scholar (1989) and obtained a TOKTEN award from the United Nations development program.

Amar Mukherjee

Amar served the greater computer science community through volunteering his time as well. He received an IEEE Computer Society's Meritorious Service Award for serving as Editor of the IEEE Transactions on Computers for three terms (1973-76, 1982-86, 1992-94) and for Chairing the IEEE Technical Committee on VLSI (Very Large Scale Integration - the technology of microchips) (1984-86). He served as a member of the Steering Committee of IEEE Transactions for VLSI Systems during 1992-94.

Amar served on several NSF panels. He was invited to participate in a Workshop on New Paradigms for Manufacturing conducted by the MIPS Division (CISE) of NSF May 2-4, 1994 and later joined NSF as a Visiting Scientist for the summer of 1994. He participated in the preparation of the Executive Summary and the Group II report dealing with VLSI-like technologies SFF (Solid Freeform Fabrication) and MEMS (Microelectromechanical Systems technologies).

Besides his professional life, he talked about Bengali social life and teaching children rich Bengali culture. Amar brought that same passion for computer science research to Bengali literature, where he studied and wrote stories based on the works of Rabindranath Tagore. He wanted to not only share Bengali culture with his own children, but to support the preservation of the language and culture for the budding Bengali community. He spent a good amount of time discussing the vision with several of his Bengali friends and the group came up with the idea of what is currently known as the Bengali Society of Florida. He agreed to lead the organization and served as the founding President for the first three years. Since then the Bengali Society of Florida has been supporting the preservation of Bengali culture and creating community for more than 30 years.

Amar Mukherjee was a close friend, a colleague, in addition to being a father, a husband, and an active member of his professional community. He will be missed. He is survived by his wife, his two daughters, and a granddaughter.

Prof. Fernando Gomez Retires

Dr. Fernando Gomez retired from UCF in May 2014. Professor Gomez made important contributions to establishing Computer Science and Artificial Intelligence (AI) at UCF. He has also made important professional contributions. His work on acquisition of knowledge from texts and algorithms for the computational treatment of nominalizations was an important contribution in the area of natural language processing. He also did important work on WordNet, a lexical semantic network.

Five years after the Computer Science department was created at UCF, i.e., in 1982, Prof. Gomez created the first AI Laboratory at UCF. At that time he also introduced and taught the first AI courses at UCF. With federal funds, he equipped his Laboratory with three Lisp machines, perhaps the first ones in Florida. These machines were a necessity for doing advanced research in AI. Later, when SPARC workstations replaced the Lisp machines as research tools, he obtained federal funds to equip his lab with them. His lab was supported by 10 grants and contracts from NASA. For example, in 2007, he obtained a $600,000 contract from NASA to build a system to read English reports from the space shuttle's problem reporting system and engineering discrepancy reports and to identify pieces of equipment and problems associated with that equipment.

During Prof. Gomez's years at UCF, he taught a number of courses in addition to the AI courses. Each year he taught the undergraduate course in AI, which became one of the most popular elective courses.

Prof. Gomez graduated 17 MS students with theses, some of which have become industrial leaders. He graduated one the first female PhD student in Computer Science, sister Viva Wingate. His PhD students have obtained relevant positions. Richard Hull (PhD 1997) received the EECS distinguished alumnus award in 2013. Sebastian van Delden (PhD 2003) is Professor and Chairman in the Department of Computer Science at Southeastern Louisiana University, Andy Schwartz (PhD 2011) has been a post-doc and currently a Visiting Assistant Professor at the University of Pennsylvania, and has recently accepted a tenure track position in the Department of Computer Science at Stony Brook University. Sean Szumlanski (PhD 2013) taught at UCF as a lecturer, then took a position with Google, but now is once again a lecturer at UCF.

A critical PhD student in the early history of UCF's Computer Science department was Richard Hull (now at IBM T.J. Watson Research Lab). His work on the acquisition of knowledge from texts, and on algorithms for the computational treatment of nominalizations (published in the main AI conference, AAAI 1996 and the Natural Language Engineering Journal) was important work in this area. This work put UCF in the map of excellence in AI research.

When WordNet, a lexical semantic network, created by the psychologist George Miller of Princeton University was being discussed as a new trend in Natural Language Processing, Dr. Gomez obtained a copy of it, and he began the arduous task of integrating it within his system. He invited Christiane Fellbaum, the main collaborator of George Miller, to give a presentation at UCF. As a result of this work, he produced three main papers on this work "Linking WordNet Verb Classes to Semantic Interpretation" and "Aspects of Semantic Interpretation using an Enhanced WordNet," and "Grounding the Ontology on the Semantic Interpretation Algorithm," which became important publications in the area of WordNet and Semantic Interpretation. He was invited to give presentations of this work at the University of Pennsylvania and at the Wordnet group at Princeton University. He sent the paper "Grounding the Ontology on the Semantic Interpretation Algorithm" still in the form of a UCF technical report to George Miller. Dr. Miller replied by saying "I have been having fun with your paper, Grounding the Ontology on the Semantic Interpretation Algorithm. It contains many excellent suggestions for reorganizing the more generic concepts in WordNet and I have been taking advantage of them as best I can …" This very long reply was the beginning of a wonderful correspondence with the great scientist. They even wrote a white paper together. Dr. Gomez's publications have appeared in the most prestigious conferences in Artificial Intelligence and Natural Language Processing, including AAAI, ACL, COLING and CONNL.