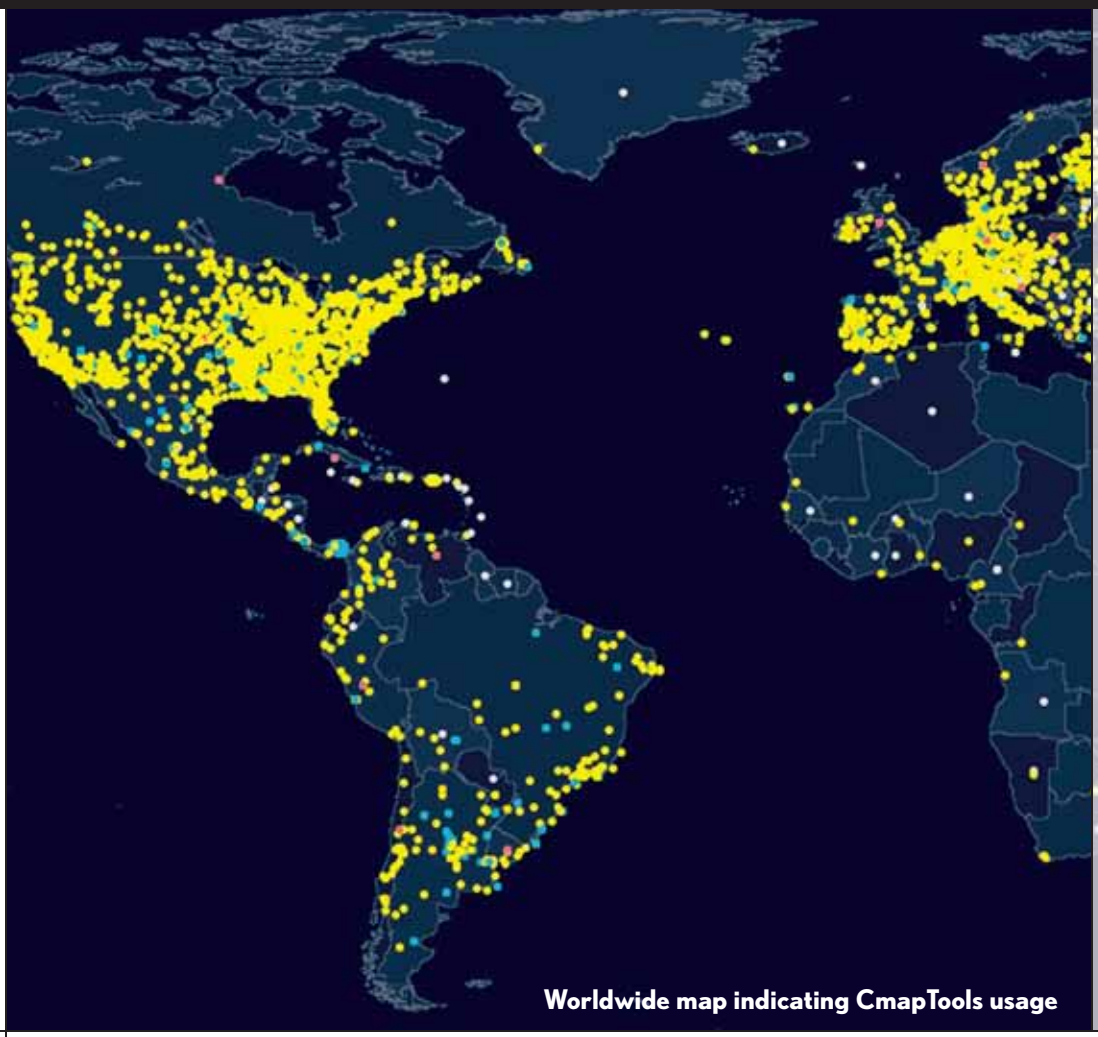
ihmc

FLORIDA INSTITUTE FOR HUMAN & MACHINE COGNITION

VOLUME 6 ISSUE 1



Worldwide map indicating CmapTools usage

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Dear Friends:

As you will read in this newsletter, IHMC received a national award for excellence in economic development. The distinguished guests who attended the ceremony, including Assistant Secretary Sandy Baruah of the US Department of Commerce, Lt. Governor Jeff Kottkamp, State Senator Don Gaetz, and State Representative Dave Murzin, applauded this significant achievement, primarily noting the economic contribution we make to our local community and the state of Florida. While most know us for our exciting research efforts, the range of ways we strengthen our economy is often overlooked.

IHMC researchers, some of the finest in the world, make Pensacola their home. They are committed to the community, lending their time and talent to many areas, such as education and the arts. Through their efforts they are improving the quality of life in our community and the local economy.

The bulk of the money which supports IHMC comes from national sources, bringing new money into the community. IHMC salaries raise the area's overall average wage, and IHMC's capital expenditures, particularly the three main facilities, have helped revitalize a long-neglected area of downtown. The area is now brimming with new offices, businesses, and homes.

An important validation of IHMC's economic development success has been the efforts by Marion County and the City of Ocala to facilitate IHMC opening a satellite branch in downtown Ocala. They understand the synergy connected with IHMC expanding into their community and have been working diligently to make sure it happens.

We certainly appreciate the EDA award and recognition as it is always nice for others to understand and acknowledge the value of your work. More importantly, we appreciate the world-class team at IHMC – and our neighbors here in Pensacola – for making our success possible.

Best Wishes,

Ken Ford

Kenneth M. Ford, Director

IHMC
Florida Institute for Human & Machine Cognition

A University Affiliated Research Institute

University of West Florida

FAU Florida Atlantic University

UCF

Florida Institute of Technology

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IHMC's CmapTools

Concept mapping has long been a key research and development focus at IHMC. In 1990 IHMC received its first significant research funding to develop a knowledge based system for nuclear cardiology. Concept maps were a central component of that system. This effort also was the beginning of IHMC's collaboration with Joseph Novak, whose research team invented concept maps. Subsequently, IBM Latin America provided IHMC's first private-sector grant to initiate Project Quorum, which included the development of IHMC's first concept mapping editing software. The interest from government agencies in the possible applications of concept mapping led to several years of funding from the US Navy, NASA, NIMA, and other Department of Defense organizations. The resultant research effort led to the development of the CmapTools suite of programs. The software is now used throughout the world by all ages, starting with pre-schoolers, and in all domains of knowledge.

CmapTools' use expands throughout the world

The use of CmapTools has grown sharply and consistently. The world map on the cover indicates CmapTools clients and servers that have connected to IHMC servers over the past year. Larger dots indicate heavy usage. In Panama, for instance, Conéctate al Conocimiento, a collaboration between IHMC and the government of Panama, has students in over 700 public elementary schools using CmapTools. This project is a large demonstration of the power of integrating concept mapping with the Internet and the Web through CmapTools to provide innovation in the classroom leading to true meaningful learning.

The use of CmapTools is also increasing, as can be seen in the graph on page 3, which shows the number of downloads of the program per month from the IHMC website. The peaks around March-April and September-October reflect the large use of CmapTools in educational environments such as universities, where students are asked to download the software for use in their schoolwork. The peaks correspond to the beginning

CmapTools team led by Alberto Cañas

Front row: Greg Hill, Roger Carff, Tom Eskridge, Larry Bunch
Second row: Alberto Cañas, Mario Arroyo, Marco Arguedas, Rodrigo Carvajal, Carlos Perez
Third row: Adrián Granados, James Lott

of the school year in the northern and southern hemispheres. The large increase for September 2008 is partially due to both the concept mapping conference and IHMC's new collaboration with Microsoft.

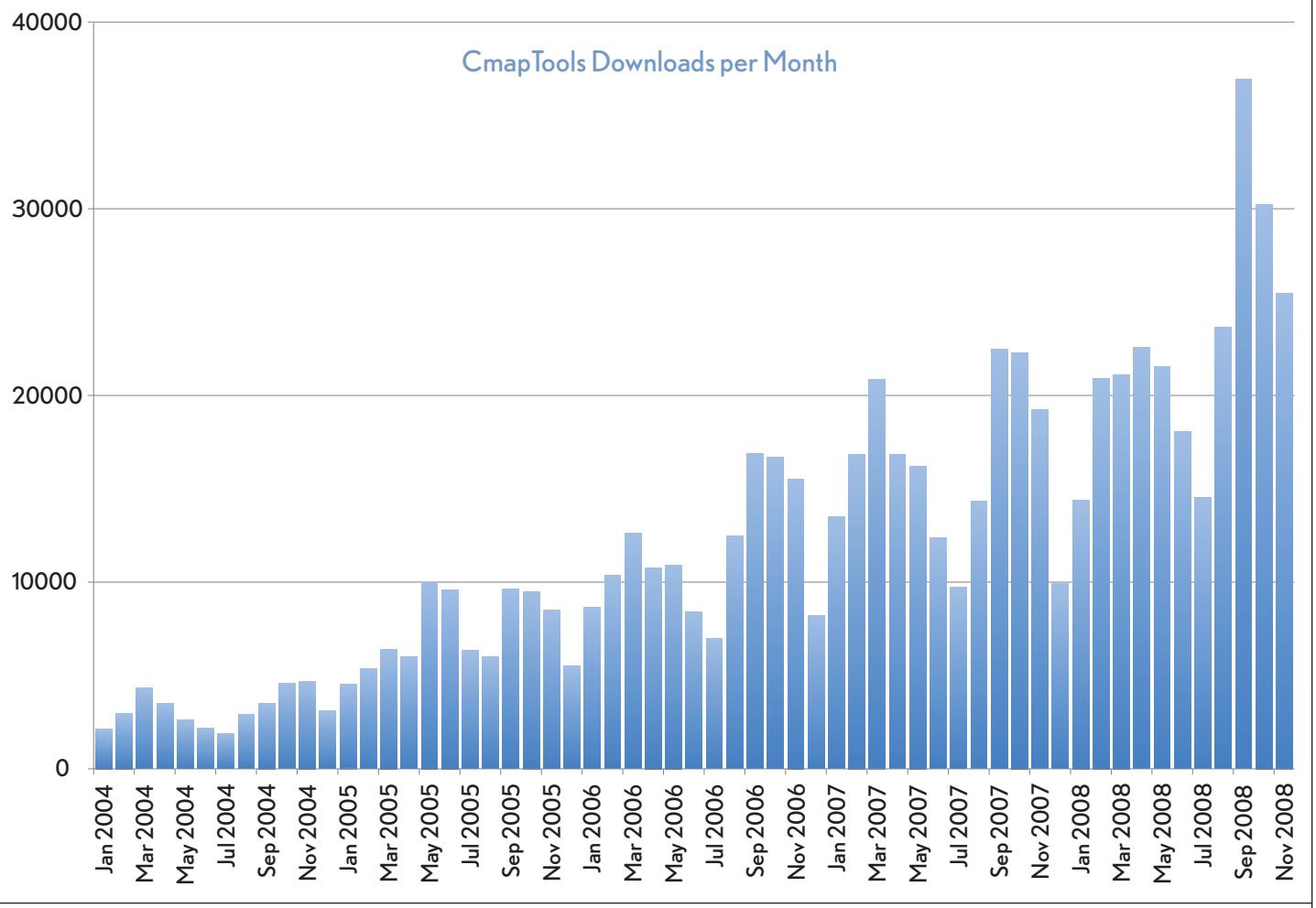
cmc2008: Third International Conference on Concept Mapping

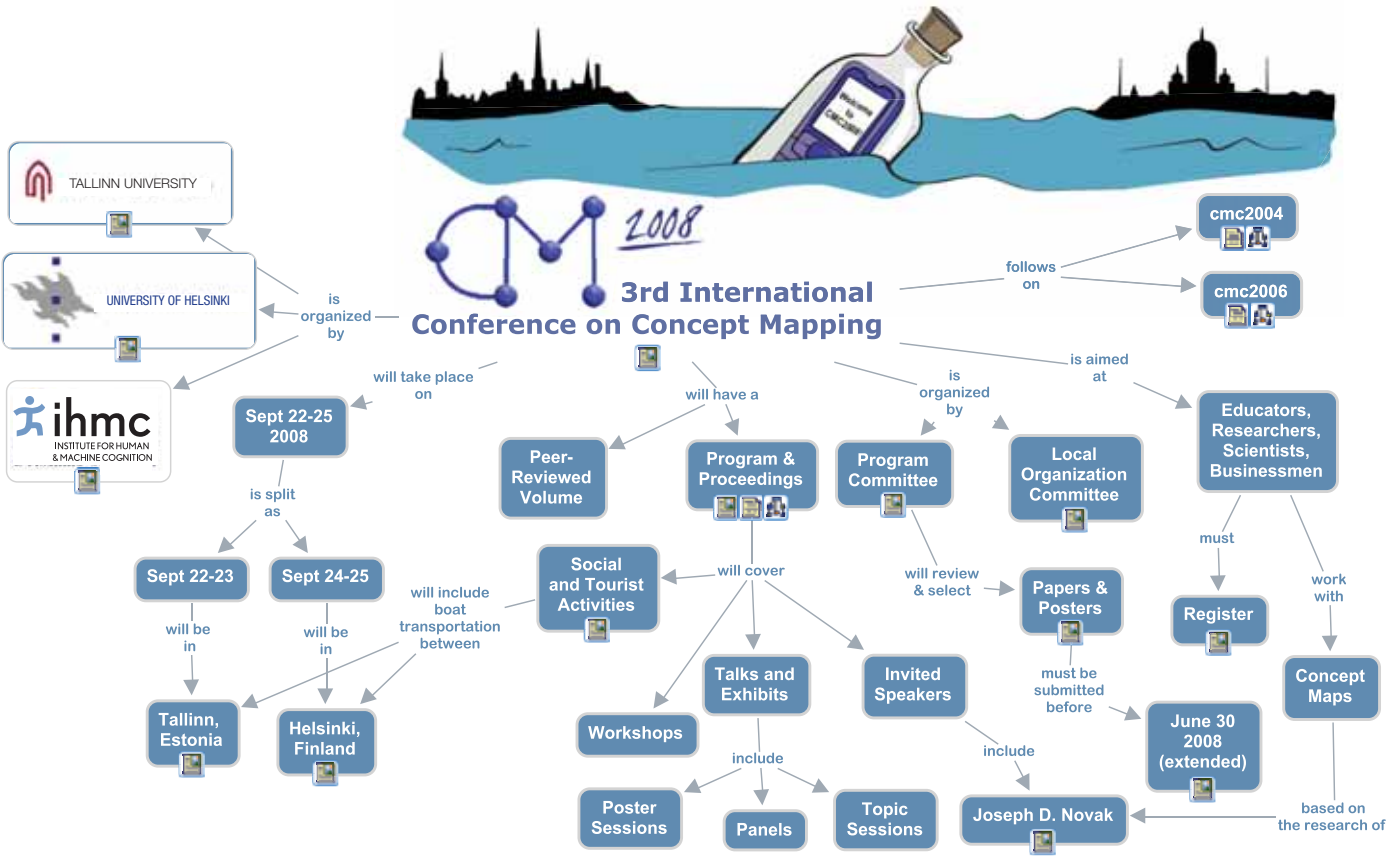
The 3rd International Conference on Concept Mapping took place in September 2008 in Tallinn, Estonia and in Helsinki, Finland, with over two hundred participants from 35 countries. The inaugural conference talk titled: Next Step: Consolidating the CMappers Community was given by IHMC's Alberto Cañas and Joseph Novak. This third conference followed on the successes of the first conference in Pamplona, Spain and the second in San José, Costa Rica, and has led to efforts to consolidate the concept mapping community. The next edition, cmc2010, is scheduled to take place in Santiago, Chile.

Collaboration with Microsoft to take CmapTools and concept mapping to schools all over the world

Through a new partnership with Microsoft, IHMC is extending the reach of CmapTools throughout the world, particularly to schools in third-world countries. IHMC researchers are developing CmapLite, a version of CmapTools that consumes less resources and can therefore be used on ultra-light computers such as the Intel Classmate and the OLPC XO which are being deployed massively in many countries.

Additionally, IHMC is developing a concept mapping training website that will be available for all users, including teachers and students, to learn how to use concept mapping and CmapTools. This site is key to support the training of teachers in large scale deployment of laptops. Finally, IHMC will also create a student collaboration website that supports collaborative projects by students in different schools, countries and regions, taking advantage of the collaboration features of CmapTools.





Cmap of cmc2008 Conference

The long reach of Microsoft together with the solid educational methodology and technology provided by IHMC through concept mapping and CmapTools will have an impact in education worldwide.

Future of CmapTools

The CmapTools team continues its research and development efforts. A new version of the software is currently in Beta testing, and a new website for concept mappers is under development (www.cmappers.net), where users can search for concept maps of interest among hundreds of thousand of maps available worldwide, and rank them. Eventually, more functionality will be added to support Cmap editing and collaboration. The increasing interest worldwide in concept mapping and CmapTools is allowing IHMC to be true to its motto of Research that makes a difference... *that makes a difference.*

Participants in cmc2008

HAPPENINGS

IHMC PURCHASES BUILDING FOR OCALA FACILITY

Dr. Ford stands inside the future Ocala Research Laboratory

IHMC purchases building for Ocala facility

IHMC's facility to Ocala moved another step closer with the purchase of a former public library building in downtown Ocala. After renovations are complete, IHMC expects to have the first of approximately fifteen researchers and staff working in Ocala.

Mayor Randy Ewers celebrated the expansion of IHMC during a ceremony presenting IHMC with the keys to the library. As a child, Ewers had frequented the library to learn about history and science. "To think that IHMC is going to be here writing history and creating science … the impact is so much larger than anyone can really put their finger on," he said.

The library building meets IHMC's desire to be located in the heart of downtown. Ocala is an ideal choice for IHMC's first expansion effort due to its historic, vibrant community and proximity to other research institutions with which IHMC has partnered.

In addition to research efforts, IHMC plans to provide science education outreach programs similar to those established in Pensacola.

Shortly after the purchase of the library, Peter Neuhaus, a researcher in Pensacola, participated in a summer program for Ocala students, kicking off IHMC's involvement in the Ocala community. Dr. Marco Carvalho became the first IHMC Ocala employee in August when he and his wife Silvia and two daughters made Ocala their new home.

IHMC Ocala Research Laboratory: 2009

HAPPENINGS

HONORS AND EVENTS AT IHMC

IHMC receives national Economic Development Award

The US Department of Commerce Economic Development Administration (EDA) selected IHMC for the national "Excellence in Economic Development" award in the category of Technology-led Economic Development.

This award is presented annually to recognize extraordinary non-profit organizations, universities, state agencies, or local governments that have implemented proven and exceptional "innovative economic development strategies of national significance." The strength of IHMC's research, which has led to high wage jobs and research-related expenditures, along with the technology transfer efforts and the community programs, such as the lecture series and education outreach, all contributed to the selection of IHMC for this award.

The award was presented to IHMC by Mr. Sandy Baruah, the Assistant Secretary of Commerce. At the ceremony Baruah said, "IHMC represents the best and brightest economic development methods and practices in use today," and described the impact IHMC has on Pensacola, Florida, and the country. Other dignitaries in attendance at the event included Florida Lt. Governor Jeff Kottkamp, State Representative Dave Murzin, and State Senator Don Gaetz.

Dr. Ford accepts IHMC's award for excellence in Economic Development

Ford Appointed Chairman of NASA Advisory Council

NASA Administrator Michael Griffin appointed Dr. Ken Ford to head the prestigious NASA Advisory Council, the board that provides expert adivce to the space agency's numerous and diverse missions. Dr. Ford replaces former Apollo astronaut Harrison Schmitt in the role of chairman. "This is a great honor for me personally and a role that will further enhance the productive partnership that IHMC has always enjoyed with NASA," Dr. Ford said. "Much of IHMC's work is directed toward projects that may ultimately benefit the space program."

The NASA Advisory Council provides the administrator with counsel and advice on programs and issues of importance to the agency. Six committees comprise the full council and conduct fact-finding sessions throughout the year. The Council then meets to discuss the issues and make recommendations to the Administrator. Dr. Ford has a long history of service to NASA and to other space-related ventures. In 1997, he developed NASA's Center of Excellence in Information Technology at the Ames Research Center where he also served as Associate Center Director. Ford also was recently re-appointed to the board of directors for Space Florida, whose mission is to strengthen Florida's position as the global leader in aerospace research, investment, exploration, and commerce.

Hayes appointed to web council

IHMC's Pat Hayes was selected to join the Web Science Research Initiative Science Council. WSRI brings together academics, scientists, sociologists, entrepreneurs and decision makers from around the world to examine the World Wide Web and offer practical solutions to help guide its future use and design.

Pat Hayes

WSRI was founded by The University of Southampton and the Massachusetts Institute of Technology by Tim Berners-Lee, Wendy Hall, and Nigel Shadbolt.

NEW ARRIVALS

IHMC WELCOMES NEW EMPLOYEES

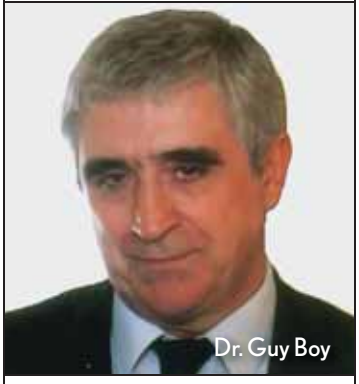

Dr. Harrison Schmitt

Dr. Harrison Schmitt

Dr. Harrison "Jack" Schmitt joins IHMC as a Senior Research Scientist. He has the diverse experience of a geologist, pilot, astronaut, administrator, businessman, writer, and U. S. Senator. Schmitt received his B. S. from Caltech, studied as a Fulbright Scholar at Oslo, and attended graduate school at Harvard. Geological field studies in Norway formed the basis of his Ph.D. in 1964. As a civilian, Schmitt received Air Force jet pilot wings in 1965 and Navy helicopter wings in 1967, logging more than 2100 hours of flying time.

Selected for the Scientist-Astronaut program in 1965, Schmitt organized the lunar science training for the Apollo Astronauts, represented the crews during the development of hardware and procedures for lunar surface exploration, and oversaw the final preparation of the Apollo 11 Lunar Module Descent Stage. He served as Mission Scientist in support of the Apollo 11 mission. Schmitt flew in space as Lunar Module Pilot for Apollo 17–the last Apollo mission to the moon.

After his time at NASA, Schmitt was elected to the US Senate, where he served for six years as the only natural scientist in the Senate since Thomas Jefferson was Vice President. In November 2005 he became Chairman of the NASA Advisory Council. He also consults, speaks, and writes on policy issues of the future, the science of the Moon and Planets, history of space flight and geology, space exploration, space law, and the American Southwest.


Dr. Guy Boy

Dr. Guy Boy

Dr. Guy Boy is a Senior Research Scientist at IHMC. He has been associated with IHMC since 2001, initially as a Visiting Research Scientist until his appointment as a Senior Research Scientist in 2008. Previously Dr. Boy was Founder and President of the European Institute of Cognitive Sciences and Engineering (EURISCO) in France. He led EURISCO from its creation in 1992 until its closing in 2008. EURISCO was a multidisciplinary organization made up of cognitive and social scientists, computer scientists, engineers and human factors specialists. It served students from various universities and engineering schools that were part of EURISCO's network of excellence. EURISCO focused strongly on its associations with the European aeronautical industry, research, and education.

Dr. Boy's research is focused on cognitive engineering, usability, human-centered automation and design, safety-critical systems, operational documentation and knowledge management. He developed various methods and techniques that include the Group Elicitation Method (GEM) and Cognitive Function Analysis (CFA).

Boy received his Doctorate from the Ecole Nationale Supérieure de l'Aéronautique et de l'Espace (SUPAERO), his Professorship Habilitation (HDR) from the Université Pierre et Marie Curie Paris VI., and his Full Professorship Qualifications in Computer Science and Psychology. He is the author of four major books, more than 200 scientific and technical papers, and involved in several journal editorial board including ACM interactions and Human Factors and Aerospace Safety.


Dr. David Atkinson

Dr. David Atkinson

Dr. David Atkinson joins IHMC as a Research Scientist. He has spent the last 20 years at the California Institute of Technology (Caltech) Jet Propulsion Laboratory (JPL) where he was a senior executive and research technologist. He worked closely with NASA on a number of key space exploration projects, including the Constellation Program, the Lunar Reconnaissance Orbiter, and the Lunar Crater Observation and Sensing Satellite.

His work spanned basic and applied research in artificial intelligence and robotics, resulting in numerous publications and inventions. Atkinson is a Docent and Doctor of Technology in Computer Systems Engineering from Chalmers University of Technology, Göteborg, Sweden.

He received his M.S. and M.Ph. in Computer Science from Yale University and his B.A. in Psychology from the University of Michigan.

Dr. James Golden

Dr. James Golden is a Visiting Research Scientist at IHMC. He is a Partner at Accenture in the pharmaceutical R&D practice. His work has included the development of systems and software for the integration and analyses of structured and

NEW ARRIVALS

IHMC WELCOMES NEW EMPLOYEES

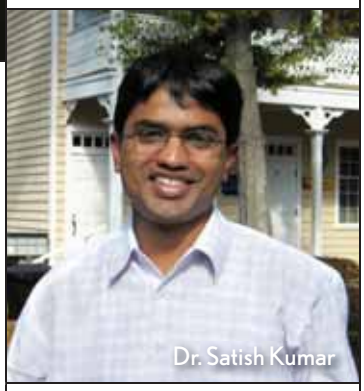

Dr. James Golden

unstructured healthcare and life science data. Jim's most recent work focuses on "Evidence Based Medicine" – creating a transparent, rather than traditions-based, approach to pharmaceutical decision making based on the aggregation and analysis of healthcare data such as electronic medical records and insurance claims data.

Prior to Accenture, he was Chief Technology Officer of SAIC's Commercial Life Sciences Office where he focused on search and intelligence analysis including unstructured text mining, competitive intelligence and social networks. He also has held positions in computational biology, bioinformatics, genomics technology development, market intelligence and business development at IDC, 454 Corporation, CuraGen, and DuPont/Pioneer Hi-Bred.

Golden is a Major in the U.S. Air Force Reserve. Dr. Golden has a B.S. in Mathematics and Computer Science from Rhodes College, an M.S. in Computer Science from the University of Tennessee Space Institute, and a Ph.D. in Mechanical Engineering from Vanderbilt University.

Golden is interested in all areas of search, NLP, tacit and explicit knowledge management, and computational epistemology, particularly applied to problems in healthcare, quantitative finance, and national security.


Dr. Satish Kumar

Dr. Satish Kumar

Dr. Satish Kumar Thittamaranahalli (T. K. Satish Kumar) joins IHMC as a Research Scientist. His research interests include constraint-based reasoning, probabilistic reasoning, planning and scheduling, model-based diagnosis, temporal reasoning, algorithms and complexity, and randomization and approximation techniques.

Before joining IHMC, he was a Postdoctoral Research Scholar at the University of California, Berkeley where he worked with Prof. Stuart Russell. He obtained a Ph.D. in Computer Science from Stanford University under the guidance of Prof. Richard Fikes. Kumar was also a Visiting Student at the NASA Ames Research Center during the summers of 2000 and 2001. Kumar received a Best Student Paper Award at the Fifteenth International Conference on Automated Planning and Scheduling (ICAPS '2005).

Dr. Steve Shooter

Dr. Steve Shooter is a Professor of Mechanical Engineering at Bucknell University where he has taught since 1995. He is spending a sabbatical as a Visiting Research Scientist at IHMC.

His research interests involve information management for design and the design of mechatronic systems and products. Integral to this research is the exploration of approaches for the capture, storage, and retrieval of product development information. He is a registered Professional Engineer in the state of Pennsylvania and has been the PI on numerous projects with industry involving new product development and the design of production infrastructure. He is currently PI on a multi-university NSF Cyberinfrastructure Teams project to develop CI tools and techniques to support engineering education through product dissection and reverse engineering. Shooter is also Co-PI on a collaborative Office of Naval Research project with IHMC to explore novel designs for mobile robots in urban environments. He is also examining representations for commonality and differentiation of product packaging with application to pharmaceutical labeling safety.


Dr. Steve Shooter


Dr. Frederick Maier

Dr. Frederick Maier

Dr. Frederick Maier is a Research Post Doc working with Choh Man Teng, investigating the use of statistical information and nonclassical logics to reason with inconsistent knowledge bases.

He received a MS and a PhD in Computer Science from the University of Georgia. Maier's doctoral work, under the supervision of Donald Nute and Robert Robinson, dealt with defeasible logic, a family of rule-based nonmonotonic logics. He also received a MS in philosophy from Tulane University and a BA in philosophy from Spring Hill College, Mobile. He enjoys mystery novels, music, and travel.

RECENT LECTURES

IHMC'S EVENING LECTURE SERIES


Michael Griffin

Griffin details need for manned space exploration

Exploration of space has brought great scientific advances. However, Michael Griffin, NASA Administrator, believes space exploration is also essential for the future survival of mankind. He discussed his views during his lecture "What the Hubble Telescope Teaches Us about Ourselves." The Hubble Telescope is one of the greatest machines NASA has ever built. Its initial deployment, however, was a letdown and NASA was mocked. NASA engineers eventually triumphed and what we have learned from the telescope far exceeds what was expected.

Griffin believes that other efforts in space will be similar—they will meet expectations of the scientific advances but also exceed them in ways which can not be predicted.

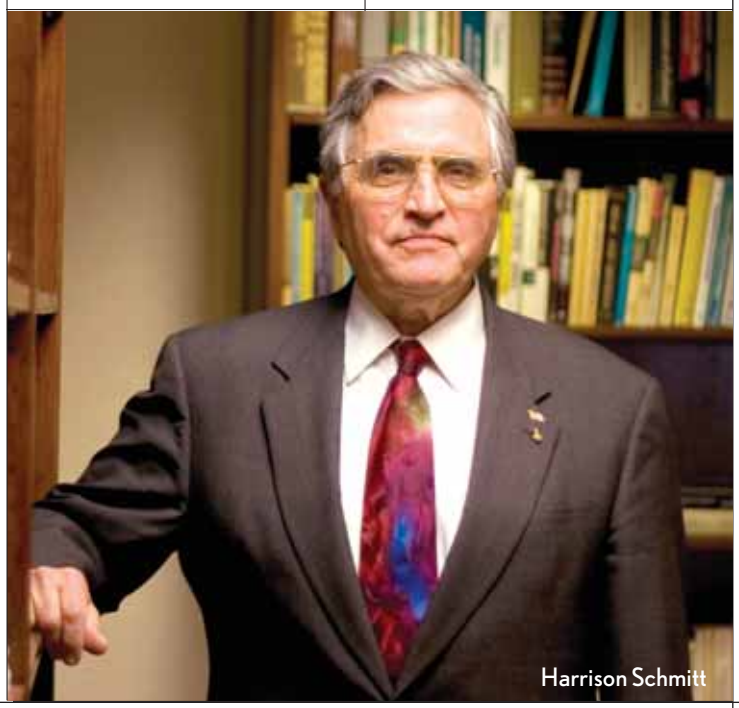
Schmitt argues for returning to the moon

Many reasons drive the desire for man to return to the moon. Harrison Schmitt, an Apollo astronaut, senator, and author, addressed some of these issues during his lecture "Return to the Moon: Science, Energy and the Future." In addition to serving as a potential launch base for a trip to Mars, the moon can support telescopes for studying the Earth and the rest of the universe and can be mined for helium-3 which may provide fusion energy. Another motivator for a renewed space effort, according to Schmitt, is to inspire young scientists.

Lyles responds to science education crisis

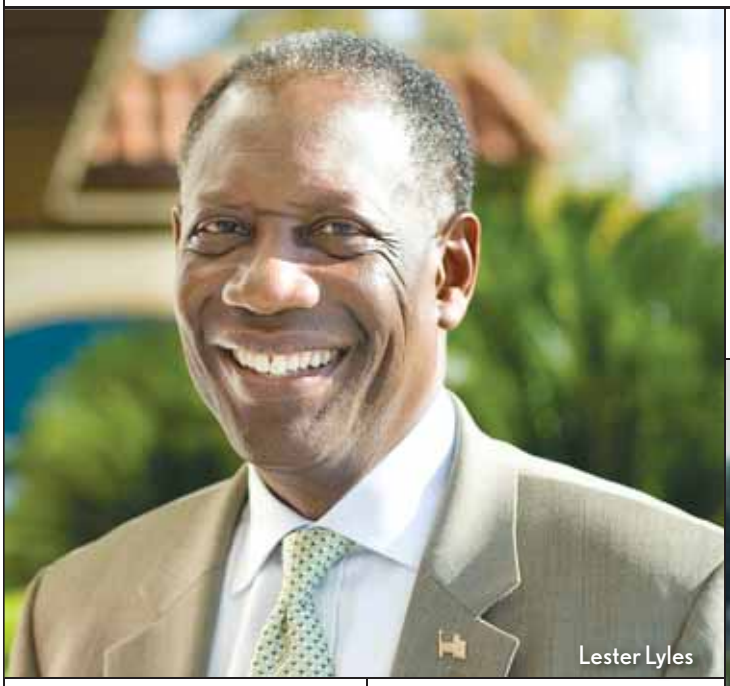
The nation is facing a critical challenge in maintaining leadership and preeminence in the fields of Science, Technology, Engineering, and Math (STEM). General (ret.) Lester Lyles, former Air Force Materiel Command, at Wright Patterson Air Force Base and member of the NASA Advisory Council, is greatly concerned about the future in these fields and how we can avoid a crisis.

During his lecture "Responding to the Gathering Storm" he described the challenges, why he is concerned, and how the government and citizens can help. The statistics, including the dearth of American citizens pursuing STEM degrees, show that we have a problem on our hands. Lyles advocates attacking the problem by increasing the awareness of the importance of science and technology to our country and improving K-12 education through national leadership.


Harrison Schmitt

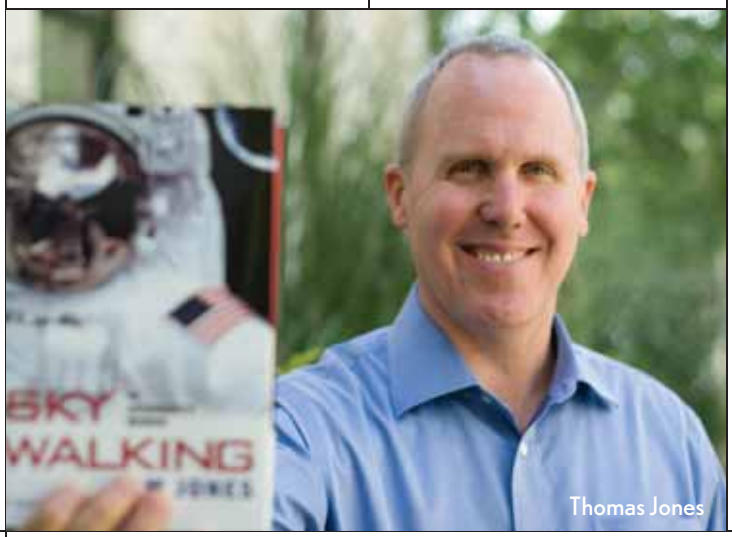
RECENT LECTURES

IHMC'S EVENING LECTURE SERIES


Lester Lyles

Jones illustrates human side of space travel

After such an exciting experience like space travel, memories begin to evaporate, forgetting many of the human moments, the personalities and excitement. Thomas Jones, a former astronaut, decided to preserve his memories by writing a book and sharing them through lectures such as the one he gave entitled "SkyWalking: An Astronaut's Memoir." From a boyhood interest in space travel, he pursued a determined path to joining NASA. After an aborted spacewalk during one of his four space shuttle missions, he was disappointed, but then realized he was with four good friends on a spaceship flying over the Earth—"how could I be a whiner?"



Thomas Jones


Charles Landry

Landry addresses what makes a great city

"Most places are at a crossroads" and must consider shifting the paradigm for their cities, according to Mr. Charles Landry, founder of Comedia and a highly respected consultant on creativity, culture, and urban change. During his lecture "The Art of (Great) City Making" he stressed the importance of embedding a culture of creativity in the community. This culture allows everyone to be potentially creative. A community should focus on what makes it distinctive and authentic while providing citizens with a sense of belonging and identity.

Seen as an international authority on creativity and city futures, Landry focuses especially on how the culture of a place can invigorate and revitalize the economy, enhancing the sense of self and confidence. With his company, he has worked on several hundred projects in 35 countries. His latest book, The Art of City Making (2006) was published to widespread acclaim. He has lectured widely all over the world.

RECENT LECTURES

IHMC'S EVENING LECTURE SERIES


Braden Allenby


William Swartout


Chris Taylor


Eugene Spafford

Allenby explores global challenges

To face the challenges of the future, it is essential to take responsibility for the present. Dr. Braden Allenby, Lincoln Professor of Engineering and Ethics, professor of Civil and Environmental Engineering, and of Law, at Arizona State University, described how many of today's problems are caused by poor understanding by people during his lecture "Life on a Terraformed Planet: Please Fasten Your Seatbelts for Takeoff."

Challenges such as global warming require people to understand the current situation and act accordingly. It is evident, however, by financial investments and other actions that people are not willing to accept responsibility. Additionally, all human technological advances provide trade-offs, but often we ignore the total perspective.

Swartout details efforts in realistic simulation

Hollywood productions far surpass military or other simulations. The mission of the University of Southern California Institute for Creative Technologies is to bring the skills and techniques of Hollywood into other simulations, without the high budgets and large technical teams. Dr. William Swartout, Director of Technology for ICT, described recent advances during his lecture "Toward the Holodeck."

Research at ITC focuses on improving military simulations in addition to advancing the field of artificial intelligence. Photo-real computer graphics, interactive virtual humans, and immersive virtual reality are some of the research areas.

Taylor describes role of private sector in military missions

Private contractors are a central part of today's military, as they have been in the past. Chris Taylor, Director of the Harvard Defense and Security Initiative, examined their current, often criticized, role during his lecture "The Private Sector in National and International Security."

He explained that we have now entered "fourth generation warfare, where the enemy uses the internet better than you do, where they learn faster than you can adapt, where they spend money in places you didn't think of first." This adaptability is not easily counteracted by rigid military structures. The private sector is nimble and can easily fill emerging gaps in abilities.

Spafford decries state of cyber security

Computer systems now have overwhelming vulnerabilities, and the prognosis for secure computing is bleak, according to Dr. Eugene Spafford, professor of computer science at Purdue University and executive director of CERIAS. Spafford detailed the challenges to computer security and the problems with improving the situation during his lecture "Insanity Rules: The Growing Cyber Security Crisis."

Large scale network attacks are doubling every year, but he considers the state of computer security as insanity. Many ways that people approach computer systems lead to vulnerability, including homogenous systems, acceptance of failures, and using legacy programs with poor designs.

RECENT LECTURES

IHMC'S EVENING LECTURE SERIES

With limited funding for computer security, both by the government and private companies, he anticipates things will get worse before they get better, as more wireless systems, more VoIP systems, more ad hoc networks, plus more people using computers provide more opportunities for new security breaches.


Hattie Dorsey


Jerry Kerr


Isabella Dusi

Dorsey presents vision for communities

America's workforce has been pushed further and further away from job centers to find homes they can afford, increasing our commutes, decreasing time with families, raising stress levels, and contributing to poor air quality. As more people are realizing that the people they would like as their neighbors, such as teachers, policemen, senior citizens, even their own grown children, can no longer afford to live near them, they are looking to building mixed-income housing.

Hattie Dorsey, founder and former Chief Executive Officer of the Atlanta Neighborhood Development Alliance, described the need for mixed income housing and her attempts to build it in Atlanta during her lecture "Highchair to the Rocking Chair: The system of building successful, affordable, inclusive communities." Dorsey's ultimate goal is cities where all people are welcome and invited to live.

Kerr demonstrates need for universal design

In 2012 as many as 12,000 baby boomers will turn 65 every day. Improvements in medicine will allow them to live longer, with an increasing number over the age of 85.

Unfortunately, as people age, their physical abilities decline. Jerry Kerr, founder of Disability Rights Advocates for Technology (DRAFT), addressed the challenges that will face us with an aging population during his lecture "2012: The Coming Crisis in America." The United States is developed for physically able people, people who can drive cars safely, climb stairs easily, and navigate department stores. To reduce the impact of the decline in abilities as people age, Kerr advocates utilizing universal design which makes the environment usable for all people.

Dusi describes community in Montalcino

The Italian hill town of Montalcino has a long history which still shapes the community. Maintaining the sense of community with the encroachment of modern forces is a challenge which the town strives to balance, according to Isabella Dusi, a resident of Montalcino who is raising funds to preserve a thousand year old church in the town. She described the history of the town and its current efforts during her lecture "Saving the Past, Accepting the Present, Forging a Future." Young people in Montalcino have a sense of belonging and are treated with respect and tolerance by the community, leading many to stay in the town. The town is thriving now on the sale of Brunello wine and tourism, which has led to some negative changes as well.

Upcoming Spring Lectures:

February 25, 2009

Eileen Collins, NASA Astronaut and Retired Air Force Colonel

April 23, 2009

James Collins, National Science Foundation

May 28, 2009

Alan Leshner, American Association for the Advancement of Science

LOCAL NEWS

EXPANDED EDUCATION OUTREACH

ihmc VOLUNTOLOGY powered by: chain reaction

IHMC kicks off teen volunteer program

IHMC has begun a partnership with a local teen volunteer organization to train volunteers to lead science activities in after-school programs. The success of the *Science Saturdays* program prompted this effort to expand the reach of our expertise in inquiry based informal science education activities. The new program, Voluntology, brings exciting science activities to kids who might not have an opportunity to attend the *Science Saturdays* program.

To reach an expanded pool of volunteers, we are partnering with Chain Reaction, a local teen volunteer organization. With many schools and scholarships requiring community service, teenagers are very willing and eager to volunteer. Chain Reaction provides a structure to allow teenagers to volunteer through many different venues in the community, including partnerships with the Pensacola Opera, the Council on Aging, and Big Brothers/Big Sisters. In addition, Chain Reaction volunteers provide enrichment activities at a number of afterschool programs in the community.

Through the Voluntology program, ten to fifteen teens are trained monthly at IHMC in how to lead science activities. These activities are be based on the many activities we have led during the *Science Saturdays* program over the last several years, but they are altered to meet the constraints of the after school program, particularly a shorter period of time. In addition to actually doing the activity themselves, the teens receive a high-school level review of the science behind the activity, refreshing or enhancing their own science knowledge. A special component of the training is an opportunity for the teens to meet IHMC researchers and learn more about them and their work.

After receiving the training, teens lead the activities at the Fricker Center, an afterschool program run by the City of Pensacola. The Fricker Center serves predominently African-American students, many from low-income families. While we target students in grades 3, 4, and 5, any student at the program who is interested is allowed to participate.

The first activities were successful. Students learned about forces while experimenting with helicopters and about states of matter and polymers while playing with slime. “These activities go beyond the regular homework help we typically provide and get the kids excited and engaged in learning science,” said Lexi Papdelias, a regular volunteer at the Fricker Center and a Voluntology member.

As the program progresses and the teens gain experience with the activities, we aim to expand the program to additional afterschool sites. Teens will also be encouraged to consider other venues, such as presentations to scouting troops, where science activities would be welcomed.

Chain Reaction members help children learn science

LOCAL NEWS

EXPANDED EDUCATION OUTREACH

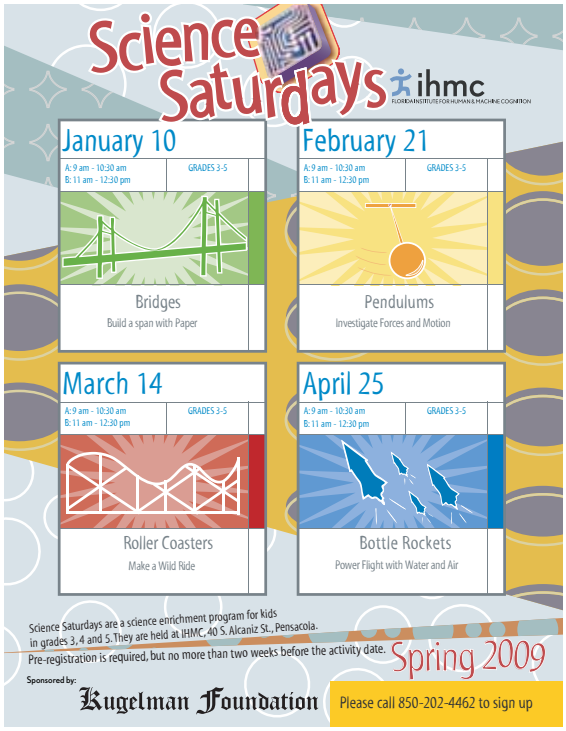
I LOVE Science continues in the classroom

I LOVE Science began its third year of partnering volunteers with teachers to improve science education. Volunteers lead activities in 5th grade classrooms throughout Escambia and Santa Rosa counties. This year, as in previous years, we have volunteers working with almost all of the 5th grade teachers.

Activities for *I LOVE Science* are aligned with the curriculum, including physics, chemistry, biology, and earth science, but bring in novel components that are designed to spark students' curiosity and interest in science. Elements included in activity script suggestions include poetry, history, and math. By approaching science from multiple angles, we aim to make it of broader interest to all of the students.

Volunteers are given wide latitude in leading their activities. Many go above and beyond the suggested activities, bringing in activities and ideas of their own. Volunteers range across fields, including many non-scientists, demonstrating to students that science is relevant in many different areas.


IHMC's Pat Hayes inspires students about scientific research



Spring 2009 *Science Saturdays* is sponsored by the Kugelman Foundation.

Science Saturdays continues for sixth year

IHMC's popular *Science Saturdays* program is in its sixth year. This fall, researchers led students in activities on flight, electronics, and balloon cars. In addition, members of the American Chemical Society Pensacola Section again held their National Chemistry Week activities for a Saturday activity.

Science Saturdays is a hands on science program for kids in grades 3, 4, and 5. They are held one Saturday a month during the school year. In previous years, demand from the community outstripped the available slots on a given Saturday, with sessions filling within 2 hours of the commencement of registration. This year we have begun to hold overflow sessions. While the regular sessions are still first-come, first-serve, the overflow sessions are filled by lottery, increasing the number of new attendees who can participate. Demand for the overflow sessions, however, still exceeds the space availability.

One concern raised by parents every year has been what programs exist for middle school students. IHMC is proud to announce that UWF faculty, particularly Dr. Michael Huggins, who has led the ACS chemistry activities for *Science Saturdays*, has designed a new program called *Fun with Science* for middle school students modeled on IHMC's *Science Saturdays* program.

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