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NONDISCRIMINATION POLICY STATEMENT
THE UNIVERSITY OF MICHIGAN, AS AN EQUAL OPPORTUNITY/AFFIRMATIVE ACTION EMPLOYER,
CONNECTING ART, SCIENCE AND PLANET EARTH

If there is one word often used to describe the University of Michigan, it is “big.” The U-M is also a comprehensive and diverse institution—so much so that sometimes we don’t always give credit to all of the pieces that contribute to its quality and character. In this issue we highlight some people and programs that typify important and pervasive contributions made by our arts faculty and students.

The arts play a central role in communicating who we are as an institution, a state, a nation, and a people. And arts scholarship, as practiced here at the U-M, is a creative exercise that provides connections between otherwise disparate and seemingly unconnected disciplines. In effect, the arts provide the means to understand the world which people of all interests and specialties can appreciate.

This connectivity is clearly demonstrated in the U-M’s relatively new Arts on Earth program, a collaboration between the School of Art and Design; the School of Music, Theatre and Dance; the Taubman College of Architecture and Urban Planning (TCAUP); and the College of Engineering. Arts on Earth was established to stimulate participation in, and broaden access to, opportunities for creating and engaging in the arts, and to explore how the arts interconnect and communicate with each other.

Indeed, artistic communication not only helps people understand others in a manner that is difficult to articulate through language, but it also has the power to transform the viewer or listener in unexpected ways. Hence, Arts on Earth recognizes the importance of communication between what some would think is the largest of gaps—that between the engineer and the artist. North Campus, the shared geography of the Arts on Earth partners, provides a wonderful and unique venue for these interactions. The University of Michigan now has an exciting opportunity to define how these diverse disciplines work together to broaden the experiences of scholars and students.

For several years, a primary mission of the Office of the Vice President for Research has been to promote closer contact between the University and the world beyond our academic confines. OVPR believes that all world-class academic institutions share a common goal of making a scholarly impact within our areas of study, and to ensure that the transformational potential of research is given every opportunity to flourish and succeed in improving our communities and nations.

Conventionally, universities consider their students as the primary mechanism for their engagement with the “outside world.” More recently, emphasis on technology transfer has been added. However, when I think about what attracts companies to a particular locale, it is a mysterious mix of talent, ideas, capital, and quality of life. And this last factor — quality of life — is almost always associated with the accessibility to new cultural experiences as exemplified by a high concentration of artistic venues. It is not by accident, then, that the Ann Arbor region is consistently ranked among the best places to live in the U.S., in part due to its world-renowned position as a hot spot for the performing arts. Indeed, the University Musical Society, under the directorship of Ken Fischer, has played a major and visible role in recruiting new businesses to our area. The scope of performances sponsored by UMS are unparalleled by a city the size of Ann Arbor, and stands well next to any location in the country—a message not lost on enterprises considering Ann Arbor as their potential home.

Admittedly, the U-M and Ann Arbor are far less well known as a center of the visual arts. The School of Art and Design and TCAUP have taken on the challenge of reversing this perception, which is a result of real trends established over the last several decades. The Arts on Earth program represents one of many ways to place increased emphasis on the visual arts, as is the School of Art and Design’s studio “Work: Ann Arbor” on South State Street and the new gallery space in the U-M Detroit Center. Add to this the annual Detroit Charrette, where important architectural and urban planning issues are examined by U-M faculty, students, and community members, and where I see momentum building to link arts scholarship and creativity to the lives of the citizens of Michigan and the world.

This issue of Search & Discovery only begins to describe the depth of intellectual pursuit in arts at Michigan. But the great thing about the world of arts is that it is always there for you to discover on your own and at your own pace. The opportunities here at the University of Michigan are as broad and abundant as anywhere else on the planet!
Perception, thinking, the mind... all are of interest to people from many different disciplines at the University of Michigan. Neuroscientists, psychologists, biologists, writers, and artists all have their own reasons for wanting to know more about how humans think and how they perceive and experience the world around them.

People from these many walks of academic life had an opportunity to explore these ideas through an interdisciplinary, interactive, artistic “experience” that took place one evening last November. "Spectacles of the Mind" was a special artistic activity (not a display or presentation) aimed at exploring concepts of the brain, perception, and communication, among others.

“The idea started with a mirror and the word ‘reflection,’ which has the dual meaning of ‘to think’ as well as the physical property of bouncing light and images back to a viewer,” says Sophia Psarra, associate professor of architecture in the Taubman College of Architecture and Urban Planning.

The end result was an installation of mirrors, projectors, and cameras set up in a studio in the Duderstadt Center for one evening. The audience — or more accurately, the participants — moved through the space viewing images, serving as the canvas upon which images were displayed, all the while being captured by cameras and projected onto other screens in the studio.

“Our purpose was to create an environment and an interactive journey. We wanted these occurrences to have no definitive shape, but one that emerged from the
interaction of bodies with space,” explains Satoru Takahashi, assistant professor in the School of Art and Design and another collaborator on the project.

“We saw visitors as an integral part of this environment, interrupting and carrying the projections with their movement in the real-time experience of the installation,” he continues. Visual and audio stimuli travel, distort, rebound, and multiply through a network of reflections, linking metaphorically the ways in which the body experiences space with the ways in which the mind processes and recalls information.

This video installation took place as part of a two-day gathering, Arts & Minds. On November 1–2, 2007, the University hosted four interdisciplinary studios as a way to stimulate, explore, and celebrate the dynamic relationship between people and their arts worldwide. Leading international artists, scientists, scholars, activists, and students attended to partake in a unique exploration of the interactions of art and mind.

The “floor plan” for the installation placed nine double-sided mirror surfaces on a grid. Images of streetscapes and aerial views of cities were projected from the two ends of the spatial arrangement. These images reflected and distorted through the network of mirrors, translating...
the notion of neural networks, a scientific phrase referring to functionally related neurons, as an experiential network of information transmitted through the reflections.

At the same time, these images were featured on the two ends of a large screen and on two smaller screens at the periphery of the studio. At the center of the large screen was a projection of a top-down view captured by a camera that was positioned over the installation. The video projections and the top-down view encapsulated the dialogue between a narrative based on immersive experience and an omniscient narrative referring to all actions and all spatial positions.

“We were interested in the dialogue between an immersive experience and a panoramic one, or between frames of reference related to one’s own body and multiple frames of reference where simultaneous actions, routes, and narratives define the experience,” says Psarra. In an immersive experience, she explains, spatial navigation is related to the particular perspective of a perceiver—the person is in the space while viewing it. In the panoramic experience, navigation relates to a framework which is external and independent of the viewer’s position in space—like looking onto the space in the mind’s eye.

“Our intention was to create an installation which worked as a metaphorical translation of the egocentric and allocentric frames of reference describing body navigation from psychology and neuroscience to space and narrative,” Psarra says.

Takahashi became involved in the “Spectacles” installation after he met Psarra at one of the Arts & Minds planning meetings in early 2007. “I have been interested in the concepts of memory and place, which in essence defines our understanding of a space,” says Takahashi. He was also thinking about Alzheimer’s disease as well as manic and depressive expressions of bipolar disorder and how these conditions provide insight into the meaning of memory and place.

As Psarra and Takahashi began talking, they realized that they had some mutual interests, particularly in how to use space—in architecture or in art exhibitions—to express ideas about story-telling and memory. “The chemistry was good,” recalls Psarra.

They also shared an interest in literary presentations about the role of memory. For instance, Argentine author and essayist Jorge Luis Borges was another common interest. Psarra notes that Borges use of concepts of space to express philosophical meanings was of special interest. “I became interested in this because I think Borges’ work is meaningful to architecture, but the field wasn’t discussing these views.”

Using notions like mirrors and primitive spatial topographies as allegories for language, Psarra says that Borges expressed the gap between the concept of the world as infinite possibility, and the time-bound life of humans “whose destiny to experience a system from within prevents them from grasping its total construction.”

The reflections occurring in the installation introduced Borges’ notion of infinity, and their labyrinthine placement were metaphors for the mind, its associations, memories, and layers of consciousness. Then the two types of images projected through the installation—streetscapes and aerial views—established a connection between the mental labyrinth of thought and the physical maze sometimes experienced in urban spaces. S&D

Further Reading
Spectacles of the Mind website, including photos and an online video: www.tcoup.umd.edu/arch/spectaclesofthemind.html
Online portfolio of Satoru Takahashi, assistant professor, School of Art and Design. www.art-design.umd.edu/faculty/sideshow.php?facID=tsatorue&fullName=Satori u%20Takahashi

SOPHIA PSARRA, ASSOCIATE PROFESSOR OF ARCHITECTURE, AND SATORU TAKAHASHI, ASSISTANT PROFESSOR OF ART (LEFT), DEVELOPED AND BUILT A GRID OF MIRRORS AND SCREENS FROM THE PLAN AT RIGHT FOR THEIR “SPECTACLES OF THE MIND” EXHIBITION.

As an architect, Psarra has long been interested in how people interact with space. Her book, Architecture and Narrative: The Formation of Space and Cultural Meaning in Buildings (Routledge), will be published this summer. “I’m intrigued by how we conceptualize space,” she says, and her book largely focuses on the relational, conceptual, and perceptual meaning of buildings. Now, through her involvement in the Arts & Minds collaboration, she also has been able to see how her interests are related to neuroscience.
Public Art

A SAMPLING OF ON THE UNIVERSITY OF MICHIGAN CAMPUS

SUNDAY MORNING IN DEEP WATERS
BY CARL MILLES (1940)

This fountain in bronze is located on the Ingalls Mall between the Michigan League and Burton Tower. The figures depict Father Triton and his sons on a holiday excursion. The fountain has been fondly called "Ye Gods and Little Fishes" by students. A renowned Swedish sculptor, Milles was the first sculptor-in-residence at Cranbrook, where this piece was executed. Funded by a gift of Charles Baird (AB & LLB 1895, AM 1901) in memory of Thomas McIntyre Cooley, professor of law and dean of the Law School.

WAVE FIELD BY MAYA LIN (1995)

A pure earth sculpture occupying a 90-foot-square space and representing a naturally occurring wave pattern, artist Maya Lin described it as "...pure poetry. It is a very gentle space that exists on a very human scale. It is a sanctuary, yet it's playful, and with the changing shadows of the sun, it is completely transformed throughout the day. 'The Wave Field' expresses my desire to completely integrate a work with its site, revealing the connectedness of art to landscape, or landscape as art." Lin is best known as the artist who designed the Vietnam Veterans Memorial in Washington, DC, and the Civil Rights Memorial in Montgomery, AL. The sculpture was commissioned by the Association FXB in memory of Francois-Xavier Bagnoud ('82 Aerospace Engineering), and a gift by his mother, Countess Albina du Boisrouvray.

INDEXER II
BY KENNETH SNELSON (2002)

Made of stainless steel tubes connected by steel cables, Indexer II displays infinite interlocking geometric forms of great beauty and strength which the artist likes to call floating compression. This gift of the Engineering Class of 1950 is located on North Campus just south of the reflecting pool and near Cooley Lab.
Just about a decade ago, Evan Chambers was in New Hampshire. While there, he took a walk through a cemetery that turned into something more than a quiet visit to a peaceful place. “When I visited the cemetery for the first time, I was floored by the power of the epitaphs. Stern exhortations about the brevity of our lives and tender statements of loss take on an urgent meaning when you encounter them face down on top of someone’s final resting place,” recalled Chambers, chair and associate professor of composition in the University of Michigan School of Music, Theatre & Dance.

Last fall, that power was shared with audiences when Chambers’ song cycles, The Old Burying Ground premiered in Ann Arbor. Then, in February 2008, the piece was presented again, this time at Carnegie Hall in New York City. The piece has been described as “a hauntingly compelling musical portrait of the imagined voices of residents who inhabited rural New Hampshire two-hundred years ago.” The Old Burying Ground is scored for soprano, tenor, folksinger, and orchestra, with original poetry recited between songs over the course of the 45-minute performance.

The premiere performances brought together the University Symphony Orchestra, a Grammy Award-winning ensemble conducted by U-M’s Kenneth Kiesler, tenor and soprano soloists, and the noted folk/punk singer Tim Eriksen, who sang recently for the soundtrack to the film Cold Mountain. Renowned poets Keith Taylor, Jane Hirshfield, Paula Meehan, Richard Tillinghast, and Thomas Lynch all contributed the original poems that were recited during the performance.

The Old Burying Ground isn’t just about the inscription Chambers found on the tombstones in that New Hampshire cemetery. “When I thought about the voices of these eighteenth- and nineteenth-century rural inhabitants, it was hard for me to hear them breaking out into song in the voice of an Italian Bel Canto tenor,” he says, referring to a vocal technique characterized by evenness of tone and tremendous agility and flexibility, which originated in Italy during the late seventeenth century.

“I needed to find a style of singing that would create a feeling of naturalness,” he continues. “I decided to slant the songs toward musical languages I’ve come to love: Irish traditional music, American folk song, sacred harp singing, and Albanian polyphony, in addition to European classical music.”
Chambers also wanted the music to seem as if it was coming out of the earth. “I had this feeling that music was rising from the grave, as they are speaking to you from under the ground,” he says.

“The piece is non-narrative because I don’t have their stories,” continues Chambers. “I have an epitaph on a tombstone, these letters that are carved into stone. You have to feel them with your fingers sometimes just to read them. You have to sit there, sometimes laying on your stomach on the ground, waiting for the sun to come around so that the shadows will be cast slightly differently on the letters and you can puzzle out what that one letter is in that one word to complete your sense of what is inscribed.” In the end, that inscription distills that person’s life into one short poetic epigram, which Chambers tried to capture in his songs.

Chambers’ interest in cemeteries and their meaning goes back to his undergraduate days in Bowling Green, Ohio, where there was a cemetery just up the street from the school of music. “Honestly, I was a little overwhelmed as a freshman in college, not having any private space at all—living in a dormitory with the noise, the people moving in and out, the loud music,” he recalls. “The cemetery for me at that time became a real refuge, a place where everything is still. Over time, my feelings about what a cemetery is has shifted from being a place filled with grief to a place of great beauty and peace.”

Those experiences came back to him when he started working on *The Old Burying Ground*. “I decided to make a meditation of how lives appear and disappear. When you read these tombstones and you see these stories about a family who lost, for example, three children in five years, you can imagine the tremendous pain and grief. And yet a cemetery is a place where all the sufferings of human life are resolved into stillness.”

—Evan Chambers

**Further Resources**


Online audio of Evan Chambers’ compositions: [www.evanchambers.net/Music.cfm](http://www.evanchambers.net/Music.cfm)
These are a few of the questions behind the exhibition WHY staged at the new Work • Detroit gallery by the School of Art & Design. The approach to this question included displays of selected works by University of Michigan art faculty as well as works by artists and designers from Detroit. In addition, the gallery in the U-M Detroit Center posted excerpts of the artist’s responses on “Why I do what I do” and video monitors played their recorded answers for all to view.

The exhibition, which ran from November 17, 2007, through January 26, 2008, offered many different responses about the source of these artists’ creative work. According to Nick Sousanis, founding director of Work • Detroit, the variety of perspectives shown on display and in words “offers an educational and insightful exploration of the origins of creativity.” Sousanis also provided the exhibition viewers with an interactive component that allows them to record their own responses to this central question about the nature of creativity.

What follows are excerpts from five of the U-M faculty who spoke for the WHY project and some examples of their work. A virtual version of the original exhibition can be found on the web at www.whyproject.blogspot.com/.

What compels artists and designers to create? Where does that drive come from?

My name’s Jim Cogswell. Most of what I do is influenced by my background as a painter. About 14 years ago I began making images that were based on an anthropomorphic alphabet. I used the alphabet just as a kind of system for making more complex images in sequences. First I thought of them individually, then I began putting them together in a sequence from A to Z, as if I were putting the whole alphabet up. A while later I realized that these were the building blocks for language. And I was willing to use them in strings to create words, but I didn’t want just any word. So I picked words that were entirely dependent on their context. Words like “this,” “that,” “the,” “for,” some linguists call these words “shifters.” I like that, because I think that whatever we make as artists is entirely dependent on context, and that is a physical context as well as a conceptual context.

Why do I do what I do? I’ve gravitated towards this way of working because it allows me to think through my body, for thinking through my whole being. It allows me to be a maker. I can pick up my work anytime I need to—I have a ready starting point. It is a form of reflecting physically on the components of my life. I grew up overseas as a child of missionary parents in Japan quite
accustomed to living in an environment that I didn't completely understand linguistically or culturally. I was comfortable there. So there's part of me that is quite comfortable living without a ready explanation. I sometimes worry, I sometimes think, that that may not be characteristic of everybody that I'm around. For example, a ready analogy for what I do is, I love music, I listen to music often while I work in the studio alone. But I'm much more interested in what happens to me through my absorption of musical structures than I am by what people are saying in lyrics. I get real tired of lyrics really fast, and it becomes an obstruction to something that I feel is much more profound. So I listen to music that's instrumental primarily or music in languages that I don't understand. That's probably the best analogy for what I make as art, is making music in languages that can't be directly understood.

My name is Anne Mondro.
I'm a mixed-media sculpture artist. I've been working on life-sized crocheted figures of the human form.

Why I do it? Part of it is because it feels good. It's a way for me to express my ideas. As a little girl I had a severe speech impediment, so speaking was hard, and expressing myself verbally was so difficult that I started to draw and color. That to me was my way of expression, and I've been continuing that and it's developed into my passion. Within my work, I really hope that my work speaks to others about issues of empathy and feelings and emotions and things that are significant to who we are.

Well for me, having my own issues, there are feelings of times of embarrassment, times of struggle, and illness within my family. The need to be empathetic is so vital to me, and art is one way that you can reach out to others. You can create a community as well as to express emotions that usually you don't share. I hope my work does that.
I’m Ed West, I’m a photographer. I come to photography through my undergraduate studies in art history, when I became very attracted to Dutch painting and scenes of daily life. As a photographer, I tend to be interested in people; most of my photographs throughout my history have been of people, either portraits or people in their environments.

The work that I’m showing at the gallery is a series of portraits that were made in South Africa of a particular community of people of mixed race in the western Cape. I published a book earlier on the people of South Africa entitled Casting Shadows. In terms of my photography in general, I want the work to be of use. To say that I want the work to be of use means that I want it to be useful to the people who I photograph. And it is useful to them in terms of representation. The people in the book are from formal settlements, squatter camps around the country. They generally don’t get the attention of photographers—or of anyone for that matter.

So when I went to South Africa, it was an opportunity to invest in those people, to spend time with them, and to represent them. In the work I made an effort to be honest in that representation.

Why I’m an artist? I come to it honestly. My father was a painter and a sculptor. I think like all children you look for a space that’s not occupied, and as a consequence I became a photographer. Photography gives me an opportunity to be in the world and to engage with people, which is really what I’ve been drawn to. I want to know about other cultures, I want to know about other people’s lives, I want to participate in those lives and to know that despite cultural differences, there is something at base that connects us. In the work, the hope, of course, is that that connection is made with my audience and that I act as the intermediary for that exchange. Not everyone has the opportunities that I’ve had to travel and to visit these different countries and cultures. And if I can make them available in a way that is empathetic and that makes them present for my audience, then I think I’ve achieved some success.

I’m Nick Tobier, and I do things in public. I also do things in private, but maybe we won’t talk about that. I say I do public performances—that’s how I’ve been describing my work recently. Most often I describe it as situational—not situationist, but situational. That is, if there’s a situation, I’ll try and do something to disrupt it; and if there’s no situation, maybe I’ll make one up.

Why do I do these things? Why do I act out in public? I think, for the most part, I’m aware of this time when I used to go to my studio all the time, and I’d walk through New York where I grew up, where I was living, and I’d see all these amazing things in the street, and I’d open this big door with a padlock, and I’d go inside my studio, and I’d make wood things. Wood sculptures that had absolutely nothing to do with what I was walking through, but was what I did in the studio. What I realized at a certain point was that I had a studio life that was completely separate from the life around me that was the parts of it that were engaged by walking through the city and wandering and getting to know people and getting lost. So I gave up my studio, which I always think was either the bravest thing or the stupidest thing. And I just started to work on the street and be responsive to whatever I came up against. The first thing I remembered doing was finding myself trying to cross the street. The snows had melted, and there was this enormous puddle that actually had become sort of a lake. I watched people walk to the middle of the block so that they could get around the puddle. So I made a bridge to help people cross puddles. The projects that I do now I think are an outgrowth of those things that were utilitarian. They seemed to have an urgency and a purpose, that is, I could make some-
The larger goal is that we all have to find some way to contribute to the world, and I think that’s part of our responsibility as human beings—to be a force for the good, to do something that’s affirmative. So I think earlier in my career, when I was more concerned with art for art’s sake, I found that this way of being is more satisfying because of the connection to people and because of the opportunity to really learn. If we think about making art, we’re thinking about being put in the position of the perpetual learner, the person who has to find ways to say things which have been unsaid. Art is really the best opportunity for that. This is not the repetition of a task, as many people’s lives are forced to repeat tasks. This is really an opportunity to be involved with continual invention and renewal. This is a most positive place to be, and we can’t overlook the virtue of being someone who brings beauty into being in the world. So I think that’s part of my motivation.

I think that basically I’m a storyteller. I like to tell stories. For me, painting and drawing allows me to do this. I also do writing, and oftentimes I write down my ideas and then I’ll paint them. Sometimes I paint my ideas and then write them down afterwards.

As an artist, I try to capture life experiences, drawing on these unique moments to feed my creative vision and build my knowledge about the work while giving it tangible form. We live in this really, incredibly fast-paced culture, and so by sitting down and drawing, or interviewing a person, painting them, I learn much more about them. I find that I can really understand something if I sit down and draw it. So if I’m on a trip to Thailand or Burma or China, I actually sit down and I’ll draw a temple and learn about it. And then often times I’ve had monks come over and sit down and talk with me and look at the drawings. It’s a wonderful exchange.

Drawing, I think like music, is a very universal kind of language. It just simply flows. I would like to make something very important out of it, but it’s a lifestyle, it’s an existence. I’m very happy when I do this. For me, painting and drawing are always equated with seeing and understanding, and this justifies for me the time and energy I put into the act of making images in my studio. I strive for a synthesis between comprehension of the structural integrity of my subjects and the raw power of expressing this through the aesthetic use of form and knowledgeable use of my medium.

I try to pick models that are very interesting to me as conversation partners, as well as a person who will be wonderful in a painting, they can take that mood, they know what I’m trying to do and they go along with me, and it becomes a dialogue, their modeling and my painting.

In my drawing, I try to combine the skills of the past, I try to pass that along to my students, and then I put it with contemporary ideology and techniques. So often I’ll put Renaissance-style drawing in with computer-generated images. I’m trying in my own way, as an older faculty member, to grow along with the students. And I learn from them. And I’m always in school, it seems like. When I’m teaching, I’m learning, and I think that’s one of the reasons that I’ve been in teaching for so long—because I feel like I’m also a student.
The photos on these pages provide a glimpse at the culmination of an artistic collaboration that happens often at the University of Michigan. The performance shown, “Swimming the English Channel,” was one piece of a full program, entitled “Stravinsky Revisited,” presented January 31–February 3, 2008 at the Power Center for the Performing Arts on campus. Amy Chavasse, assistant professor in the School of Music, Theatre & Dance, collaborated with 15 U-M dance students to create “Swimming…” which was performed to five Stravinsky compositions. “It started when I sat down with a giant box set of Stravinsky works.”
I started listening, looking for works that reflected the era they were composed in and of the right duration,” explains Chavasse.

With about eight pieces selected, she began to look into historical events from the years each work premiered, with special attention on Russian history. The final five she settled on were Leon Trotsky’s murder (“an interesting and gruesome event”), the attempted assassination of Vladimir Lenin and the invention of the vacuum cleaner in 1917, Gertrude Ederle’s swim across the English Channel (the first ever by a woman), and the eruption of Mt. Vesuvius.
With the music and events in mind, Chavasse and the students started meeting three times a week in September 2007 to develop the dances. “We didn’t try to mime or act out the events,” says Chavasse. “We created a dance vocabulary related to the events, but also intended that each dance stand on its own. We did a lot of improvising, and I gave the dancers some problems to solve, too. I wanted them to have a stake in the final choreography.”

Chavasse also felt fortunate to be able to work with a video artist, Sue Rees of Bennington College. Rees edited together archival footage from newsreels with other images to set up each
segment of “Swimming.” The costume design, by senior design student Lena Sands, quite coincidentally blended well with the video colors. And in another bit of ingenuity, the property master looked at eBay and was able to buy a classic vacuum cleaner, even if it wasn’t from 1917, for the dancers to incorporate into the performance.

“I’ve taught at both large universities and small schools,” says Chavasse, who came to the U-M in the fall of 2006. “The environment here is really great for creative work. It’s a huge university, but a pretty intimate organism here in the dance department.” S&D.

Suite No. 2 for Small Orchestra
Valse (the invention of the portable vacuum cleaner)
dancers—Stephanie Overton
and Rosario Lionudakis

Adagietto (first woman to swim the English Channel)
dancer held aloft—Samantha Stone
The internet and some creative thinking led to the creation of Block M Records, the University of Michigan’s recording label that posts performances on the internet for anyone to listen to via web streaming or to download for a fee.

“Through Block M Records, works by U-M students, staff, and faculty performers and composers may be recorded, produced, and released,” says Mary Simoni, chair of the Department of Performing Arts Technology in the School of Music, Theatre & Dance. Simoni notes that the record label doesn’t only give student and faculty performers a way to distribute their work, it also provides student audio engineers valuable experience in music production. These student technologists also are gaining experience in audio compression, metadata tagging, and database design and management.

When Block M Records was launched in December, 2005, U-M President Mary Sue Coleman said she was delighted that the University was taking the lead in such a venture. “This project offers manifold benefits to students, faculty, and staff alike by protecting and encouraging the creative process and by making all kinds of music more broadly accessible to audiences everywhere.”

Block M Records, which promotes the convergence of various technologies, allows the University to retain control over its intellectual property by applying a technology transfer model where faculty inventors—in this case, performers, composers, and engineers—receive a percentage return on their invention (e.g., a recording).

“In short,” Simoni says, “intellectual property rights stay with the University.”

Here is how the Block M label works: Louis Nagel, U-M professor of piano, went on a performance tour about the time the label was formed. His concerts featured selected sonatas by Haydn. Soon after the tour, Nagel recorded the sonatas at U-M’s Hill Auditorium with Professor Jason Corey and a cadre of U-M audio engineering students. Nagel authorized Block M Records to release the recordings for electronic distribution. Anyone interested in Nagel’s recordings can visit the Block M Records catalog web page, where all of the label’s recordings are linked to the Apple iTunes Music Store for purchase.

When a commercial label publishes a faculty member’s recording, the company typically requires the performer and/or composer to relinquish some or all of their rights. Under those commercial contracts, the faculty generally receives a very small percentage of sales as royalty. Through this U-M venture, faculty license their recorded performance to Block M Records and retain the copyright to their works. Also Block M Records keeps control over the recording and its production and distribution, and the faculty member may see a greater return in royalties from his or her work.
“I am delighted with Block M Records,” says Christopher Kendall, dean of U-M’s School of Music, Theatre & Dance. “It has powerful implications for our students and faculty as a teaching tool and for the recognition of our School’s many outstanding recordings. It will be fascinating to watch the project develop and to see it help us explore the unique, complex synergy between music teaching and technology.”

Another example of Block M advantages involves U-M faculty Mark Kirschenmann, Katri Ervamaa, and Michael Gould, who are engaged in contemporary improvisation involving trumpet, percussion, violoncello, and electronics. Their avant garde music is less likely to receive a commercial record contract. But their music is vital to U-M’s commitment to performing and teaching across a wide range of styles, Simoni says.

“With the collaboration on recording, producing, and distributing the work, U-M outwardly conveys a commitment to diversity in music making,” says Simoni.

Block M Records benefits U-M students by exposing them to various aspects of audio encoding for web distribution. A student can learn to identify and solve musical problems that result from audio compression. In a hands-on environment, students learn how to process audio data to achieve the highest fidelity possible for online distribution, and how to acquire metadata (data about the music) from concert programs by entering data into software so the correct information is displayed in web-based music services.

The label also sponsored a student competition in 2006 and 2007 called “New Music on the Block.” Hundreds of U-M students submitted original music which they composed, performed, recorded, and produced. A three-judge panel—Erik Santos, associate professor of music composition; John Storyk, partner and co-founder of Walters-Storyk Design Group; and John Merlin Williams, director of the Digital Media Commons in the Office of Technology Transfer, and the Scholarly Publishing Office of the University Library. Block M Records is a subsidiary of the Internet Publication Project—a campuswide, collaborative-research program that explores the convergence of multiple technologies to support web-based publication of media-rich scholarly and creative research. S&D

“With the collaboration on recording, producing, and distributing the work, U-M outwardly conveys a commitment to diversity in music making.”

—Mary Simoni

Block M Records is managed by the School of Music, Theatre & Dance with the support and guidance of the Office of the Vice President for Research, the Office of the Provost, the Division of Research Development and Administration, the James and Anne Duderstadt Center,
CONVERGENCE BY JON RUSH (1990)

This stainless steel object was created by "inverting one ‘cage of triangles’ against the other," explains Rush, who sought to symbolize ISR’s work in the study of social change. A professor emeritus of U-M’s School of Art & Design, Rush is also the sculptor of Sunstructure, a piece in the Matthaei Botanical Gardens, as well as Onus and the Koszonom Raoul Wallenberg Memorial, both on North Campus. Convergence was made possible by a grant from the Michigan Commission on Public Art and gifts to the U-M.

SUMMARIES OF ARITHMETIC THROUGH DUST, INCLUDING WRITING NOT YET PRINTED
BY ALICE AYCOCK (1992)

Aycock described her piece, made of aluminum and steel and painted white, as “elements taken from various two- and three-dimensional scientific diagrams which attempt to explain various aspects of the universe—for example, the scattering of particles, models of spiral galaxies, the curvatures of space... These forms are pervasive in the art and culture of many societies both past and present.” The sculpture was a gift of the Engineering Class of 1933.

DAEDALUS BY CHUCK GINNEVER (1977)

The sculpture of Cor-Ten steel refers to the escape of the Greek hero Daedalus on wings from Crete. The “five parallelograms... fan out and enclose a large concave space nearly 11-feet deep... The effect is of a serenity that is at odds with its size.” Pedestrian traffic flow makes it possible for people to look at it from every angle, as the piece changes dramatically depending on the angle from which it is viewed. The piece was funded with private gifts by supporters of the Museum of Art and an NEA grant, in recognition of the 30th anniversary of the Museum’s establishment as a separate administrative unit in 1946.

THE CUBE ENDOVER BY TONY ROSENTHAL (1968)

Although seemingly massive, the Cube will rotate on its axis, given a gentle push. The Cube, which is made of Cor-Ten steel and painted black, measures 15-feet wide by 15-feet tall. It was a gift of the Class of 1965 and the artist, who was a U-M alumnus ('36).
VIEW FROM WASHINGTON, DC

Science Faces an Uncertain Future

Research faces a challenging year in Washington. At the close of 2007, expected FY08 increases for the National Science Foundation (NSF) and the Department of Energy (DOE) Office of Science disappeared during the final negotiations between Congress and the White House. This dealt a blow to scientific initiatives across the country. The scientific community now is working to recover in a political environment largely frozen by the presidential campaigns. Preliminary indicators give reason for some hope, but real challenges remain.

The President’s FY09 budget request includes some bright spots, but also troubling signs. The White House requested significant increases for the NSF, the DOE Office of Science, and the Pentagon’s basic research portfolio—a 13 percent increase for the NSF, an 18.9 percent for the Office of Science, and 4 percent for defense basic research. Unfortunately, the Administration held the National Institutes of Health (NIH) funding flat at $29.3 billion and pegged science programs at NASA for cuts.

Following the release of the President’s budget proposal, the House and Senate passed their own FY09 budget resolutions in mid-March. These annual resolutions provide general-spending blueprints across broad budget categories. In physical sciences, both chambers supported the President’s request for strong increases. For the NIH, the two chambers offered more support than shown by the executive branch. The Senate recommended raising the NIH budget to $3 billion. The House voted for additional NIH funds, but did not specify an amount.

To date, 107 institutions have earned AAHRPP accreditation. The latest endorsements were announced March 20 in Washington, D.C.

“The University research community worked hard for this, taking on the challenges of a rigorous self-assessment process in order to achieve accreditation,” says Judy Nowack, associate vice president for research and director of the Human Research Protection Program.

“We are committed to striving for the highest standards of ethical and regulatory compliance while supporting creative and scientifically sound research,” she says.

The University has more than 5,000 active research projects involving human participants. The areas of study involve medical and health research, as well as social and behavioral sciences topics. Every project is reviewed and monitored by one of nine boards—seven on the Ann Arbor campus and one each on the Dearborn and Flint campuses.

“We view accreditation as the culmination of an array of efforts we have put in place over several years, aimed at enhancing our human research program,” says Vice President for Research Stephen Forrest, the University’s institutional official for human research.

AAHRPP accreditation is valid for three years, and accredited organizations submit annual reports on the status of their human research programs. For more information about the Human Research Protection Program, go to www.research.umich.edu/hrpp.

Next, the executive and congressional branches will wrangle over allocations for every federal agency. Already there are concerns that the tight budget climate may make it difficult to find additional money for research. Final decisions remain months away and may not be made until after the presidential election—freezing money for federal programs for at least a few months after the end of FY08. Unfortunately this means that federally-supported researchers and scientists should expect once again to experience the uncertainty that marked the end of FY07.

—Sarah Walkling, Director of Federal Relations for Research, Assistant Director, U-M Washington, DC Office

RESEARCH NOTES

Human Research Program Achieves National Accreditation

The Association for the Accreditation of Human Research Protection Programs has granted full accreditation to U-M, one of 15 institutions to receive the group’s endorsement this year.

The AAHRPP is a nonprofit organization that works with universities, hospitals, and other institutions that conduct biomedical, behavioral, and social sciences research involving human participants. The group accredits institutions that demonstrate they provide participant safeguards beyond the threshold of state and federal requirements.
James R. Baker, Jr., M.D., a scientist in the Medical School and a successful entrepreneur, is the Distinguished University Innovator for 2008. Baker has conducted breakthrough research in nanotechnology materials and launched two startup companies based on the results.

Baker, Ruth Dow Doan Professor and director of the Michigan Nanotechnology Institute for Medicine and the Biological Sciences, received his award on April 21 when he also gave a public talk on “Taking Nanotechnology from the Bench to the Bedside.”

“Professor Baker is an outstanding researcher and innovative thinker in both scientific and entrepreneurial terms,” says Stephen Forrest, vice president for research. “He also has been a tremendous advocate for thoughtful changes to the University’s research climate so that more faculty research can see a life beyond the academic realm. I am extremely pleased he has been selected for this award. I especially value his active role in promoting the Michigan Innovation Initiative, a concerted, ongoing, campus-wide effort to enhance the entrepreneurial activities of our academic community.”

For his own part, Baker is happy to help the University expand its entrepreneurial ways. “I’m pleased to be recognized for my efforts to make progress in my research and then working hard to see these discoveries applied in the real world,” Baker says. “But I’m hardly the only one doing this. There are many good researchers on campus involved in similar activities, and I hope even more do so in the future.”

Baker’s research is in the area of immunology and host defense, evolving into nanomaterials and their applications in medicine. Recently he has been involved in work concerning gene transfer and drug delivery. These studies have produced new vector systems for gene transfer using dendritic polymers, which have the potential to revolutionize pharmaceutical therapy. Baker’s work with synthetic lipid and polymeric nanostructures has resulted in the development of nanoeumulsions as a new class of antimicrobial agents with activity against bacteria, spores, fungi, and viruses.

Baker’s nanoeumulsion technology became the basis for NanoBio Corporation, which was founded in 2000. The Ann Arbor-based NanoBio is developing treatments for cold sores, nail fungus, and mucosal vaccines for hepatitis B and influenza. Other products in development target genital herpes, shingles, and methicillin-resistant staphylococcus aureus (MRSA).

Through early 2006 a total of $28 million was invested in the company’s NanoStat™ technology platform through grants and angel investments. In August 2006 NanoBio secured an additional $30 million in private equity funding from Perseus LLC, which is being directed toward advancing the clinical programs for the company’s lead product candidates.

A second startup, Avidimer Therapeutics, was launched in 2003 by Baker to develop plans and answer questions from a panel of distinguished venture capitalists and entrepreneurs who serve as judges and also provide valuable feedback on the business plans.

“Competitions are a great way for students to fine-tune business plans, hone presentation skills, and prepare for life after the University — whether that is with a start-up or as an innovator in an established company,” said Tom Kinnear, executive director of the Zell Lurie Institute. “The Institute has enjoyed working with the University’s business plan competition teams, and we are proud...
pharmaceuticals formed from dendrimers, nanometer-size polymers that serve as an inert bio-scaffolding. In some applications, therapeutic or diagnostic agents are chemically attached to this scaffolding. In other uses, the dendrimers are modified and serve as the precision guidance system which directs therapeutic add-ons to disease sites, while bypassing healthy tissue.

As applied to cancer, avidimers offer dramatically improved tumor-specific delivery, resulting in improvements in both efficacy and safety relative to the corresponding untargeted drugs. Additionally, by incorporating an anti-cancer drug into an avidimer, the drug’s distribution in the body can be altered in a controlled manner, potentially broadening its spectrum of activity to include tumor types to which the untargeted drug fails to show activity.

Baker joined the faculty in 1989 and currently is professor of medicine and division chief of allergy and clinical immunology in the Department of Internal Medicine. In 2001 he became a professor of biomedical engineering in the School of Engineering.

**Nano-based Material Proves to be as Strong as Steel**

Engineering researchers in the College of Engineering have created a transparent material that is as strong as steel. In the Oct. 5, 2007 issue of *Science*, Nicholas Kotov and his colleagues showed that by mimicking a brick-and-mortar molecular structure found in seashells they could create a composite plastic that’s as strong as steel but lighter and transparent. The material is composed of layers of clay nanosheets and a water-soluble polymer that shares chemistry with white glue. This research demonstrated for the first time that the super-strong properties of many nanoparticles could be bonded together on the macroscale and retain the strength of the building blocks. Kotov says that further development could lead to lightweight armor for soldiers or police and their vehicles or aircraft. *WIRED* magazine named this material one of the Top 10 Scientific Breakthroughs of 2007. S&D

**Faculty Honors**

The National Academy of Engineering elected 65 new members in February, including two from the University of Michigan: Dennis Assanis, Arthur F Thurnau Professor, Jon R. and Beverly S. Holt Professor, director, W.E. Lay Automotive Laboratory, and co-director of the GM Engine Systems Research Laboratory, Department of Mechanical Engineering, College of Engineering; and Pallab Bhattacharya, Charles M. Vest Distinguished University Professor, James R. Mellor Professor of Engineering, Department of Electrical Engineering and Computer Science, College of Engineering.

C.K. Prabahad, Paul and Ruth McCracken Distinguished University Professor of Strategy in the Stephen M. Ross School of Business, was ranked No. 1 on Suntop Media’s “Thinkers 50,” a biennial ranking of the top 50 management thought-leaders worldwide.

The Undergraduate Research Opportunities Program annually recognizes five Outstanding Research Mentors with a $1000 honorarium. Students nominate the faculty mentors, then a student panel selects the winners. For 2007–08, they are: Augustin Holl, professor of anthropology, College of Literature, Science, and the Arts; Catherine Keegan, assistant professor of pediatrics and communicable diseases, Medical School; Emil Lauzzana, lecturer in architecture, A. Alfred Taubman College of Architecture and Urban Planning; Armando Matiz Reyes, D.D.S., health behavior and health education, School of Public Health; Sheryl Olson, professor of psychology, College of Literature, Science, and the Arts.

The John Simon Guggenheim Memorial Foundation awarded 190 fellowships in 2008, including seven to U-M faculty members: Geri A. Allen, associate professor of jazz piano and improvisation, for music composition; Sheldon Danziger, H. J. Meyer Distinguished University Professor of Public Policy, for a project on anti-poverty policies; Phoebe Gloeckner, assistant professor of art and design, for a graphic narrative; David M. Halperin, W. H. Auden Collegiate Professor of the History and Theory of Sexuality, for a project titled “How to be gay”; Paul Christopher Johnson, associate professor, Center for Afroamerican and African Studies and Department of History, for a project on religion and the purification of spirits; Richard Primus, professor of law, for a project on constitutional authority in the wake of civil war; Ashutosh Varshney, professor of political science, for a multi-country study of cities and ethnic conflict.

In each issue of Search & Discovery, we list a few of the faculty who were recently recognized for their outstanding achievements in research and scholarship. Please send information on these achievements to searchanddiscovery@umich.edu.
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