UNIVERSITY OF MICHIGAN • SPRING 2002

Kinesiology is movement

IN THIS ISSUE:

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Energy, progress, positive change. In all of its definitions, the word movement describes the dynamic state of kinesiology today. Movement encompasses the scientific study of human motion, the importance of activity on growth and development, the role of sport in society, the exploration of new directions, and emerging trends. movement brings you research findings and thoughtful insights on developments in kinesiology, as well as continuing updates on faculty, students, and your fellow alumni.

Associate Professor Melissa Gross (standing) in the Movement Dynamics Laboratory with undergraduate student Kelly Lenard (see page 7)

D. C. Goings

D. C. Goings

Victoria Haehl and Dean Beverly Ulrich with a participant in the Motor Development Lab (see page 20)

SAVE THE DATE!

Kinesiology Alumni Reunion

Friday, October 25, 2002

3:30-5:30 Kinesiology Laboratory Tours

3:30-5:30 Career Networking Session

6:30 Reception

7:00 Dinner and Award Ceremony

Call (734) 647-2689 for information

Published two times a year by:
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Ann Arbor, MI 48109-2214

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Greetings, and welcome to our latest edition of Kinesiology's *Movement* magazine. With each publication we try to provide you, our alumni and friends, with a sampling of the latest happenings within the Division and to feature some activities of our alumni as well. The content in this issue ranges from "up close and personal" stories about two of our outstanding students, to faculty updates, to a feature on one of our alumna who blazed new trails to become one of the very small minority of women orthopedic surgeons in the US. With each issue we strive to create a better publication for you. Please send us your comments; let us know what you like and what you would like us to add.

In the past few issues of *Movement*, we have been publishing stories that focus on the research of clusters of faculty who work in a related area or specialty. This time we focus on biomechanics. Biomechanics is far from new to the Division of Kinesiology, but I believe the work our faculty members are doing today is quite different from the topics studied in biomechanics even ten years ago. (See article on pages 2-7). If you are an alumnus, you probably took at least one course in biomechanics as an undergrad, but it may have been called kinesiology. As the areas of study and the professional careers available to people in the area grew, the term kinesiology, which means the study of movement, began to be used to represent the entire field (e.g., the Division of Kinesiology encompasses a variety of specialties). Biomechanics became the dominant term to refer to work in which people strive to explain and affect the forces that act on the body or that are created by the body as we move. Melissa Gross and Dan Ferris, our biomechanists, are working on exciting new issues within this field, from the musculoskeletal dynamics of expressive movement to the creation of pneumatic muscles that can interface with orthotic devices and help stroke and spinal cord injury patients recover the ability to walk.

The 2001-02 academic year has been exciting, productive and challenging as well. It has been one in which I have experienced great pride as well as sadness in my role as Dean of Kinesiology. I am extremely proud of the outstanding class of 140 first-year students that entered in the fall, and saddened by the fact that they had to experience the national tragedy of September 11th within a few days of leaving their families to embark on their college careers. I was proud of the way these students and our continuing students, staff and faculty rallied to support each other and the families of victims. I was sad to see the President and Provost of the University of Michigan move on to new positions. Lee Bollinger and Nancy Cantor were powerful leaders of this public institution and strong advocates for Kinesiology. Yet, in true Michigan tradition, strong and experienced administrators were selected to serve as Interim President—Joseph White, former Dean of the School of Business, and Interim Provost—Paul Courant, former Associate Provost. Both have been steadfast in their support of Kinesiology and each has a strong base of understanding our needs and strengths. Most sad and closest to many of our hearts was the loss in November of B. Patrick Maloy, when he succumbed to his year-long battle with cancer. Pat was a faculty member for seventeen years in Sport Management and Communication, specializing in sport law and facilities management. He distinguished himself as a lawyer and scholar, but the aspects of his career he loved most were teaching his students and collaborating with his colleagues. During his last months, Pat was determined to fulfill his academic responsibilities but sometimes his will was not enough. Faculty, staff and students responded without hesitation to his needs and ultimately pulled together to help each other, and the Division as a whole, deal with this great loss. Pat Maloy was a person who reached out to others, who built not just professional relationships but personal ones; he gave freely of his time and energy to everyone. I am proud to have known and worked with Pat. We will miss him very much. (See page 17 for more on Pat).

We look forward to 2002-03, and we plan to gather for our next Kinesiology alumni reunion on Friday, October 25, 2002. I hope you will mark that date on your calendar and make plans to join us (see details on page 12). We will expand the event this year to include an open house and tour of the Kinesiology Building, a networking event for alumni and current students, and a banquet on Friday evening in the Michigan Union Anderson Rooms. There will be tickets available to purchase for the home football game against Iowa on Saturday, October 26. We regretted having to cancel the alumni reunion last year, but in the wake of September 11th it seemed the right thing to do. We hope that you will consider it especially important this year to attend the October 25 event, and greet old friends, strengthen existing relationships, and make new friends among the faculty, staff and friends of Kinesiology.

On behalf of all of us in Kinesiology, I want to thank you for your continued support. I wish you much health and happiness in the months ahead.

Best wishes,

Beverly D. Ulrich

Beverly D. Ulrich
Professor and Dean

MAKING A DIFFERENCE WITH RESEARCH FINDINGS

Martin Vloet

THE HUMAN NEUROMECHANICS LABORATORY

William was one of the 600,000 people who suffered a stroke last year in this country. The stroke affected control of the muscles on the left side of his body, leaving his mouth distorted and his left arm limp. His nervous system was so damaged, he "forgot" how to walk with his left leg. William spent the next several months going to physical therapy, doing home exercises, and learning how to do tasks that used to be simple for him to perform. After almost a year, he eventually was able to walk with a cane, move his arm with a little control, and return his facial expression to normal.

Assistant Professor Dan Ferris is committed to improving the rehabilitation process of stroke and spinal cord injury patients. There are over 200,000 spinal cord injury patients in this country, with the two main causes of such injuries being car accidents and gunshot wounds. More than 4.5 million Americans alive today have suffered a stroke. Strokes occur when a blood vessel bringing oxygen to the brain bursts or is clogged by a particle or blood clot, killing brain cells due to lack of oxygen.

Stroke patients and spinal cord injury patients have several things in common. Both injuries produce disordered motor control via damage to neurons. The negative effects can vary from minor motor disruption to complete paralysis. It takes a long period of rehabilitation for patients to "re-learn" how to do everyday tasks, and in many cases, patients will have motor deficits their entire lives. For all patients, the rehabilitation process is slow and the outcome is unpredictable.

Assistant Professor Dan Ferris walking on a treadmill with his pneumatically powered lower limb exoskeleton.

Dr. Ferris conducts research that looks at how our nervous systems interact with our musculoskeletal systems to help us move. "I focus on locomotion, both from a basic science aspect and from a clinical aspect," said Dan. He uses a combination of techniques from engineering, neuroscience, and mathematics. He summarizes the goal of his research as looking for answers to two main questions:

- How adaptable is the nervous system to control locomotion?
- How can we design gait rehabilitation devices to help patients re-learn how to walk after a stroke or spinal cord injury?

The Human Neuromechanics Laboratory in the Division of Kinesiology, where Dr. Ferris conducts his research, is newly renovated and contains first class, state-of-the-art equipment for studying human gait. Dr. Ferris literally "bounces" with enthusiasm when he stands in his lab and points out the various features throughout the room that help him with his research. "The laboratory has a combination of traditional equipment for studying human gait and some special devices that allow us to do innovative studies," he said. There is a high-speed video system, a powerful treadmill, a force platform, and a sixteen-channel telemetry electromyography system, among other pieces of equipment. The video system measures limb movements of subjects as they walk and run. The force platform is like a very sophisticated bathroom scale that measures forces vertically and horizontally with extreme accuracy. The electromyography system records the electrical activity that nerves send to the muscles to activate them. All of these data are combined automatically via computers while the monitors show real-time images of the subjects' movements. The special devices are real-time robotics hardware that allow Dr. Ferris and his students to actively perturb the movements of healthy subjects and assist the movements of neurologically impaired subjects.

Dr. Ferris became interested in rehabilitation because of the injuries he experienced while playing football in high school in Lake Mary, Florida, and for the University of Central Florida in Orlando. "I broke my back, both legs, my foot, my hand, and my nose playing football....all at different times," said Dr. Ferris. Rather than continue breaking his body playing the sport, he began to look at solutions to the problem. As an undergraduate, he worked in the university library and became fascinated by books on biomechanics and muscle physiology as he checked them in and out to students. This experience led him to apply to graduate schools in movement science as he was finishing his bachelor's degree in mathematics at Central Florida. He went on to obtain his master's in exercise physiology from the University of Miami in south Florida. His continued interest led him to obtain his Ph.D. in human biodynamics from the University of California, Berkeley.

The combination of personal experience, educational pursuit, and research curiosity resulted in Dr. Ferris' development of a pneumatically powered lower limb exoskeleton. The exoskeleton is an orthosis (i.e. brace) for the legs that can assist leg movements during walking. It is powered by artificial pneumatic muscles that function like balloons. By pumping air into the artificial muscles, they become fat and short, producing tension to power the exoskeleton. The exoskeleton should provide several advantages when worn during physical therapy. It will reduce the need for manual manipulation by the therapists and it will help monitor the progress of the patient during the rehabilitation process.

In part, Dr. Ferris credits his idea for the exoskeleton with the fact that he learned to read with comic books. "Whenever I say exoskeleton, people think of comic book super heroes like "Iron Man," the movie *Aliens* with Sigourney Weaver, or the claymation movie *The Wrong Trousers* with Wallace and Gromit," he said. "Iron Man" has a body suit made of steel that allows him to fly and lift incredibly heavy objects. In *Aliens,* Sigourney Weaver fights the last remaining alien with a huge metal exoskeleton during the movie climax. Wallace is an inventor in a series of British claymation movies that gives his dog Gromit a pair of electrically controlled metal pants (i.e. "the wrong trousers") that can take Gromit for walks without Wallace going along. At one point in the movie, Wallace wears the metal trousers while he is asleep and the movie villain controls the trousers with a joystick. "The device in *The Wrong Trousers* is similar to what I would like to develop," said Dr. Ferris. Perhaps he will.

Dr. Ferris was recently awarded

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Assistant Professor Dan Ferris and graduate student Keith Gordon in the Human Neuromechanics Laboratory

$150,000 from the Christopher Reeve Paralysis Foundation to work on the project. He plans to use the funding to develop a full bilateral exoskeleton to assist spinal cord injury patients with gait rehabilitation. Dr. Ferris is also working on a unilateral version for stroke subjects and has applied to the Whitaker Foundation for funding on that project.

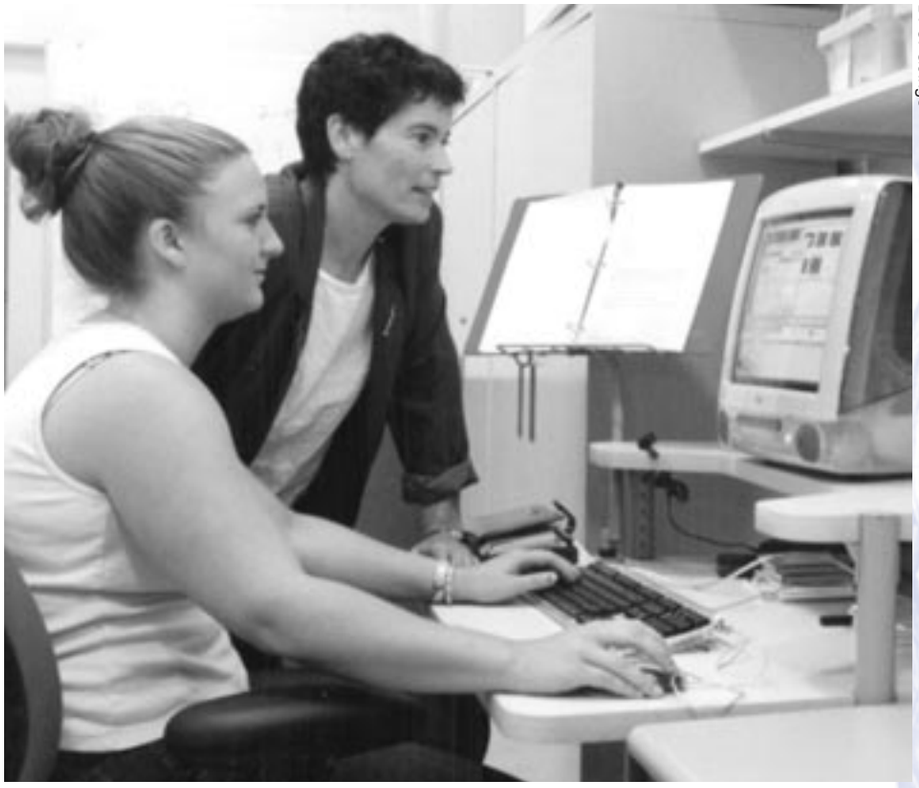
In another line of research, Dr. Ferris is looking at potential therapy benefits of using electrical stimulation to promote motor learning. Recent studies indicate that such stimulation may have therapeutic effects that allow patients to regain lost motor control if the electrical stimulation is tied to the patient's voluntary efforts. By using his real-time robotics control hardware, Dr. Ferris couples electrical stimulation to the level of effort from the patient. As a result, the more the patient tries to do a movement, the stronger the electrical stimulation. The advantage of this method would be the resulting stimulation of the patient's own muscles. If Dr. Ferris finds electrical stimulation to be effective, it may become an alternative to the exoskeleton.

Dr. Ferris also uses mathematical models and computer simulations to study the interaction of the nervous system and the musculoskeletal system. Simple nonlinear differential equations can reproduce the basic output pattern of the nervous system during walking. By connecting these equations to different models of the human body, Dr. Ferris can determine what aspects are critical to the control of leg movements. Most of this work is basic research right now, but Dr. Ferris hopes that he will eventually implement the mathematical models as an alternative control strategy for the lower limb exoskeleton.

The last line of research Dr. Ferris plans to pursue at Michigan will require building a reduced gravity simulator in the laboratory. The simulator will have a harness suspended from the ceiling above the treadmill. Dr. Ferris built previous reduced gravity simulators in Berkeley and Copenhagen during his graduate education. "The reduced gravity simulator will allow us to examine the way people would move on the moon or Mars right here in the laboratory," said Dr. Ferris. The main use of the simulator will be to understand how astronauts can better adapt to different gravity levels. Astronauts are very uncoordinated when they return to Earth from missions in micro-gravity. Dr. Ferris studies the mechanics and neural control of human subjects walking and running at different gravity levels to test ideas about the motor adaptation process.

When Dr. Ferris is not teaching or conducting research, he pursues his avid interest in volleyball. He travels to Windsor as frequently as he can during the winter so that he can play on the indoor sand volleyball courts at a local establishment. He is also a member of the Biomechanics Resource Advisory Team for USA Volleyball.

THE MOVEMENT DYNAMICS LABORATORY



D. C. Goings

Associate Professor Melissa Gross (standing) with undergraduate student Kelly Lenard in the Movement Dynamics Laboratory

Joy, anger, surprise, fear, disgust, sadness—how are ordinary body movements altered during such expression? This is a simplified description of the research question Dr. Melissa Gross seeks to answer in one of her main topics of research, the biomechanics of expressive movement. She wants to know more about the features of musculoskeletal dynamics that occur with expression in human movement. Dr. Gross will quantify such expression in biomechanical terms. "I want to know how the expression affects movements from a basic science standpoint," she said.

The Movement Dynamics Laboratory, where Dr. Gross conducts her research, is one of Kinesiology's newly renovated laboratories. State-of-the-art equipment includes a digital video analysis system that captures motion in real time. There is a force plate in the laboratory floor that, when stood upon, assesses the amount of force exerted. It will ultimately be used to

measure how the amount of force changes when different expressions are reflected in human movement. The equipment is tied into and "talks" to the computer system, where the data are recorded.

How does Dr. Gross manage to record such expression? She collects movement data from dancers and actors as they perform the expression. For example, she collaborated with Dance Professor Peter Sparling, and invited his dance composition class to participate in a laboratory experiment. The dancers were asked to improvise dance movements to portray a variety of emotions. She will also conduct studies with actors, who will be asked to "get into the role" of a script while data are collected.

One of the goals of this work is to improve the quality of computer simulations of human movement. Such computer simulations can be used to study a number of movements that include analyzing a reach, walk, or run by one person, to choreographing dance movements by several people. The computer simulations allow the researchers to manipulate movements on screen, when actual people are not available to attend the session.

Dr. Gross has been interested in the study of movement almost all of her life. She has always loved to ski and hike. "I always danced informally," she said. She didn't actually study dance, though, until she began her bachelor studies, where she really became interested in how the body makes movement. She graduated with a B.A. in dance with high distinction from the University of Colorado in Boulder.

The undergraduate kinesiology course that Dr. Gross took was pivotal to her career. She had a keen sense of interest in the subject and she so excelled in the class that her instructor asked her if she had considered graduate school. In fact, she hadn't, but the encouragement from her instructor led her to the University of California at Los Angeles, where she graduated with an M.S. in kinesiology. She stayed on to obtain her Ph.D. in kinesiology biomechanics.

D. C. Goings

Associate Professor Melissa Gross studies and analyzes a number of movements that include reaching, walking, running, and dancing.

Dr. Gross is interested in how the physical nature of the body affects and interacts with control, and how structure influences and determines the movement. She seeks a basic understanding of those issues and how they affect the function outcome. She strongly believes in and uses an interdisciplinary approach to study the biomechanics of human movement. Her projects include:

- *The Functional Ability and the Menopausal Transition Project.* Funded by the National Institute for Health, with Principal Investigator Dr. Mary Fran Sowers, this study is being conducted on women who are age-eligible (between 47 and 52 years) to experience menopause. Dr. Gross is analyzing body movement data on approximately 1,000 women as they climb stairs, rise from a chair, lift an object, walk, and reach as far as possible. She is collecting the biomechanical data and will be integrating it with other data such as hormone status, osteoarthritis, and self-reports of functional ability. The goal of the study is to understand if there is a relationship between menopausal status and functional ability or whether loss of function is secondary to other factors such as body mass, body index, and bone density. There are currently no data on the subject, thus the results of this research will give doctors more knowledge and help women understand more about themselves.

- *A study of the Role of a Professional Society in the Careers of Women Scientists.* Dr. Gross served from 1999-2000 as president of the American Society of Biomechanics. She was only the second woman president in a 25-year history of the organization. Her professional experience in the organization led her to an interest in conducting a study of the effects of professional society participation on the careers of women. Participation in outside professional activities is one of the criteria for academic success, but little is known beyond that. Dr. Gross will document the participation of women in the American Society of Biomechanics over 25 years. In addition to providing specific information about this exemplar scientific organization, the project will serve as a model for future studies of other research societies.

- *Rackham Interdisciplinary Summer Institute.* For the past three years Dr. Gross has participated in the Rackham Summer Interdisciplinary Institute Program. She was a Rackham fellow in 2000; she served as a co-director

in 2001; and she will serve as a co-director in 2002.

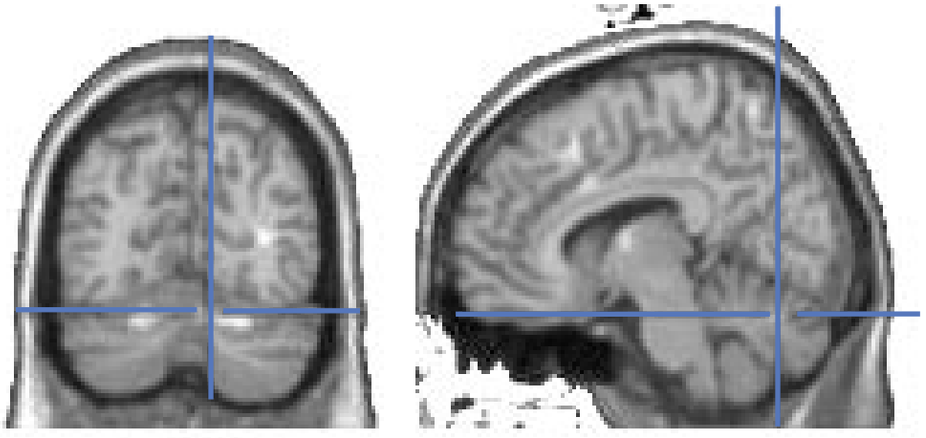
The Summer Institute is a month-long workshop that promotes faculty and student collaboration across the campus. The Institute provides a community where students and faculty can explore opportunities and concerns about the integration of interdisciplinary research and teaching, explore pedagogical tools, and then create databases, bibliographies, and materials that document the outcome of the workshop. Each year the Institute focuses on a specific theme.

The 2002 theme for the Summer Institute is "Explorations in Scale: Size, Measure, and Value." Dr. Gross is co-director with Dr. James Porter, professor of classical studies and comparative literature. Participants will explore scale as a unifying and diversifying concept, how it enables, delimits, and represents the work of researchers, artists, students, and teachers.

Stradivarius as Biologist: Cultivating Bel Canto through Sound and Vision. Dr. Gross will co-teach this new course in the fall of 2002, which will introduce basic principles from anatomy, physiology, biomechanics, perception, and vocal health as they relate to vocal production. *Bel canto,* when translated, means "beautiful singing." The course will examine the dynamically varying posture of the body and the muscular activity as people sing. Faculty members from Engineering, Music, Otolaryngology, and Art & Design will co-teach this course.

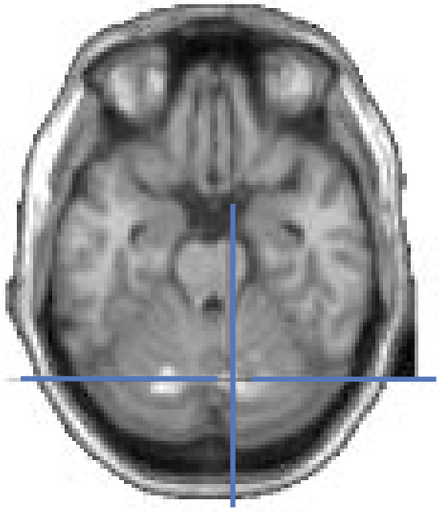
When she is not doing research or teaching, Dr. Gross enjoys raising her daughter Marina and observing her many expressive movements.

THE NEUROMOTOR BEHAVIOR LABORATORY



"The ultimate goal would be to know everything about how the brain works."

— Dr. Rachael Seidler



These functional magnetic resonance imaging (fMRI) scans show parts of the brain that were active in subjects learning to perform complex sequences of finger movements. The images shown are from experiments conducted during Dr. Seidler's postdoctoral training with Dr. Ashe at the University of Minnesota.

When people participate in Dr. Rachael Seidler's research at the new Functional Magnetic Resonance Imaging Center on the UM North Campus, they can expect to work with a computer and a joystick, but not for the purpose of playing any of the popular computer games. The joystick used in Dr. Seidler's study is equipped with potentiometers that turn it into a motor behavior measurement device. The potentiometers record data as the person moves the joystick to reach a target on the computer desktop with a cursor.

"Research participants lie in an MRI scanner while wearing LCD goggles that allow them to see the computer screen as they work with the joystick," said Dr. Seidler. The scanner allows researchers to look at the parts of the brain that are contributing to the accomplishment of the task performed. For example, when a person moves a foot, a certain area of the brain is highlighted on the scan, with a slightly different area activated when an arm is moved.

"This is exciting technology," said Dr. Seidler. "We can acquire images of the brain at a resolution of 1-2 cubic millimeters (one voxel), and then we can look for voxels with high activity that are statistically, significantly active for one task in comparison to another." The mapping carries through to both the motor and sensory responses.

Another task that people are asked to perform while lying in the MRI scanner involves working with a button box, which is more technical than the name sounds. The box has four buttons that correspond to four areas on the

Dr. Rachael Seidler's research in the Neuromotor Behavior Laboratory

computer screen. The computer lights up in a certain area on the computer monitor, and people are asked to press the corresponding button on the box, and data are collected on the reaction time.

Dr. Seidler's research goal is to answer complex questions such as:

- How does the brain control movement?
- How does this change with learning?
- How can we take advantage of prior learning experiences?

The sophisticated equipment at the FMRI Center is very useful in assisting researchers collect data to help answer such questions. "The scanner allows us to observe the associated brain activity," said Dr. Seidler.

Dr. Seidler collects data in the Neuromotor Behavior Laboratory, one of the newly renovated Kinesiology labs, to look at behavior, performance characteristics, and reaction time. The Neuromotor Behavior Laboratory is equipped with state-of-the-art technology that includes motion analysis cameras and the same type of button box set-up that exists at the FMRI Center. Laboratory tests with the button box are conducted using two different methods—by introducing the stimuli in a sequential pattern or in a random pattern.

"We work with visual motor learning as people work with the joystick, and we distort the target or rotate the cursor in order to change the way it moves," said Dr. Seidler. People learn fairly quickly to adjust to the distortions. "The errors get smaller as people are learning," she said. Research has shown that fewer areas in the brain are utilized once a skill becomes learned. Her current work examines how people take advantage of prior learning experiences to facilitate new learning.

"My goal is to take note of paradigms that accelerate motor learning in young adults and to see if these paradigms can be translated to help older adults or patients with Parkinson's disease learn in the same manner as a younger person," said Dr. Seidler. She said that the research results could also be used to serve as a neurological guide for surgery so that brain tissue is not removed from areas that will affect critical functions, such as speech or movement.

Dr. Seidler began her position as a research scientist in kinesiology last fall. She grew up in Oregon and earned her bachelor's degree at the University of Oregon, where she studied exercise science and biology. She obtained her M.S. in biomechanics and her Ph.D. in motor control at Arizona State University. She did postdoctoral training in neuroscience at the University of Minnesota. She continues to learn new motor skills herself, and is enrolled in a U-Move swimming class, with the goal of doing a triathlon some day.

— *Cheryl Israel*

Professor Emerita RUTH HARRIS, A Teacher Ahead of Her Time

I tried for forty years to educate students that Kinesiology is the scientific study of movement. We were scientists, and my goal was to help students teach better, coach better, and perform better by understanding how to analyze motion. — Professor Emerita Ruth Harris

Professor Emerita Ruth Harris was introduced to the world of studying movement when she was very young. "My father fished me out of a pond when I was three years old," she said, "and the next year I started swimming lessons." She gained an interest that never waned. "It was my lifelong love of swimming and teaching while in college that really lured me into the field of physical education," said Ruth.

She was lured into a teaching career that lasted 44 years, 41 of which were with the University of Michigan (1946-1987). "Although I taught a variety of sports, I was hired as a specialist in kinesiology (today called biomechanics) and adapted physical education," said Ruth.

Kinesiology used to be an applied anatomy class with the emphasis on origin, insertion, and action of muscles. A few laws of physics that affected muscle action were included. Dr. Harris began emphasizing physical principles and the action of muscle groups rather than individual muscles. She was a teacher ahead of her time. Long before it became a popular teaching method, she livened up her lectures with in-class demonstrations to illustrate the theories she was discussing. "I acted out the simple laws of physics by doing things that illustrated the law rather than just stating it. Simply stating a law doesn't mean anything to a person with little or no background in science, which was true of the majority of our students in the Kinesiology undergraduate class," she said. "That is why I was so delighted when Dr. Margaret Bell, chair of the Women's Department, asked if I would add a laboratory class to the two hours of lecture."

Dr. Harris felt that the students who were really interested in her undergraduate kinesiology course would be candidates to go on for their master's degree in what was then physical education, but would become kinesiology. She was committed to teaching a class that would hold their attention.

She used a variety of examples. During a lecture class, she would have students hold a book away from their bodies, then closer to their bodies, to observe that an object feels heavier when held at a greater distance—demonstrating the concept of torque. In the lab that followed, batting with the hands in different positions might be used to relate the ideas to teaching.

In another instance, Dr. Harris might have students lift a book from a table or lower it slowly to a table so they could feel the effect gravity had on the contraction of a group of muscles—then relate this same idea in the lab to doing exercises to strengthen certain muscle groups. "This was something they would need to understand if conducting an exercise class or helping someone recover from an injury," she said.

WORKING WITH Ph.D. STUDENTS

Dr. Mary (Peggy) Grattan conducted a research project under Dr. Harris' direction when she began her Ph.D. in kinesiology. "I hold Ruth dear to my heart. She was indeed an inspiration and a lovely experience in my graduate training," she said. Dr. Grattan enjoyed the freedom Dr. Harris gave her, allowing her to use the lab and other resources. "Ruth supported my efforts, helped with directions, feedback, and direct intervention when necessary," she said. Dr.

Harris provided hands-on help as Dr. Grattan collected data on children with Down syndrome, and she also contacted a member of the community who donated equipment for Dr. Grattan's work. Dr. Grattan remembers Dr. Harris' strong community and church involvement, and her willingness to open her home to faculty and graduate students. "I admire Ruth not just as a researcher, but as a human being," said Dr. Grattan.

UNIQUE TEACHING TECHNIQUES

"Ruth shocked us," said John Pheney ('70). One night three of us stayed up late to study for her exam. We studied everything in the book—pronation, rotation, extension, etc. Ruth stood on the auditorium stage with a lacrosse stick, whipping balls over our heads, and asked us to analyze the motion. That was our final."

Dick Honig ('63) said that Dr. Harris was an excellent teacher who made learning fun. "You never knew what to expect when you went into Ruth's room," he said.

Carol Cross ('63, '97) was talking to Dr. Harris about a theory during gymnastics class. "Ruth suddenly grabbed the rings and did an inverted hang to demonstrate a kinesiological principle," she said. Dr. Harris kept talking as she hung upside down.

Caryl Powell ('63) said that "Ruth was demanding, but you didn't forget what she taught you. During officiating class we were officiating field hockey, and Ruth ran up and down the field with us. She came up behind me once and yelled 'BLOW THAT WHISTLE!' Then she looked at me and asked why I blew it. I knew better than to say, 'Because you told me to', so I came up with a foul. Ruth said, 'That's what I thought you saw.'"

INDIVIDUALIZED LEARNING

John Pheney ('70) said that Dr. Harris taught the best graduate class he ever took. "Ruth allowed us to work in our own area of interest. There were a lot of readings, but she made it more interesting by bringing in popular books of the day. She made learning a lot more personal."

Pat Bubel ('63) came into kinesiology as a graduate student. "Ruth allowed me to teach one or two lessons in the kinesiology class because she knew I was headed toward teaching, and she wanted to give me the experience."

A LASTING IMPACT

When a teacher holds the attention of the students for an entire class period, she is an excellent teacher. When a teacher makes an impression that lasts a lifetime, she has accomplished a lofty goal—Dr. Harris was such a teacher.

Carol Cross ('63, '97) said that Dr. Harris was a dedicated, committed teacher. "She believed in me when I didn't believe in myself."

Caryl Powell ('63) said that outside of her family, the one person who made the most impact on her career was Dr. Harris. "Many times I ask myself, 'What would Ruth do?'"

Pat Bubel ('63) said that she could always count on Dr. Harris' word. "She had a lot of integrity as a teacher. I took only one class from her, but I had a strong bonding with Ruth."

JACKSON MEMORIAL CAMP FOR UNDERPRIVILEGED CHILDREN

Many of Dr. Harris' students worked as counselors during the summer at the Jackson Memorial Camp for Underprivileged Children, where she served as director from 1948 to 1972. The camp activities included arts and crafts, swimming, and boating, among others. Each counselor was in charge of an activity and acted as a cabin counselor for a group of five or six children.

Carol Cross was one of those students. "The children attending the camp would sometimes arrive with no clothing other than what they were wearing, and sometimes they were shoeless. Ruth ran the camp, and she never asked us to work any harder than she herself did. Ruth taught, made up the menu, and cooked when it was necessary," she said. Carol remembered the shipwreck dinners that involved the counselors dressing up like pirates, going out in a boat and rowing dinner into shore to amuse the children.

LIFE COMMITMENT

Dr. Harris was a teacher, motivator, mentor, and role model for hundreds of students during her teaching career. She served on the governing boards of several local, regional, and national professional organizations. She received many honors related to education, to her service with the American Red Cross, and to her work with the underprivileged.

She is still involved. She continues to participate on the Kinesiology Alumni Society Board as an *ex officio* member. The Alumni Board is largely made up of Dr. Harris' former students, a testimony to the fact that she instilled the attributes of loyalty and commitment to those she taught.

Dr. Harris also stays physically active. She swims three times a week in the indoor swimming pool at her home. She has traveled extensively, and she has an extensive teddy bear collection from all over the world.

— *Cheryl Israel*

In 1987, the Division of Kinesiology worked with Ruth to establish the Ruth Harris Endowment Fund to provide financial assistance to deserving graduate students. The fund was started with an initial gift from Ruth and has been supported through the years by her and some of her close friends. She realized that "We needed scholarship money because we were losing graduate and doctoral students, especially women, to other schools who could offer them more." Checks should be made payable to Ruth Harris Endowment Fund and mailed to University of Michigan, Kinesiology, 401 Washtenaw, Ann Arbor, MI 48109-2214.

Judith Oppenheim, BS '68, MS '73

Watch your step.

Falls are one of the leading causes of fatal and nonfatal injuries in the U.S., according to the American Academy of Orthopaedic Surgeons (AAOS). As we grow older the risks increase: one out of three adults over 65 falls each year. That's 11 million people.

But age is not the only risk factor. Sprains, strains and fractures can happen to any of us. Some injuries evolve slowly over time, as in the case of repetitive motion strains like carpal tunnel syndrome. Or they can occur in the split second of a traffic accident or a heroic slide into home plate.

Judith Oppenheim, '68, '73, has seen a wide range of trauma in her career as an orthopaedic surgeon, and the variety of the work is a big part of its appeal. Orthopaedics is the branch of medicine that treats problems in the bones and joints, so it encompasses almost every kind of broken bone, sprain or strain.

Judy describes herself as "a general orthopaedic surgeon with a special interest in foot and ankle surgery." In the 18 years since she finished residency, she has probably performed more than 4,000 surgeries. Besides fractures, she performs such procedures as knee arthroscopy, carpal tunnel release and bunion surgery and treats diseases such as arthritis and osteoporosis.

It is a demanding and uncommon specialty. There are only 14,800 board-certified orthopaedic surgeons in America today, and fewer than two percent are women.

"I did everything I could to talk myself out of a career in surgery," Judy declares. Not because it was difficult, but because it entailed two more years of residency, and she was impatient to get started. She considered family practice, but kept coming around to orthopaedics as her first choice.

"In family practice, you might encounter a patient with diabetes. You can help the person manage the disease and perhaps get better, but not cured," she explains. "Orthopaedics offers a way to help many patients fully recover and resume as normal a life as possible."

Dr. Judith Oppenheim

TAKING HONORS AT MICHIGAN

Judy did not set out to become a doctor. Growing up in Detroit, she enjoyed "an ordinary, active childhood." Her interest in sports led her to major in physical education at Michigan, where she excelled in academics and athletics. She received two scholarships as well as the William F. Branstrom Award honoring students in the top seven percent of the freshman class.

She played two years each of basketball, volleyball and field hockey, and served the Women's Athletic Association as treasurer and president. But her favorite sport was tennis, and by senior year she was elected team captain. With energy to spare, Judy worked as a dormitory advisor, golf and swimming instructor, and lifeguard and still graduated with honors.

After four years of teaching high school physical education and coaching in New Trier Township, IL, she returned to UM on a graduate teaching fellowship. Dr. Merle Foss piqued her interest in exercise physiology, and Dr. Ruth Harris guided her through in-depth studies of kinesiology/biomechanics. Yet she continued her extracurricular activities, especially the synchronized swim club, Michifish. "She was a real trooper," recalls Associate Professor Emerita Joyce Lindeman. "Judy helped out in all aspects of the water show such as running the lights and music. She was a friend to many of the swimmers—helpful, sincere and loyal, as well as a brilliant student."

The job at New Trier was waiting when she finished her master's, but gradually her aspirations had changed. "I knew I did not want to be doing the same thing at 45 that I was doing at 25," she says. Ruling out such career paths as high school counseling and administration, Judy began thinking about medical school.

"I see physical education and medicine as two ends of a continuum," she explains. "Both of these fields are aimed at keeping people active and healthy."

TRAILBLAZING IN MEDICINE

These days, a number of U-M Kinesiology graduates go on to medical school or medicine-related careers such as physical therapy, occupational therapy, or physician's assistant. It was far more unusual in the mid '70s when Judy passed the MCAT and applied to Medical School at the University of Illinois.

It came down to this, she says: "If I didn't try, I'd always wonder."

"I figured I had two strikes against me: my age—29—and my gender." Instead, she was welcomed with a four-year scholarship. She was elected vice president of both the freshman and senior class, and vice president and president of the Medical Student Council.

The next stop was the University of Oklahoma for an internship in general surgery and residency in orthopaedic surgery, followed by the University of Missouri where she became chief resident. After a short time with Cigna Health Plans of Southern California, she did a trauma fellowship at Sunnybrook Hospital/University of Toronto and then anchored with Permanente Medical Association of Texas, a health maintenance organization in Dallas.

For ten years, Permanente gave Judy an opportunity to use her surgical skills to influence the quality of medical care delivery. She joined committees for improving ambulatory care, rehabilitation, and quality assurance and became active in professional associations. For the Ruth Jackson Orthopaedic Society, she served three years as program chair and ran the 1996 biennial meeting in Dallas.

Then, Permanente was sold. She completed a foot and ankle fellowship in San Antonio, Texas, and then began her most diversified position to date.

"Since January, 2000, I have been employed as a locum tenems, which means 'one temporarily taking the place of another.' I fill in when an orthopaedic surgeon is ill or on vacation or when a community is temporarily without that specialty," she explains.

Working with a company that acts as a clearinghouse for positions and provides malpractice insurance, she has been able to choose among various jobs and locations in Illinois, North Carolina, Virginia, the state of Washington, and Texas. The duration of the jobs range from three months to four days. She is now licensed in nine states.

"Unlike many of my colleagues in medicine, I did not dream of becoming a physician while I was growing up. Rather, it was my studies of anatomy, physiology, kinesiology, and exercise physiology as an undergraduate and graduate student that led me to choose a career in medicine."

"My favorite position was at a hospital in Fort Worth, where I had four residents in my service. I attended their surgeries, helped them on cases, and worked in the clinic with them. I really enjoyed teaching again."

"The advantage of locum tenems is that you get exposed to a wide variety of organizations and ways of doing things. There is a lot of freedom in this lifestyle. The disadvantage is I've only been home for three months out of the past year," she adds, referring to the residence she still owns in Dallas.

KEEPING PEOPLE HEALTHY

Judy was working in Champaign, Illinois, at the time of this interview, but she recently signed a contract with Front Range Orthopaedics in Colorado Springs, Colorado.

After 18 years of repairing injuries, Judy may some day start a business designed to prevent them. "I'm considering opening an osteoporosis clinic, possibly attached to a fitness center, to educate older women and men about ways to prevent bone loss and the debilitating injuries that can result from falls and bone fractures."

A recent bone density test revealed that Judy herself has suffered bone loss, in spite of an active lifestyle that includes walking, skiing, cycling, swimming, and lifting weights.

"I was surprised," she admits. "But in fact, all of us begin losing bone density around age 30. About 20 percent of people with osteoporosis are men, but women are at higher risk. Not only are our bones smaller, but the accelerated loss of estrogen at menopause leads to a further loss of bone density."

The stakes are high, she points out. According to the National Osteoporosis Foundation, an estimated 44 million U.S. women and men have osteoporosis or bones porous enough to raise the risk of fracture. Many are unaware of this condition until they are injured. Falls cause 90 percent of the 350,000 hip fractures that occur, and more than half of the people who suffer them will never fully regain their independence.

"The costs of a hip fracture are staggering—an average of $33,000 per patient for care alone. The costs are much higher when you consider the long-term effects including loss of independence and nursing home placement," Judy adds. "Hip fractures are also among the leading reasons that people enter a nursing home."

"An osteoporosis clinic, as I envision it, would focus on four approaches: diagnosis, education, treatment, and prevention."

Prevention. It's the far side of the continuum where you find physical education—the route that led her to orthopaedic medicine in the first place. "The ultimate goal and the greatest reward," she repeats, "is helping people restore their lives to as full function as possible."

— Pat Materka

KINESIOLOGY ALUMNI SOCIETY (KAS)

HOMECOMING WEEKEND ACTIVITIES

Please mark your calendar for the afternoon and evening of October 25, 2002! There are two afternoon events planned that will be held simultaneously from 3:30 to 5:30 p.m.:

Kinesiology Lab Tour and Open House:
The Kinesiology lab tour and open house from 3:30 p.m. to 5:30 p.m. will include visits to the newly renovated laboratories and presentations by faculty about their exciting research areas.

Career Networking Session:
There will also be a career networking session from 3:30-5:30 p.m. We would like to hear from alumni who are interested in talking to students and giving them advice about their careers. Think how much you would have appreciated the opportunity to talk to a Kinesiology alum at that point in your life! If you can participate in this session, please contact Shelly Kovacs at (734) 647-2696 or e-mail her at skovacs@umich.edu.

Alumni Reunion:
The Kinesiology Alumni Reunion will be held on October 25, 2002 at 6:30 p.m. This year there will be a sit-down dinner before the award ceremony to recognize the KAS award recipients. The 2001 award recipients will also be recognized at this year's Alumni Reunion, since the 2001 Reunion and award ceremony was cancelled due to the September 11th attacks. The 2001 award recipients are:

- Congresswoman Carrie Meek, Career Achievement Award
- Dr. David Lohrmann, Career Achievement Award
- Roger Harvey, Ten Year Alumni Achievement Award
- Pat Materka, Lifetime Achievement Award

The 2002 recipients will be announced soon. Watch for your Alumni Reunion/special event registration form to arrive later this summer, and please pre-register for this special event!

ANNOUNCEMENTS

The Kinesiology Alumni Society Board (KAS) membership has had a few changes during the past year. Dick Honig ('63, '66) stepped down as chair. Dick has been an Alumni Society Board member since KAS was first formed. He will stay on as a member of the board until December, 2001. He is now a member of the Kinesiology Campaign Steering Committee.

Pete Kempf ('95) was elected chair and Catherine (Cat) Serrin ('94) was elected the first vice chair of KAS.

KAS invites members and non-members alike to attend the board meetings. The next meeting is scheduled for September 23, 2002, 6:00 p.m., in the Alumni Center Founders Room.

The Board invites non-members to participate on sub-committees. Sub-committee work can be conducted electronically, allowing committee members to serve long distance.

Board members and non-members are welcome to nominate alums for the KAS awards. Those awards are the Ten-Year Alumni Achievement Award, the Career Achievement Award, and the Lifetime Achievement Award. If you have questions about any of the Board announcements, feel free to contact Shelly Kovacs at skovacs@umich.edu or (734) 647-2696. You may also contact Cheryl Israel at cisrael@umich.edu or (734) 647-2689.

CONNECTKINES CAREER NETWORK PROGRAM

ConnectKines is a career network of Michigan Kinesiology graduates who have volunteered to put their names on a database so that current students and graduates may contact them to discuss career fields of interest. The database will be available in the Kinesiology Career Resource Center, and will require a pin number for access. Alumni/ae may volunteer to serve as guest speakers for career pathway programs and provide information about internships and graduate school opportunities. Alumni, please help by volunteering. Complete the on-line volunteer registration form at www.umich.edu/~divkines/kinweb/alum/ckform.htm. If you have questions, please contact Carol Overley at (734) 764-4473 or via e-mail at coverley@umich.edu.

JOIN THE UM ALUMNI ASSOCIATION

The Alumni Association of the University of Michigan is an independent, worldwide organization that nurtures lifelong relationships with and among current and future Michigan alumni. As a committed partner of the University, the Association offers programs of relevance and service to alumni and creates support for the University. Underlying all that the Alumni Association does is the belief in the value of education to the well-being of society and a commitment to integrity, diversity, and service. The Association has more than 107,000 members and offers benefits, programs, and services to its members. When you join the UM Alumni Association, you automatically become a member of the Kinesiology Alumni Society, too.

TAKE ADVANTAGE OF EMAIL REDIRECTION

Email Forwarding Now Available

Changing email addresses is a hassle. With free email forwarding, however, you get a permanent "umich.edu" email address. This

is not an Internet Service Provider but a forwarding service. You just simply forward messages from the "umich" account to your current email address and you are set. Your friends, family and other alumni can always find you. For more info, go to http://www.umich.edu/~umalumni/online-services/forwarding.html or visit www.umalumni.com and click on "Online Services."

PARTICIPATE IN THE ONLINE ALUMNI DIRECTORY

Find friends and network with Online Alumni Directory

The Alumni Association's Online Alumni Directory is the best place to find old friends and network. All UM alumni are listed in the directory, and each individual can choose how much or how little information to include. The directory is limited to Alumni Association members for their privacy and security. Alumni Association members can access the directory at www.umalumni.com (click on "Online Services"). Nonmembers can join at www.umalumni.com. Note: If you join the online directory, you can e-mail each other!

ALUMNI NEWS

Please remember to send us your news so that we can list you in *Movement*.

Congratulations to Kinesiology Couples

Todd Gershwin, ('97) is engaged to **Michele Schneider,** ('97).

Brian Aparo, ('99) and **Beth Amelkovich,** ('99) were recently married and are living in New Hampshire.

Are there more Kinesiology couples in our alumni base? Please let us know who you are (cisrael@umich.edu).

Brian Aparo, ('99) is managing his own company called Driving Force (www.driving-force.com), which he began last June. His company focuses on marketing specialty products designed specifically for athletes. The UM wrestling team is currently using some of his products.

Beth Aparo, ('99) is in her second year as the assistant gymnastics coach at the University of New Hampshire.

Dave Balza, ('91) is the men's basketball coach at Florida Gulf Coast University. He was previously the basketball coach at St. Joseph's College, where he helped them restore a clean image that had been soiled due to an NCAA probation. Previous to that, as an assistant coach at Cleveland State University, he took over a program that was subsequently taken off probation and went on to win a league record.

Steve D'Eletto, ('97) is a Kinesiology SMC graduate. He is attending the Pharmaceutical Marketing Executive MBA Program at St. Joseph's University (Philadelphia). Prior to that he was a respiratory specialist at Merck & Co., Inc. in New York. He received the Vice President's Club Award and won the Northeast Region Great Performances Award Trip to Hawaii in 2000. He was also given the regional Business Driver Award three times in 2000 and once in 2001. He was chosen to represent his district at the American Thoracic Society Meeting in Toronto (2000), the American College of Asthma, Allergy, and Immunology Meeting in Seattle (2000), and the American Academy of Asthma, Allergy, and Immunology in New York (2001).

Andrew Galbreath, ('97) is currently a medical student at Michigan State University in the College of Osteopathic Medicine.

Chuck Ghannam, ('01) is the sales manager for Dick's Sporting Goods in Novi, MI.

Chris Highfield, ('00) was recently named Florida Gulf Coast University's first men's and women's cross country coach. He is the assistant men's basketball coach and will continue in that position while coaching the cross country team. Florida Gulf Coast University will soon be admitted into the NCAA.

Shawn Johnston, ('91) attended UM Medical School, did his residency at the Mayo Clinic, and is now in private practice in Alaska. He said that his practice is wonderful and the lifestyle in Alaska is even better. He is thankful for his kinesiology education.

Erin Lumpkins, ('01) is teaching physical education in Falls Church, Virginia.

Brian Movalson, ('90) is the global brand manager for EA Sports in Redwood City, California. Brian calls himself the "keeper" of the EA Sports brand. Some of the initiatives he manages include the title sponsorship of the EA Maui Sports Invitational, the EA Sports Roundball Classic, and the 68-game exhibition schedule of NCAA basketball games with the EA Sports All-Stars. On the weekends he travels with *ABC Sports,* working as a spotter for the NCAA football telecasts.

Patrick Mullally, ('01) completed his degree in kinesiology movement science and is now pursuing his graduate degree at the UM Dental School.

Laurie G. Murphy, ('79) is the director of interactive communication for Ingenix Pharmaceutical Services, which is a United Health Group Company within the Medical Education Division, and she is working to create an innovative, interactive education for healthcare providers. She received her master's degree from kinesiology in exercise physiology and she credits Kinesiology for inspiring her career interest, which began with an exercise physiology position at AT&T in their Employee Health Promotion Program, and then the internet e-health space as director of marketing at Physicians' On-line. She said that one of her biggest challenges is raising her two teenage sons.

Lauren Pober, ('96) graduated from kinesiology with a degree in sport management. She is now the manager for the Chicago White Sox in the department of strategic marketing, where she focuses on setting up strategic partnerships with various venues and attractions throughout the city of Chicago. Prior to that she worked in the marketing department of the now-defunct XFL.

Ronald Rolak, ('73) is director of development at Powers Catholic High School in Flint, where he has been employed for 29 years. This past year he was nominated as National Football League Educator of the Year by one of his former students, Todd Lyght, a defensive back with the Detroit Lions. Ron is an officer on the board of governors for the University of Michigan Alumni Club of Greater Flint.

Alan Salmoni, ('73, '74) is the director of the School of Kinesiology, faculty of Health Sciences at the University of Western Ontario in Ontario, Canada.

Nichole Samczyk, ('01) is a recent graduate of the kinesiology movement science program. She is the project manager for an intensive training research project involving children with Cerebral Palsy in collaboration with Dr. Edward Hurvitz, from the UM Department of Physical Medicine and Rehabilitation. Nichole attended the Society for Neuroscience meeting in San Diego last November with Dr. Susan Brown, Associate Dean for Research.

Elise Sharp, ('99) is the Chevrolet Regional Activation Manager for the Midwest. She was assigned to the Olympic Torch Relay, and spent most of February in Salt Lake City at the Olympic Games.

Melissa Shuch, ('97) received her masters degree in physical therapy from Touro College in New York, NY. She is now a licensed physical therapist at the New York University Medical Center.

Erin White, ('01) is an account executive with the Sacramento River Cats, which is the triple affiliate of the Oakland A's. They won the Prisim Award for the most outstanding minor league team in the United States. Her role is to sell group tickets and season tickets, and organize group and corporate events. Her responsibilities will also include making customer presentations and evaluating prospect needs assessment.

Dr. Katarina Borer has been elected to the position of visiting professor and external (international) collaborator by the faculty of Kinesiology at the University of Zagreb, Croatia. She will teach a short graduate course at the University of Zagreb, and she will give a talk at the third International Scientific Conference on Kinesiology, entitled "Kinesiology—New Perspectives" that will be held in Opatija, Croatia September 25-29, 2002. She has been invited to participate on a special emphasis panel for the National Institute of Health to review the Pepper Center aging research grant applications. The panel will meet in Bethesda on April 23 and 24, 2002.

Dr. Susan Brown attended the Society for Neuroscience meeting in San Diego last November along with doctoral students Gerry Conti and Min Huang, both of whom presented their research. Other members of the Motor Control Lab who attended and presented were Robert Gregory (research associate) and Nichole Samcyzk, a recent kinesiology graduate in movement science (see Alumni News, pg. 14).

Dr. Brown is involved in the South Africa Malnutrition and Motor Performance Study (SAMMPS). She and Gerry Conti, doctoral student in Kinesiology and faculty member in the Department of Occupational Therapy at Wayne State University, spent two weeks this May in South Africa as part of a newly developed research project examining the effects of protein malnutrition on motor coordination. The study is being done in collaboration with Dr. Daniel Monyeki, Department of Physical Education and Kinesiology, at the University of the North, South Africa. They will focus on motor performance in older children, adolescents, and elderly individuals. This will be part of the Ellisras Longitudinal Growth Study, which also involves several European universities. Preliminary, long term plans include the development of a student research exchange program which would allow Kinesiology students to engage in research activities in South Africa.

Dr. Brown is participating in Fathom, as one of the UM faculty in its collaboration with a consortium of thirteen top universities, museums, and libraries. The goal of Fathom is to work with faculty on features, learning seminars, and on-line courses. She has been invited by the provost to serve on the Undergraduate Council, which is charged with talking to faculty and students across campus and using the feedback to develop recommendations about issues such as recruitment, financial aid, and undergraduate student life. She will spend this fall at St. Thomas University, Frederiction, New Brunswick, Canada as a visiting chair in gerontology.

Dr. Dan Ferris received a research grant from the Christopher Reeve Paralysis Foundation for his work on a powered lower limb exoskeleton to assist locomotor training. He also received a project grant from the University of Michigan Office of the Vice President for Research for his work on powered lower limb orthoses for gait rehabilitation, and he also received a faculty grant for his work on an artificial neural oscillator control of functional electrical stimulation during gait rehabilitation after spinal cord injury. He co-authored an article on "Reflex Adaptations to Walking and Running in Simulated Reduced Gravity" that appeared in the *Journal of Physiology.* He presented a poster on a powered lower limb orthosis at the annual meeting of the American Society of Biomechanics last August in San Diego, CA.

Dr. Melissa Gross will co-direct the 2002 Rackham Summer Interdisciplinary Institute with Dr. James Porter, professor in Classical Studies. The theme this year is "Explorations in Scale: Size, Measure, and Value."

Dr. C. Keith Harrison co-authored a paper with Sunki Min (graduate student, SMC), entitled "Stereotypes and ethnic heritage in sport" for the North American Society for Sport History annual meeting in London, Ontario, May 23-27, 2001. He authored one paper and co-authored another paper with Eddie Comeaux, doctoral student at UCLA, for the North American Society for the Sociology of Sport annual meeting in San Antonio, Texas, last October. He co-authored an article with Jim Moye that appeared in the *Texas Entertainment and Sports Law Journal,* 11(1), Spring, 2002. He has four refereed articles in press: one article with Louis Harrison and one with Leonard Moore that will both appear in *Sport, Education and Society;* one with Louis Harrison, that will appear in the *African American Research Perspectives;* and an article he has authored that will appear in the *National Association of Student Affairs Professional Journal.*

Dr. Jeffrey Horowitz moved into his newly constructed lab in the spring of 2001, and he and his students have already initiated several research projects. The general scope of these projects is focused on how alterations in fat metabolism impact important health issues such as obesity, diabetes, heart disease, and advancing age. He has received funding for these projects from the Rackham Graduate School and the Michigan Memorial Phoenix Project. Horowitz is also collaborating with researchers in the Institute of Gerontology as well as the Department of Endocrinology and Metabolism at the University of Michigan Medical School. He has been selected to become an associate editor for the *Canadian Journal of Applied Physiology* and will give keynote talks at conferences in Turkey, Greece, and Canada during 2002. In the past year, Horowitz published five journal articles, one invited review, and one book chapter.

Dr. Charles Kuntzleman, carried the Olympic Torch, along with almost 40 other torchbearers, in the Lansing Torch Relay on January 6 as it made its way through Michigan to Salt Lake City, Utah for the 2002 Winter Olympics.

Dr. Rachael Seidler co-authored an article on changes in multi-joint performance with age, which was published in *Motor Control.* She published an article on age-related kinematic differences as influenced by task difficulty, target size, and movement amplitude in the *Journal of Gerontology: Psychological Sciences.* She received a Rackham faculty grant and a pilot grant from the UM FMRI Center in support of her work "Neuroimaging of human motor skill learning processes." This work is in collaboration with Dr. Douglas Noll, associate professor in the Biomedical Engineering Program and co-director of the FMRI Center. She received a Rackham travel grant to present her work at the Neural Control of Movement Society's annual meeting in Naples, Florida, April 17-21. She will present "An event-related FMRI investigation of motor preparatory processes" with co-authors Purushotham, Kim, Ugurbil, and Ashe from the University of Minnesota. She received a NASA 2002 summer faculty fellowship, a program that is co-sponsored by NASA and the American Society for Engineering. She will spend 10 weeks working with Dr. Jacob Bloomberg in the Neuroscience Motion Laboratory at the Johnson Space Center in Houston, Texas.

Dr. Beverly Ulrich, Professor and Dean of Kinesiology, gave invited talks about her research on dynamic systems theory and children with Down syndrome as the invited keynote speaker at the Sixth Biennial Motor Control and Human Skill Research Workshop, in Fremantle, Australia (December 2001) and at the Seventh Annual Gait and Clinical Movement Analysis Conference, in Chattanooga, TN (April 2002). In June 2002, she and her graduate students presented papers at the annual meeting in Baltimore of the North American Society for the Psychology of Sport and Physical Activity. She was co-author of three research papers published during the past year in the journals: *Pediatrics, Motor Control,* and *Research Quarterly for Exercise and Sport.* In January, 2002 she was appointed to the scientific review board of the BRIGHT Foundation (Brain Injury Group—Hope through Treatment).

Dr. Dale Ulrich authored and co-authored several articles. The research article published in the November, 2001 issue of *Pediatrics* by Dale Ulrich, Beverly Ulrich, and Rosa Angulo-Kinzler, titled "Treadmill Training in Infants with Down syndrome: Evidence-Based Developmental Outcomes," has received national and international news media coverage. The results were highlighted in the *New York Times* science section, the *Tokyo Times, Der Speigel* magazine (the German equivalent to *Time* magazine*),* and was summarized with pictures and parent interviews in the April 2002 issue of *Popular Science.* Dale Ulrich was recently interviewed about the research by the *Australian Broadcasting Network* and will appear on a program this spring similar to *NPR's* "Science Friday." He published in *Adapted Physical Activity Quarterly* with articles on "Estimating measurement validity: A tutorial," an article "In memoriam (Allen Burton): A model career worth adopting," an article on "The impact factor and AAQ," and an article on "Social comparisons of children with and without learning disabilities when evaluating physical competence." An article also appeared in the *International Journal of Sport Psychology* on "Measuring Perceived Motor Skill Competence in Children."

Dr. Ulrich and **Dr. Rosa Angulo-Kinzler** received a grant from the U.S. Office of Special Education and Rehabilitation Services in Washington, D.C. for a longitudinal study of early locomotor training in infants with Down syndrome and infants at-risk for Cerebral Palsy. He has been a consultant for the U.S. Department of Defense Dependents Schools and has implemented three training workshops for elementary physical education teachers working in Europe, the Pacific, and in the United States. The military schools have adopted his Test of Gross Motor Development to assess the motor skill achievement of children in elementary schools throughout the world.

Pat Van Volkinburg was elected president of the Michigan Association for Physical Education, Recreation, and Dance. Pat is a member of the task force charged with re-writing the MTTC (Michigan Teacher Test for Certification) in Physical Education. She also works with the Michigan Department of Education on the committee in charge of reviewing physical education (PE) programs at the college/university level for state approval, and she is a member of the nominating committee for the Mid-West Alliance of Health, Physical Education, Recreation, and Dance (AAHPERD). Pat is working on the task force to write the state safety guidelines for sports and PE in the state of Michigan. She presented at the state PE convention last November, at the national CDC conference in Washington, DC last February, and at the AAHPERD convention in San Diego in April.

Pat Maloy had an enormous enthusiasm for life. He was an integral part of Kinesiology and the personality of the Sports Management and Communication Department. His teaching reflected the way he lived his life—with gusto. He had an intellect as impressive as his vibrant, booming voice. The memory of Pat will be treasured by colleagues and students alike.

Bernard Patrick Maloy, J.D., associate professor in Kinesiology, passed away peacefully in the early morning hours of November 28, 2001 after a courageous battle with cancer. His family was at his bedside.

Professor Maloy, best known as "Pat," was a beloved friend, colleague, teacher, and mentor. He first joined Kinesiology as an assistant professor in 1986, and he was promoted to associate professor in 1992. Prior to the University of Michigan, he worked in private industry, and he spent 12 years as a trial attorney. The students were more challenging than any jury he ever faced, according to Pat, but he obviously won their respect. The proof lies in his outstanding teaching evaluations—a consistent median of 4.8 out of a possible 5.0.

Pat was known as a caring professor, but one who highly challenged his students, and took great care in evaluating their work. He was referred to as an outstanding University of Michigan instructor in the 1989 issue of *Advise*. Students at the 1991 commencement ceremony gave Pat a standing ovation when he received Kinesiology's Teaching Excellence Award. The award is given in recognition of superior classroom performance, innovative instruction, high educational standards, and concern for students in and out of the classroom.

Pat continues to be recognized. He received the 2002 Teaching Excellence Award posthumously at the Kinesiology Commencement Ceremony on April 26, 2002. The students again gave a standing ovation as Nora Maloy, Pat's wife, accepted the award on his behalf. The University of Michigan softball program honored Pat at their fifth annual "Professor Day" on May 2, 2002, which was renamed "Pat Maloy Day." Nora Maloy also accepted the Kinesiology Sport Business Association 2002 Faculty of the Year Award on Pat's behalf at their annual dinner.

Paul Jaronski

Pat Maloy

Pat was known nationally as an intellectually challenging, energetic, and supportive colleague. He had published both as a sole author and in collaboration with others. He had written three books, contributed several book chapters, and published several articles in his field of expertise. He was affiliated with over 15 associations, and he served as a member of the editorial board of the *Journal of Legal Aspects of Sport and Physical Activity.*

Most recently he served as a faculty mentor for the University of Michigan Mentorship Program and as a member of the Ombuds Training Task Force. He previously served as an ombuds for the Division of Kinesiology, as a member of the Student Assembly, and as a member of the University of Michigan Committee for Experiential Education. Pat was a long-time marshal at the commencement activities, and he has actively helped the Athletic Department in their student recruitment activities for many years.

Over 250 colleagues, friends, and family members attended the memorial service for Pat in the Pendleton Room at the Michigan Union on December 4, 2001, with a standing-room only section at the back. Speakers included Barney and Michael Maloy, Pat's sons; Mark Maloy, Pat's brother; Kinesiology Professor Katarina Borer, Kinesiology Associate Professor Bruce Watkins, and Kinesiology Associate Professor Dale Ulrich.

Kinesiology has established a fund for the Bernard Patrick Maloy Award for Excellence in Writing that will be given for writing excellence in the areas of sport and public policy. Checks should be made payable to: UM-Bernard Patrick Maloy Award, and mailed to University of Michigan, Division of Kinesiology, 401 Washtenaw, Ann Arbor, MI 48109-2214, Attention: Jeff Freshcorn

Marie Dorothy (Pete) Hartwig, 1906-2001

Marie Dorothy (Pete) Hartwig passed away peacefully December 23, 2001. Marie was a lifelong advocate for education, women's sports, and for intercollegiate athletics. She touched the lives of thousands of students during her career.

She was born August 1, 1906 in East Orange, New Jersey, the daughter of Frank and Fannie (Koch) Hartwig. She attended the University of Michigan and obtained two bachelors degrees (Literature, 1929; Physical Education, 1932) and a master's degree in Physical Education in 1938. Physical Education is now under the umbrella of Kinesiology.

In 1930 Marie began her teaching career at the University of Michigan. By the mid-1930s she was in charge of the intramural/recreational sports program for women through the Women's Athletic Association (WAA), and she had developed a national reputation as a leader in intramural recreation and athletics for women. She was promoted to associate professor in 1968, and she became a full professor in 1969. She was named the associate director of athletics for women in 1974, and retired in 1976. The Regents gave her professor emerita status in 1977.

Marie served as the national secretary-treasurer of the Athletic Federation of College Women (AFCW) from 1939-1947. She served on the National Basketball Committee from 1944-1950 and on the Board of Governors of Residence Halls from 1959-1969. She also served as president of the board of governors of the Michigan League from 1982 to 1984.

She led the Camp Counselor Education Program at the National Music Camp at Interlochen from 1949 to 1982. She was an active member in the Michigan Camping Association and the American Camping Association, and she co-authored the *Camp Counselor Training Workbook,* the *Children ARE Human* series, and *Camping Leadership*.

Marie Dorothy (Pete) Hartwig

Her efforts have been recognized by the naming of the Marie Hartwig Award, which is given to an outstanding junior woman varsity athlete, the Marie "Pete" Hartwig Award, which is given to an outstanding woman intramural athlete, and the Marie Hartwig Scholarship awarded by the Alumnae Council to a woman varsity athlete. Kinesiology has established the Marie Hartwig Collegiate Professorship.

Marie has been honored by her induction into the University's Athletic Hall of Fame. She received the "Go Blue" Award and the Distinguished Alumni Service Award from the UM Alumni Association. She received the Applause Award and honorary life membership from the Interlochen Alumni Organization, and she was named honorary life member of the M-Women organization. The Athletic Ticket Office building was named the Marie Hartwig Building.

She is survived by nephews Tom (Rosanne) Bloomer of Ann Arbor and Harlan Bloomer of Mankato, MN, and also leaves dearest friend and caregiver Sheryl Szady of Ann Arbor. Her sister Hope Bloomer preceded her in death.

Over 100 people attended a memorial celebration of Marie's life on January 9, 2001 at the University of Michigan Golf Course.

In 2000, Kinesiology established the Marie Hartwig Collegiate Professorship to benefit a faculty position within Physical Education. The Hartwig Collegiate professorship will be the first endowed professorship within Kinesiology. This fund will be the means by which Marie may continue to touch future generations of students and faculty of Kinesiology. Contributions may be made to the Marie Hartwig Collegiate Professorship Fund, University of Michigan, Division of Kinesiology, 401 Washtenaw, Ann Arbor, MI 48109-2214, Attention: Jeff Freshcorn.

KINESIOLOGY DOCTORAL STUDENTS GO THE EXTRA MILE

The work of a doctoral student is very rewarding in the long run, but can require much self-sacrifice along the way. Doctoral students trade personal time for a demanding work schedule. They make financial sacrifices, trading a paycheck for a small stipend, or sometimes no stipend, to help them through. They put their careers on hold to enhance their knowledge. In summary, doctoral students take a journey that requires a strong commitment and passion for their work.

Following are the stories of two Kinesiology students who have been exceptional in their ability to go beyond the rigorous requirements of their doctoral work. They have given their time and expertise to volunteer, participate in professional associations, and help others.

Kinesiology is proud to introduce you to Gerry Conti and Victoria Haehl.

GERRY CONTI

Curiosity—that is what led Gerry Conti to pursue her doctoral degree in Kinesiology. Her career was already well established. She had over 25 years as a clinician and manager and she was an assistant professor at Eastern Michigan University (EMU). She had attained a high goal by many people's standards, and then she reached higher. She was determined to learn more about the relationship between basic science and what she had observed clinically.

Gerry maintained her normal EMU schedule when she began her doctoral studies, which meant working the equivalent of two full-time positions. She also had demands on her personal time. Her husband, a research scientist in the UM Physics Department, also works full time. And with two teenage daughters Gerry had to think about the daily needs of her family. Was it her turn to cook? Would she or her husband take their daughters to their extracurricular activities? When could the family find time to be together?

Gerry Conti (standing) with subject (left) in the Motor Control Laboratory

Although there was no external funding available to assist Gerry with her tuition costs and she knew that there would soon be college tuition costs for her daughter, Gerry and her husband made a difficult financial decision. Gerry took a two-year unpaid leave of absence from EMU so that she could focus on her doctoral work.

Gerry refers to her doctoral studies in Kinesiology as a perfect match that offered life-changing opportunities. She works closely with Dr. Susan Brown, associate dean of research. "Dr. Brown is an incredibly gifted researcher, with both basic science and clinical applications research, which is unusual. There are researchers who can do well at one or the other, but very few who do well at both," said Gerry.

From the beginning Gerry was involved in research. "I know a lot of people who never had the opportunity to conduct research during their early graduate work," she said. One research project is funded by The National Institute on Disability and Rehabilitation Research. Gerry serves as the research occupational therapist on the project "Effects of Repetitive Intensive Therapeutic Exercise in Children with Spasticity (RITE)." Gerry's doctoral dissertation, "The Coordination of Bimanual Force Production in Older Adults," begins to look at how older women coordinate force in both hands.

The South Africa Malnutrition and Motor Performance Study is a project that Gerry refers to as the bridge to her professional life. She and Dr. Brown spent two weeks this May in South Africa as part of a newly developed research project examining the effects of protein malnutrition on motor coordination and grasp force production. The study will be done in collaboration with Dr. Daniel Monyeki from the Department of Physical Education and Kinesiology at the University of the North, South Africa.

Last fall, out of necessity, Gerry returned to work. She is now an assistant professor in occupational therapy at Wayne State. She is thrilled with her new position, which combines teaching with her ongoing research. She has also taken on the responsibilities of serving as chair of the research committee and she is the graduate coordinator for the post-professional Occupational Therapy Program.

So, Gerry is back working full time, finishing her doctoral studies, and spending as much time with her family

as possible. In addition, she is very active in community church activities. She is a member of the vision committee, which will help with future church development. She has been nominated to become the lay leader for the church beginning this July. Gerry's older daughter is now studying biological anthropology and German at the UM, and the other is a junior in high school. Gerry is a classically trained soprano and she plays the flute. She sings or plays in occasional solo and small group performances in church and community concerts. How does she handle so much? "I'm going crazy," she said with a smile.

— *Cheryl Israel*

VICTORIA HAEHL

When Victoria Haehl began her doctoral studies, she had a definite goal in mind. She wanted to learn more about the theory of motor skill acquisition. "If we want to be critical thinkers and plan effective intervention, we need to know the theories," said Victoria.

Victoria looks at the impact of added weight on behavior as a person rocks back and forth on the stationary barrel, in order to test a mathematical model of riding.

She entered Indiana University, where she worked closely with Dr. Beverly Ulrich who she describes as "a major player in applying the dynamic systems approach to motor development." The approach recognizes that behaviors emerge as a result of an interaction among multiple subsystems—within the individual, within the task, and within the environment.

When Dr. Ulrich accepted the UM Kinesiology dean's position, Victoria wanted to continue studying with her mentor, and so she moved to Ann Arbor and entered the UM as a doctoral candidate. Victoria accepted a graduate research assistant (GRA) position to help defray costs. Over the years she has participated in and analyzed data from a variety of studies that have looked at many different levels of motor behavior and coordination. Victoria now has a long term goal. "Ultimately I hope to have an impact on intervention strategies used to improve function," she said.

One such potential intervention strategy is hippotherapy, a form of physical therapy that uses the movement of a horse to improve function. Victoria's doctoral dissertation, "Modeling a Motor Skill in Children With and Without Cerebral Palsy," examines the fundamental task involved in hippotherapy. She will compare the behavior of children with and without CP and with and without riding experience as they rock back and forth on a stationary barrel and as they ride a horse that is being led at various walking frequencies. She is developing a mathematical model to assist her in this examination. "When I have verified the usefulness of the model, I will begin looking at the impact of hippotherapy on children's movement control," said Victoria.

Next fall Victoria will have the advantage of working with a 6' x 20' equine treadmill, which allows a horse's walking speed to be increased and decreased systematically as a child rides. "The equine treadmill will improve the power of my analysis, allowing me to test the usefulness of the mathematical model more directly," said Victoria. Victoria obtained the treadmill through networking rather than funding when it was loaned to her on an indefinite basis by the Thorncroft Therapeutic Riding Program in Pennsylvania.

Her research is so distinctive that Victoria was awarded the Blue Cross Blue Shield of Michigan Foundation Student Research Award and the North American Society for Psychology of Sport and Physical Activity Graduate Student Research Award.

Victoria is also distinctive in her commitment to the community. "My volunteer activities help me maintain perspective and balance in my life," said Victoria. She volunteers as a consulting physical therapist (PT) at the Washtenaw County Therapeutic Riding, Inc. hippotherapy program. She also volunteers for the Hunger Coalition, a non-profit organization that serves free meals to those in need. "I enjoy talking to the clients, and I have made lasting friendships," said Victoria.

She participates in professional organizations. She is a member of the American Hippotherapy Association Research Committee, and a member of the North American Society for the Psychology of Sport and Physical Activity. She is also a member of the American Physical Therapy Association, and the International Society for Infant Studies. Victoria, even with her fulltime-schedule-plus, finds time to practice dressage, a form of horseback riding, which she describes as "ballroom dancing with horses."

Victoria graduated with her Ph.D. in Kinesiology this spring. She will begin her faculty appointment in the Physical Therapy Program at the University of South Carolina next fall, where she will continue her research and teach.

— *Cheryl Israel*

Barbour Scholarship

Min Huang, graduate student, with professor Susan Brown

Kinesiology doctoral student Min Hui Huang was recently awarded a Barbour Scholarship, which recognizes University of Michigan "women of the highest academic and professional caliber." Min, who is from Taiwan, has research interests focusing on the postural and motor control of older adults. She plans to conduct research and teaching in geriatric physical therapy. "In addition," she says, "I would like to contribute my knowledge and experience to the policy-making processes of national health care by participating in related activities of professional organizations."

Dr. Susan Brown, Arthur F. Thurnau Professor and associate dean for research, is Min's faculty mentor. She states, "From the very beginning of her doctoral training, Min has demonstrated strong analytical skills and can easily integrate new and seemingly disparate facts into cohesive and logical constructs. Her ability to bridge the gap between basic science and clinical application underscores her potential to be a leader in the field of geriatric rehabilitation."

Established in 1914 at the bequest of Levi L. Barbour, the Barbour Scholarship program was established to train young Asian women in modern science, medicine, mathematics, and other specialties critical to the development of their native lands.

— *Reprinted from the Kinesiology Web site*

Carey Larabee in the Olympic Torch Relay

Carey Larabee, a Kinesiology SMC major, was an enthusiastic participant in the Olympic Torch Relay on January 7, 2002. He carried the 2002 Winter Olympics torch for the last portion of its Ann Arbor route that began at Arborland and ended in the Rampy Chevrolet dealership on Jackson Avenue. Carey held his hands out and gave a big smile as he set the torch in front of his wheelchair and came to a stop. His picture appeared on the front page of the *Ann Arbor News* local news section the next day, January 8, 2002.

Photos contributed by the Larabee family

Above: *Carey, in the foreground, on the day of the Olympic torch relay*

Left: *Carey just after arriving in the Rampy Chevrolet dealership with the Olympic torch*

DEVELOPMENT NEWS

The 2001 Kinesiology football tailgate party was a great success. The annual event is graciously hosted by Mike Leoni, ('88) and his wife, Diane. An unusually pleasant November day afforded members of the Campaign Steering Committee, alumni, and friends of Kinesiology a fun-filled morning before heading off to the Michigan versus Minnesota game, where Michigan triumphed, 31-10. Thank you, Mike and Diane, for making this event possible. We look forward to seeing you next year. (See pictures, facing page.)

SPECIAL RECOGNITION

Dean Beverly Ulrich and Jeff Freshcorn would like to thank the members of the former 21st Century Board for their service:

- Joan Bickner, Sycamore, IL
- Roger Harvey, New York, NY
- Richard Hirsch, New York, NY
- Gerald Irons, The Woodlands, TX
- Norman Jacobson, Scarsdale, NY
- Josh Kestenbaum, New York, NY
- Michael Leoni, Ann Arbor, MI
- Bob Lyons, Ypsilanti, MI
- Michael Olsher, Boca Raton, FL
- Robert Paley, Scarsdale, NY
- Karl and Marilyn Pick, Owings Mills, MD
- Jeff Roth, W. Bloomfield, MI
- Edward Spiegel, Port Washington, NY
- Ronnie Stern, New York, NY
- Steve and Eve Yavers, New York, NY

KINESIOLOGY CAMPAIGN STEERING COMMITTEE

The Division of Kinesiology is proud to announce the formation of the new Campaign Steering Committee. The Steering Committee will provide advice and counsel to Kinesiology development personnel and assist in allocations and the solicitation of gifts. Committee members include:

- Roger Harvey, ('91) chief operating officer of Crunch Gym, New York City
- Mike Leoni, ('98) president of Four-Star Transportation, Saline, Michigan
- Dick Honig, ('63, '66) owner of Honig's Whistle Stop, Ann Arbor
- Jim Betts, ('71) director of diversity for Domino's Corp., Milan, Michigan
- Greg Goss, ('84) chairman and CEO of The Goss Group, Ann Arbor
- Butch Woolfolk, ('82), business owner, Sugar Land, Texas
- Ron Tate, ('66) owner of Remax, San Antonio, Texas
- George Wade, ('64, '66) president of The Idaho Sports Medicine Institute, Boise, Idaho
- Jan Shatusky, ('57) retired educator, Ann Arbor, Michigan
- Tim Wadhams, ('70, '73) vice president of Masco Industries, Ann Arbor, Michigan
- Bob Paley, ('63) retired real estate broker, Scarsdale, New York
- Josh Kestenbaum, father of a former student and president of Cosmopolitan Gym Corporation, New York City
- Joan Bickner, homemaker and mother of former student, Chicago, Illinois
- Bob Lyons, friend of Kinesiology and former owner of Michigan Trenching, retired, Ann Arbor

LET US HEAR FROM YOU!

Send this form to: Cheryl Israel • University of Michigan • Division of Kinesiology
401 Washtenaw Avenue • Ann Arbor, MI 48109-2214 • cisrael@umich.edu

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2001 KINESIOLOGY FOOTBALL TAILGATE PARTY A GREAT SUCCESS

Top left: *Dean Beverly Ulrich, Bob Lyons, Jan Lyons, and Shelly Kovacs*

Top right: *Alumnus Roger Harvey (right) and a friend*

Middle left: *Shelly Kovacs, Diane Leoni, Dean Beverly Ulrich, Michael Leoni*

Bottom right: *Jim Betts, Mike Leoni*

Bottom left: *Terry Barr, Leo Koceski*

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Photos courtesy of Bentley Historical Library, University of Michigan

To Learn More...

Contact the Division of Kinesiology's Development Office at ***734-615-4272***

or
email us at ***freshco@umich.edu***

or
visit ***http://www.giving.umich.edu*** and select the "How to Make a Gift" option.

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