This Summer semester is more hectic than usual. There are three searches occurring for faculty members in the fields of cardiac physiology and biomechanics and a search for a graduate secretary. In addition, faculty members from the School are involved in the search for a new director.

**Shona McLean** joined the School of Kinesiology in 1978 as the Graduate Secretary after working for two years in education. Thus it is 29 years of service at Simon Fraser University which will end on June 17th when Shona takes her early retirement. Generations of graduate students owe a significant debt of gratitude to Shona who has steered them with wisdom and good humour through the trials of graduate student life. Over those years, Shona has also been the invaluable assistant to at least eight Graduate Program Committee Chairs. The faculty who served in this role would all agree that they could not have fulfilled this important function without Shona’s guidance and assistance. On behalf of the graduate students, faculty and staff, I wish Shona every good fortune in her retirement.

The highlight of the Summer semester is June Convocation and this year both an excellent ceremony and reception saw 71 graduates receive BSc degrees, 8 M.Sc. and 2 PhD degrees. Thanks to **Laurie Klak** for arranging the well-attended Reception.

**John Dickinson**
Once again, awarded the Mahatma Gandhi and Mobility Lab.

This is a two-year Senior Graduate Studentship in the area of clinical stability in elderly women.”

Influences in control of postural muscular versus behavioral movements and use tools. He to control our muscles to produce I was even being considered.”

Franklin, who graduated from South Delta Senior Secondary in Tsawwassen, may be surprised but with seven previous awards and contributions to more than 30 journal and conference publications under his belt, virtually no one else is.

Franklin’s PhD thesis investigates how our brain learns to control our muscles to produce movements and use tools. He says it appears that the brain forms models of the external world to learn how to adapt to it. And he’s proposed an algorithm to explain this learning process that may one day be used by robots to “produce a similar adaptation and robustness to an externally changing world.”

The future university professor cites two keys to his success: “First off, I love what I do. The brain is one of the most exciting research areas left in science and one of the great frontiers. Secondly, I have been extremely fortunate to work with great researchers such as my supervisor (SFU Kinesiology) Ted Milner and (ATR Director) Mutsuo Kawato.

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SVU Info Evening

SFU’s Annual Information Evening was held on June 6th. Prospective students and their parents were invited to visit various SFU booths and information sessions. The School of Kinesiology once again participated in this event, speaking to approximately 200 students and parents. It was an extremely exhausting evening, but everyone had a lot of fun getting to know our prospective new students. Many thanks to those who represented Kinesiology at the event: Van Truong, Penny Deck, Darleen Bemister, and Sarah Chow (current Kinesiology major).

Faculty, Adjuncts & Graduate Students

Ted Milner participated in the Canada Wide Science Fair held at Science World in May. The demo put on by himself and his graduate students was enjoyed by many of the participants. It was a special bonus that he was able to do the presentation in French for the francophone visitors.

Andrew Blaber was a judge at the Canada Wide Science Fair held at UBC on May 17th and 18th, 2005.

Amber Zutz received the People’s Choice Award of $1,300 for best overall presentation at the Advancing Networks Conference. Amber is working under Scott Lear at St. Paul’s Hospital.

Jack Kerr, who completed his MSc in December 2004 under Andy Hoffer’s supervision and was also a member of the NeurostepTM Clinical Feasibility Trial team, recently started on a “dream job” that he was offered upon his return to his native England. Jack is the Clinical Trial Coordinator for the Function after Spinal Treatment, Exercise and Rehabilitation (FASTER) study. The study is based at Imperial College and funded by the Arthritis Research Council. The primary aim of this study is to determine if the long-term functional outcome of spinal surgery and patient satisfaction can be improved via either a systematic programme of post-operative rehabilitation or an educational booklet, and whether a combination of both is even more effective. Jack’s primary role is liaising with surgeons, doctors, nurses and physiotherapists to ensure that the trial runs smoothly. He is also involved in developing the rehabilitation class content, creating the databases and clinical forms, and running a number of other studies looking at lower back pain and methods for rehabilitation after spinal surgery. Jack will also be writing a PhD thesis on the basis of findings from these studies. Way to go, Jack!

Max Donelan was recently featured in an article in The Vancouver Sun on May 20th, 2005, Cityplus Alberta on May 21st and an SFU Press Release on May 20th (see below). His research measured the conduction velocity of peripheral nerves in an elephant and found...
that the speed is approximately
the same as a mouse even
though the signals have to
travel fifty times as far.

Reprinted below is from the
SFU News Press Release dated
May 19th, 2005, courtesy of
Media & PR, with thanks.

How fast are the nerves in large
animals like elephants? Preliminary results of an SFU
led-study at the Edmonton Valley Zoo show that elephant
nerves are only slightly faster
than those of mice, even though the signals have to go about 50
times further as they travel the
length of the leg.

In a bid to better understand
how the neural control of
movement is affected by body
size, SFU kinesiologist MAX
DONELAN and University of
Alberta researchers Steven
Aung, David Collins and Doug
Weber conducted tests on a
female Asian elephant at the
zoo named Lucy. The
researchers measured the
speed of signals travelling along
the elephant's nerves and came
up with the surprising results,
which could also help shed light
on how large dinosaurs moved.

"Time delays in neuromuscular
control systems can be
substantial," Donelan explains.
"The most significant contributor
to reflex delay in large animals
is the time it takes for signals to
travel up the nerves in the leg
and back down again. When
compared to the copper wires
which transmit our email
messages at nearly light-speed,
nerves appear dreadfully slow."

"We become acutely aware of
the speed of our nerves whenever
we trip and fall," Donelan adds. "Our preliminary
results suggest that delay due
to nerve speed is a much bigger
problem for elephants—perhaps
to a degree that it limits how fast
they can move."

Measurements were taken from
Lucy's hind leg using procedures the researchers
usually use on human subjects.
Muscle activity was recorded
using electrodes placed on her
skin and the nerve to those
muscles was stimulated at the
back of the knee. The 8,600
pound Lucy feasted on sugar
cane and watermelon throughout the experiment.

"We anticipate that in future
years this research may aid
veterinarians and zoos in the
care and treatment of
elephants," says Donelan,
noting that while these
experiments are the first of their
kind carried out on elephants,
similar measurements in
humans are commonly used to
diagnose neurological
dysfunction and may prove
similarly useful for elephants.

Researchers had strong support
from the zoo to undertake their
work. "Lucy has been fantastic,
considering that she is about
sixty times more massive than
the human subjects we usually
work with," says Collins.

PUBLICATIONS

ANDREW BLABER, TESSHIN
HACHIYA, Mitsuuru Saito. Near
Infrared Spectroscopy: Assessment
of Limb Vasoconstrictor Tone and Blood Volume Shifts
During Orthostatis Stress. Presented
at the 15th Humans in Space Symposium, May 22-27,
2005 in Graz, Austra.

SCOTT LEAR presented the
following abstract: LEAR SA,
Kiess M, Ignaszewski A.
Comprehensive risk factor and
lifestyle trends four years after
cardiac rehabilitation. Sixth
International Conference on
Preventive Cardiology, Iguassu
Falls, Brazil.

Kuo AD, DONELAN JM, Ruina A.
Abstract: Energetic consequences of walking like an

Doke J, DONELAN JM, Kuo AD.
Abstract: Mechanics and
energetics of swinging the

DEFENCES

SUCCESSFULLY DEFENDED:

JINZE (ROBERT) LI M.Sc.
Wednesday, May 11th, 2005
11:00 a.m., ASB 9896
Molecular assessment of former
cancer sites predicts second oral
malignancy.
Supervisor: MIRIAM ROSIN

DEFENDING:

FLAVIO OLIVEIRA M.Sc.
Thursday, July 7th, 2005
1:00 p.m., ASB 9896
Electrophysiological correlates of
performance monitoring and error
detection in response to
augmented feedback.
Supervisors: DAVID GOODMAN,
JOHN DICKINSON

BRIAN TOPP Ph.D.
Monday, July 18th, 2005
2:00 p.m., ASB 9896
The etiology and natural history of
Type 2 Diabetes.
Supervisors: DIANE FINEGOOD,
TED MILNER

KINES ALUMNI

Recent B.Sc. graduate MICAH
CARMDY has been hired as an
ergonomist by the B.C. Ministry
of Energy and Mines.

B.Sc. graduate JIM BOWIE has
been accepted into the Masters
of Physiotherapy programs at
both the University of Alberta and
at Queen’s University.

KINES CO-OP UPDATE

From DARLEEN BEMISTER and
BARBARA PEACHEY:
29 of the 70 graduates this June
received co-op awards. That is
a little over 41% of our total
graduates! In order to receive a
Co-op award, students must
have completed a minimum of
Students who complete three Co-op work terms received a Co-op Certificate and those students who completed more than three Co-op work terms all received Degree Designations (DD). DD’s are noted directly on the students’ BSc Kinesiology parchment, which is a very nice way to promote their ‘extra’ undergraduate efforts. Many of the Kinesiology Co-op students have already secured full-time work for September or are moving onto professional school.

The following students received co-op awards last week.

THREE CO-OPS:
- Lindsay Carlson
- Courtney Collins
- Dayna Derksen
- Jessa Eng
- Alexander Factor
- Robin Hopkins
- Bruce Mullin
- Urszula Naszynska

FOUR CO-OPS:
- Aylm Abdulla
- Doug Cameron
- Joanna Chung
- Jodi Huys
- Michelle Lee
- Daphne Leung
- Karen MacDonald
- Vicky Mak
- Jill Meanley
- Trevor Moizumi
- Alaina Nicholson
- Christian Peters
- Elmne Postma
- Erin Sloan
- Mandy Yan
- Shawn Yazura

FIVE CO-OPS:
- James Bowie
- Micah Carmody

SIX CO-OPS:
- Darby Ponich
- Collins Wong
- Jason Liu

So far, the Kinesiology Co-op Program has placed 60 students in Co-op work practicums for the Summer 05 semester. This puts the program right ‘on track’ for their semesterly goal, in terms of placement numbers and two away from the all time Summer record. Summer semesters always see larger placement numbers than Fall or Spring. Interviews, for summer, are still in progress for a few jobs, so one or two placements may still happen.

This summer has been record breaking in other ways though. We posted over 152 jobs for our students to apply to. That is almost 3 times more jobs than we were able to place. This is the most jobs that we have ever posted in a semester and certainly gave our students a great choice.

Many students are already well underway applying for Fall semester co-op jobs. That said, we appear to be a little short of students applying for the Fall semester. If you have the opportunity to encourage students in your classes or labs to participate in the Kinesiology Co-op Program for the Fall semester, please do so and send them our way. Thanks!

**Cost:**
- ACE Members / SFU Community: FREE
- $10 all others – payment at door, cash only please

**Registration:** Confirm attendance with Louise Wynne at louisewynne@hotmail.com

**About the speakers:**

Aaron Miller is a Planner with the Interior Health Authority. He will be presenting on incorporating ergonomics into the design of a community hospital involving a participatory approach with both staff and management involvement.

Stephen Robinovitch is an Associate Professor in the School of Kinesiology and associate member of the School of Engineering Science at SFU. He will be presenting on the research being conducted within his laboratory, examining the biomechanics of fall initiation, descent, and impact.

**Lab Tours and Refreshments Following**