WELCOME

Welcome to the first edition of the FMDAT quarterly newsletter.

As leader of FMDAT, I am proud to be working with such passionate and motivated researchers and I look forward to the future successes of our ASRI.

With the new year, 2010 will bring some new developments and changes to the FMDAT ASRI structure, with the expectation that this will lead to some exciting outcomes. We will be discussing these at our upcoming workshop in February.

I look forward to engaging with you at this event and throughout the year and wish everyone a happy and successful 2010.

Karen Reynolds
Leader, Flinders Medical Devices & Technologies

NEW ASRI MEMBERS

We welcome a number of new members to the FMDAT ASRI.

Ms. Carmela Sergi
Manager, Strategic Initiatives
Carmela has a strong background in intellectual property and her role is to support the FMDAT ASRI by identifying, pursuing & securing opportunities for enhancing capabilities in Medical Device research.

Ms. Kelly Burton
Project Officer
Kelly provides administrative support for the FMDAT ASRI and is responsible for event coordination, the FMDAT website and marketing materials, finances & budgets and general project management.

Dr Aaron Mohtar
Research Associate
Aaron has recently completed his PhD in Electronics Engineering and has a strong interest in the application of electronics in biomedical devices and instumentation.

Dr Jan Chu
Visiting Scholar
Dr Chu, an Associate Professor at Cheng Shiu University in Taiwan, is working on a variety of data mining areas with Prof. John Roddick.

Dr Haifeng Shen
Lecturer in Computer Science
Dr Shen’s research interests include human computer interaction, computer supported cooperative work, collaborative virtual environments, medical simulation and health informatics.

NEWS

NEW DVC (RESEARCH)

FMDAT would like to welcome our new Deputy Vice-Chancellor (Research), Prof. David Day, and we look forwrd to working with him to increase the University's research profile.

2010-2012 ASRI UPDATE

Late last year the DVC (Research) announced Flinders University's areas of strategic research investment for 2010-2012. FMDAT is one of ten successful ASRI's who have received further funding.

The 2010-2012 ASRI funding model has two components:

- Base-funding: for three-years from central research funds
- Growth-funding: dependent on the amount of income generated by the ASRI via the infrastructure levy.

MEMBER GRANT SUCCESS

Congratulations to all FMDAT members who secured funding in recent grant rounds.

ARC Discovery

- Prof. John Roddick (with Prof. M Bull et al) - Behavioural syndromes and social networks in sleepy lizards

National Health and Medical Research Council (NHMRC)

- Prof. Nico Voelcker (with Prof. K Williams et al) - Nanostructured porous silicon for opthalmic implants
- Prof. Karen Reynolds, Dr. John Costi, Prof N Fazzalari & A/Pr M Bottema (et al) - Development and validation of a finite element model for orthopaedic screw insertion into trabecular bone
- Dr. Kenneth Pope and E/Pr John Willoughby (with Dr M Broberg et al) - Cell swelling and EEG ripples: components in the transformation of normal brain activity into seizure
UPCOMING GRANT DEADLINES

- ARC Discovery - 3 March 2010
- NHMRCProject - 17 March 2010
- NHMRC Partnership - 30 April 2010
- NHMRC Program - 1 June 2010

Note: additional internal reviewing deadlines may also apply. Please contact the Office of Research to confirm any internal deadlines.

ASRI UPDATE

NEW FMDAT ORGANISATION STRUCTURE

Also new to 2010 is the updated FMDAT ASRI organisational structure.

Six research areas have been identified within FMDAT and a Program Leader has been selected to represent each group at the 3 monthly FMDAT Research Committee.

These new Program Leader roles have been established to help encourage and identify opportunities to increase research activities and collaborations within each of the six identified research areas.

The Program Leaders for 2010 are;

Assistive Technologies - Prof. David Powers
Biomechanics & Implants - Dr. John Costi
Health Informatics - Prof. John Roddick
Medical Devices & Instrumentation - Prof. Karen Reynolds
Medical Signals & Imaging - A/Prof. Murk Bottema
Medical Simulation & Modelling - Prof. Harry Owen

In addition to the Research Committee, a revised FMDAT Steering Committee will convene every 3 months.

WEBSITE UPGRADE & NEW BRANDING

The FMDAT team are currently updating the content of the FMDAT website and have been holding discussions with the Marketing and Communications Office (MACO) on a brand refresh for the ASRIs.

MACO are in the process of rolling out the new brand-refresh for the entire University, which will filter through to the FMDAT ASRI website and marketing materials. The new brand-refresh should ensure the FMDAT communication materials are visually appealing, dynamic and user friendly. Stay tuned!

UPCOMING EVENTS

FMDAT MEMBER WORKSHOP 2010: THE NEW FMDAT ASRI

The 2010 FMDAT member workshop will be held on Wednesday 17 February 2010 at the Belair Park Country Club from 9am-2.30pm (lunch included). Special guest speaker will be Prof. David Day (DVCR). Please mark this date in your calendars.

RSVP either ‘yes’ or ‘no’ to kelly.burton@flinders.edu.au by Friday 5 February 2010.

PAST EVENTS

MDPP CHRISTMAS DRINKS

50 industry, government and research contacts attend the event providing a fantastic opportunity to network and enjoy the festivities amongst new and old contacts. FMDAT student, Mel Ryan, won the ‘Guess the Medical Device’ competition – well done Mel!

PATENT SEARCHING

A Patent Searching in Research seminar was presented during October last year. If you were unable to attend this seminar but are interested to gain further information, please contact Carmela on ext. 12901 or at carmela.sergi@flinders.edu.au.

MEDICAL DEVICE PARTNERING PROGRAM (MDPP) - UPDATE

The MDPP has seen some exciting new developments. Some successes so far include;

- **October 2009** - The launch of MANA Calendar by the Minister for Ageing at the International Day of the Older Person.
- **November 2009** - Design and construction of a hand hygiene event logging system currently installed in a local hospital.
- **Ongoing** - The MDPP continues to work on projects spanning a large cross-section of research interests with local & interstate companies. Some examples of projects include:
  - Incontinence measurement
  - High performance hearing aid development
  - Tissue properties analysis
  - Torque and strength measurement in joints.

The MDPP continues to benefit from substantial involvement from FMDAT membership with some exciting collaborations resulting.
**STUDENT CORNER**

Hi my name is Melissa Ryan and I am the student representative for FMDAT.

I completed my undergraduate degree at Flinders University in Biomedical Engineering and am currently completing a PhD in the School of Computer Science, Engineering and Mathematics. The focus of my research is in the area of orthopaedic screw design for use in fracture fixation in osteoporotic bone using finite element modelling techniques.

I’m very excited to be taking on this role within FMDAT and this year we are looking forward to a very strong presence from our student members. There is a wealth of resources and expertise within FMDAT so don’t be afraid to utilise it!!

This corner will be dedicated to news and announcements for student members, so please be sure to keep me informed of any grants, awards, or completed theses!

We have a number of social functions planned for the year and hope to see many of you there. We will be holding a barbecue in March for all student members to get to know each other and find out what FMDAT is all about. More details will be sent out soon so stay posted.

If you have any queries or news, please feel free to email me:
melissa.ryan@flinders.edu.au

**STUDENT NEWS**

Congratulations to Tam Nguyen who has recently been awarded his PhD. His thesis is entitled ‘Biomechanical aspect of walking and lifting in pregnant women: Analysis of lumbosacral loads, and interjoint coordination’.

**BENEFITS OF BEING AN FMDAT STUDENT MEMBER**

Student’s can enjoy a number of benefits from being an FMDAT member. Some benefits include;

- Assistance with preparing travel grants
- Advice on where to find additional funding e.g. equipment funding
- Career support
- Networking opportunities (with internal and external contacts)

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**FMDAT MEMBER PROFILE**

**Dr. John Costi**

**Research Focus:**

John is developing programs of research into the multi-scale (nano-, micro– and macro-scope) biomechanical behaviour of soft tissue and bone with a view to providing a comprehensive understanding of their function during both healthy and diseased stages.

His major research interests are to understand the mechanisms of spine disc degeneration, disc tissue injury and biomechanics, knee ligament reconstruction, soft tissue and bone mechanics and implant micro motion.

This research should lead to improved mathematical and experimental models that will facilitate the development of better implants and therapeutic treatments of tissue and bone degenerative diseases.

John also lectures in Biomechanics, Mechanics and Structures and Mechanics of Machines.

**When he’s not working, John enjoys ......**

Spending quality time with his family, watching movies, reading, jogging/exercise.

**John’s favourite food is....**

Pasta

**The last movie that John watched is ......**

Avatar

**John’s favourite television show is ......**

How I met your mother

**John is currently reading ....**

Stephen King’s, The Dark Tower