Research chair in multi-wave astronomy will underpin study of far galaxies

UCT’s newest chair in the Department of Astronomy is an important endorsement of the institution’s capacity to build a body of research – and researchers – that will enhance South Africa’s reputation as a major hub for ground-based multi-wave astronomy

The Head of the Department of Astronomy, Professor Renée Kraan-Korteweg, is delighted that astronomy at UCT has been awarded the Chair in Extragalactic Multi-Wavelength Astronomy, part of the South African Research Chairs Initiative in collaboration with the South African Square Kilometre Array (SKA) office.

The news was announced at the SKA Bursary and Fellowship Conference in Stellenbosch on 2 December, opened by Naledi Pandor, Minister of Science and Technology.

"South Africa is rapidly becoming a major international hub for ground-based multi-wavelength astronomy, by virtue of its geographical advantage and the construction of world-class facilities," said Kraan-Korteweg.

Both South Africa and Australia have been short-listed to host the SKA, which will consist of thousands of dishes and radio-wave collecting devices, offering vast computing power (according to an online report, Dr Bruce Elmegreen of the Physical Sciences Department of IBM’s Research Division estimates that the SKA’s computing power will be equal to all the people on the planet doing a billion calculations per second simultaneously.)

If South Africa is chosen as host, this equipment will be spread over a vast area of the arid Karoo, but will act as one instrument – a high-speed wireless connection is under construction to link the two facilities.

"The new Chair in the Astronomy Department augurs well for the development of radio astronomy through undergraduate and postgraduate student programmes at UCT. Many are supported by SKA bursaries. Hosting the SKA in South Africa will boost the development of high-level skills and cutting-edge technology infrastructure in Africa, and will also attract expertise and collaborative projects to the continent.

Already the South African SKA Youth into Science and Engineering Programme is feeding a steady stream of high-level expertise into the continent’s SET system that will help Africa advance radio astronomy and its related sciences and technologies.

"The support for the new chair is very high-level skills development.

UCT’s strengths in astronomy

• UCT is the only South African university with an astronomy department.
• The university has implemented a research strategy that focuses its resources into strategically selected clusters of activity and postgraduate training. This includes accredited research groups that operate as clusters of research excellence, one of which is Extragalactic Astrophysics and Cosmology.
• From a department of three academics, one postdoctoral research fellow and a handful of graduate students, the department has grown to a complement of 10 academics, 32 postgraduate students, and four postdoctoral research fellows.
• The astronomy department hosts another research fellow and the establishment of a research group specialising in extragalactic radio astronomy. De Blok is also a member of the MeerKAT International Science Advisory Committee.
• The department implemented an astrophysics undergraduate programme in 2005 which has been very successful in attracting black South African students. Of the 43 students registered for an astrophysics major at UCT this year, 74% are black and 19% are women.
• To date the National Astrophysics and Space Science Programme, partly hosted at UCT and which is open to all African students, has graduated 86 honours and 36 master’s students.

Research chair in multi-wave astronomy

South Africa as a hub

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Eternal summer for school

UCT’s Summer School, directed by Mede Rall, will celebrate its 60th birthday next year.

Unique in Africa, UCT’s Summer School has had a long and distinguished history. For six decades, as the university’s premier public outreach event, it has offered courses and lectures ranging over arts and humanities, science and conservation, history, philosophy and contemporary studies, as well as practical art, languages and writing courses.

Planned and co-ordinated by the Centre for Extra-Mural Studies, it annually attracts approximately 3000 students from all over the world. In celebration of the event, which runs from 15 to 23 January, artist Gwen van Embden is creating Bits, Bites and Tweets, a commemorative artwork around a central pillar in the Leslie Social Sciences Building. This interactive installation engages with the theme of evolution as played out in the various adaptations of Gala-pagos fowches, first noted by Darwin more than 175 years ago. Students will be classified as members of a symbolic finch species according to their areas of study, and the appropriate symbolic finch will accompany their registration cards.

The exhibition website, http://ss60.uct.ac.za, has quick links and access to social networking tools such as Twitter.

Summer School’s 60th anniversary will also be celebrated by two receptions. At the opening, on 15 January, the speaker will be Dr Stuart Saunders, former vice-chancellor, and at the second, on 22 January, the speaker will be vice-chancellor Dr Max Price. Two free lectures are offered on a first-come, first-served basis, one of these being by Dr Laurine Platzky, on the 2010 FIFA World Cup. The co-ordination and smooth running of Summer School requires a great deal of planning and preparation to maintain its high reputation. Student assistants, all currently studying at UCT, are presently in training at the Centre. Summer School is a demand-and very ‘real’ work experience, and the skills and work ethic acquired by the students have made them highly employable on graduation, both within UCT and in the wider world.

For general info, visit the Summer School website at http://ss60.uct.ac.za.

Neo-liberalism seeks to dominate Aboriginal affairs

Tension is building in Aboriginal affairs as Australia mainstreams employment and education departments and environmental agencies pursue different pathways for the development of the country’s indigenous citizens living in remote areas.

The dominant state project of improvement seeks to integrate the Aboriginal population into the mainstream, while at the same time, environmental agencies provide support for indigenous Australians to remain living on a huge indigenous estate that covers a massive 1.5 million square kilometres, an area larger than South Africa, where only 100 000 indigenous Australians reside.

So said Professor Jon Altman (above right), director of the Centre for Aboriginal Economic Policy Research at the Australian National University, in his seminar, Commodification of Environmental Knowledge: An alternative development strategy for the Australian indigenous estate.

The event on 24 November was presented by UCT’s Environmental Evaluation Unit and the Department of Social Anthropology as part of the collaboration between UCT and the Australian National University.

Birds have something to say on climate change

While climate-change predictions and modelling – essential for policy design – are as cutting-edge and sophisticated as they come, they remain, as their critics like to point out, flawed and full of holes.

Then why not turn to birds to help fill the gaps? In a 16-page illustrated booklet, Birds and Environmental Change: Building an early warning system in South Africa (http://www.adu.org.za/docs/climate_change_booklet.pdf), scientists from the Animal Demography Unit (ADU) at UCT and the South African National Biodiversity Institute (SANBI) describe how bird monitoring and research can provide telling warning signals of the impacts of climate change.

Keep an eye, for example, on the correlation between reproduction rates of the blue crane Anthropoides paradiseus and rainfall in the Nama Karoo region – the better the rain, the better the fledglings’ chances of survival. On the flip side, drier weather around Cape Town could spell a roiser future for the peregrine falcons Falco peregrinus, so watch their numbers.

And because spring arrives earlier in Eurasia than it used to, it’s been noted that barn swallows Hirundo rustica now leave South Africa 11 days earlier on their seasonal breeding migration than they did a decade and a half ago.

Many of the findings in the booklet are based on data collected for scientific programmes by trained members of the public.

“In SA (and elsewhere in the world), there are plenty of enthusiastic and knowledgeable members of the public who spend much of their leisure time birding,” says editor Dr Mariene de Villiers of the ADU.

“There is the urge to help and willing ‘workforce’ of people who can help collect data on birds – perhaps more so than for any other faunal group.”

“Birds are certainly not the only group of species affected by global change, nor even the most affected,” wrote SANBI’s Guy Midgley and Phoebe Barnaud in their introduction.

“But they are certainly among the most visible and evocative to us as a society, and are thus an important window into the broader changes in ecosystems.”

While the contributors admit that not enough is known to put all the trends in bird populations and distributions described in the booklet down to climate change, the long-term data should be enough to set alarm bells ringing.

(M.Morris@uct.ac.za)

Law faculty recruits students in Rwanda

The deputy deans who hold the postgraduate studies and internationalisation portfolios in the Faculty of Law travelled to Kigali recently to meet with prospective students.

Earlier this year an exchange agreement between the Ministries of Education of the governments of South Africa and Rwanda paved the way for a group of 19 students to register for the LLM programme in the faculty.

The recent visit aimed at consolidating the exchange agreement, streamlining administrative processes and administering language proficiency tests to a second round of prospective students. The UCT delegation was hosted by the director of SFAR, Emmanuel Muvunyi.

During their brief visit Professor Evance Kalula and Associate Professor Eliana van der Spuy also attended the opening session of the Judicial Open Week, at which issues relating to justice sector reform in Rwanda were discussed.

The Honourable Chief Justice spoke about far-reaching institutional reforms involving the modernisation of infrastructure, and the development of technological skills and human resource capacity within the justice sector.

The discussions also touched on the challenges confronting the reform of the judicial sector in post-conflict jurisdictions. The delegation paid a brief courtesy call to the Minister of Education. A visit to the Genocide Memorial in Kigali brought the visit to a fitting conclusion.

“Fifteen years after the blood events of 1994, life in Kigali seems to have transformed itself,” Van der Spuy said. “The city is situated on rolling green hills. The vegetation is lush. The streets are clean. More importantly, public perception reflects an absence of concerns about public safety – in sharp contrast to South Africa today.”

Among the students there was eagerness to explore the possibilities of exchange, she added.

As a potential host institution, UCT also stands to benefit from the presence of a cadre of motivated postgraduate students, who will bring their comparative experiences to bear on wider African conversations about law, justice and democratisation.”
Global challenges require global solutions, and the time has come for South Africa and Norway to examine how to consolidate and develop their co-operation. "PATA does not tell people what to do, but helps them discover common goals and how to collaborate to get things done," Roux said. Listening to other people’s ideas is what excites Roux, and gives him and PATA the energy to move forward, he added. Through the nomination by Professor Heather-Zar, Roux’s colleague in the division, this is the first time that PATA and its work has been acknowledged.

No more monkey business with baboons

"They require the same areas of land that humans steer towards – your low-lying, flatter land," explains Hoffman. "For humans it’s easier to build on, for baboons it’s richer in resources."

Roux launched a ‘visiting treatment team’ programme in 2004, when he discovered that there were "well-educated colleagues" in Africa who, at that time, had not treated patients with anti-retroviral treatments "because they were frightened to have to do some treatments they had not done before". This initiative led to the establishment of PATA in 2005. The organisation borrowed its name from a Miriam Makeba song, Pata Pata, meaning "reach out" in isiXhosa and isizulu.

By reaching out and touching communities and health professionals, "PATA does not tell people what to do, but helps them discover common goals and how to collaborate to get things done," Roux said. Listening to other people’s ideas is what excites Roux, and gives him and PATA the energy to move forward, he added. Through the nomination by Professor Heather-Zar, Roux’s colleague in the division, this is the first time that PATA and its work has been acknowledged.

Tali Hoffman’s supervisor, Dr Justin O’Riain, has a watchful eye on his subject. "PATA has compiled a series of digital maps – based on months-long tracking of baboon movements, and some 25 000 GPS points that came out of that exercise – that pinpoint the baboons’ home range on the Peninsula – from Tokai to Cape Point – to a very fine scale. And, no, baboons don’t just hang out on the mountains somewhere. Well clear of humans.

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Dark energy thesis wins medal

The three researchers who shared the Nobel prize for physics this year are Ada Yonath of the Weizmann Institute of Science, Thomas Steitz of Yale University and Venkatraman Ramakrishnan of the Medical Research Council’s Laboratory for Molecular Biology in Cambridge.

The epicentre of structural biology in South Africa is UCT’s Electron Microscopy Unit. Students and scientists use this facility to study the structures of proteins using techniques that led to the determination of the structure of the ribosome. This is pivotal work that has won three overseas researchers the 2009 Nobel Prize in Chemistry, announced in October.

The researchers, who shared the Nobel Prize in Chemistry this year are Ada Yonath of the Weizmann Institute of Science, Thomas Steitz of Yale University and Venkatraman Ramakrishnan of the Medical Research Council’s Laboratory for Molecular Biology in Cambridge. The pioneer of the trio is Yonath, only the fourth woman, and the first since Dorothy Crowfoot Hodgkin in 1964, to win the Nobel Chemistry award. She is also the ninth (and first woman) Israeli Nobel Laureate.

Yonath believes it was possible to crystallise ribosomes because she was aware that the ribosomes of hibernating polar bears are preserved through the winter because they form crystalline two-dimensional arrays. This observation gave her the courage to persist and ultimately produce high-quality crystals.

However, ribosomal properties are unfavorable for crystallisation: they are flexible, heterogeneous and unstable. Yonath believed it was possible to crystallise ribosomes because she was aware that the ribosomes of hibernating polar bears are preserved through the winter because they form crystalline two-dimensional arrays. This observation gave her the courage to persist and ultimately produce high-quality crystals.

Her research has led her to use X-ray crystallography, which requires high-quality crystals.

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Death of a star: A white dwarf waits to go kaboom

Astronomers are charting the evolution of a Type Ia supernova, critical for studies of elusive dark energy and our understanding of the Universe’s expansion.

It’s not often that an academic paper on the evolution of a supernova star – when a large dying star implodes – sends audiences scurrying for YouTube.

But Associate Professor Patrick Woudt and his co-author Emeritus Professor Brian Warner’s paper (published in the 20 November 2009 issue of Astrophysical Journal) on the unique explosion of a white dwarf star, V445 Puppis, has caused quite a stir internationally.

V445 Puppis and its companion star are 25 000 light years away in the constellation of Puppis (The ‘Stern’) in our galaxy. This means the light emitted from them was during the Earth’s Palaeolithic Period, when early humans were hunting and fishing and practising primitive forms of cultivation.

Fast forward to March 2005, when astronomers using the European South Observatory’s (ESO) Very Large Telescope began to receive detailed pictures of the expanding nova shell of V445 Puppis following its outburst in November 2000.

Vampire star

The central star in V445 Puppis had been sucking helium from its companion star, much like a vampire. Having tanked up on cannibalised energy, V445 Puppis had become heavy and unstable. The subsequent helium nova outburst – the first ever helium nova observed in the Milky Way galaxy – bumped up its brightness some 250 times, and the star began ejecting a vast amount of matter, several times the mass of the Earth.

Over the next two years, astronomers were able to get some very sharp images of the vampire star’s dramatic evolution. What they saw resembled a bipolar shell, shaped like a bow-tie, initially with a small waist and lobes on either side. The shell – unlike any previously observed for a nova – is moving at about 24 million kilometres an hour.

While the event offers a grandiose display of fireworks, it is also of huge value to astronomers, allowing them to calculate the distance away and intrinsic brightness of this peculiar outbursting double-star system.

Exploding supernovae

This double-star system is a prime candidate for becoming one of the long-sought progenitors of the exploding stars known as Type Ia supernovae, critical for studies of elusive dark energy.

“Becoming a supernova is one way that a star can end its life,” says Woudt. “One family of supernovae, Type Ia supernovae, are of particular interest to cosmologists as they can be used as ‘standard candles’ to measure distances in the Universe – and to calibrate the accelerating expansion that is driven by dark energy.”

It’s hard to say when – or even if – V445 Puppis will become a Type Ia supernova. The matter piling up on V445 Puppis’ surface from its companion star will eventually cause it to exceed the Chandrasekhar limit (named after Indian physicist Subrahmanyan Chandrasekhar), which is nearly 1.4 times the mass of the Sun. Once it reaches this threshold it should explode like a stellar thermonuclear bomb.

“One of the major problems in modern astrophysics is the fact that we still do not know exactly what kinds of stellar systems explode as a Type Ia supernova,” says Woudt.

“Whether V445 Puppis will eventually explode as a supernova, or whether the current nova outburst has pre-empted that pathway by ejecting too much matter back into space is still unclear,” he adds.

“But we have a pretty good suspect for a future Type Ia supernova!”

If V445 Puppis explodes as a Type Ia supernova, it will be easily visible with the naked eye. It will appear as bright in the night sky as the planet Jupiter, even though V445 Puppis is 25 000 light years away.

(You can take a look on YouTube at http://www.youtube.com/watch?v=bf50nwry_G8)

(Monday Paper 5 – 13 December 2009 Volume 28#19)

Death of a star: A white dwarf waits to go kaboom

Mysteries unravelled: Assoc Prof Patrick Woudt is lead author of a paper on a double-star system that is a likely candidate to become one of the long-sought progenitors of the exploding stars known as Type Ia supernovae, critical for studies of elusive dark energy.
Obituaries

Mendel Kaplan, remembered by Prof Milton Shain, director of the Isaac and Jessie Kaplan Centre for Jewish Studies and Research

Mendel Kaplan once told me that the key to success was focus. I witnessed it in all his efforts. Details concerned him greatly, but he never lost sight of the big picture. Indeed, he created the big picture.

Mendel, who recently passed away, initiated, led and funded numerous Jewish, Zionist and other projects in South Africa and throughout the Jewish world.

There is much to celebrate in his 73 years. Cape Gate has been transformed from a modest business selling products like wrought iron and garden benches into a vast conglomerate producing its own steel; it became one of the largest privately-owned companies in South Africa. The expansion was largely orchestrated by Mendel and his brother Robert.

Cape Gate is a family concern. Family was Mendel’s passion. Con- tributions to Judaism and Jewish Studies at the University of Cape Town and through his involvement in the activities of other Jewish organizations in South Africa and internationally were not my strongest suit. But he

would leave that alone.

Projects, conferences and research interested him. There were no formalities. It was always down to business.

No doubt Mendel’s law degree from the University of Cape Town and his experiences in business administra- tion from Columbia University in New York stood him great in steady. But it was his creativity, vision and focus that set him apart. Mendel was always three steps ahead. He provided direction and ideas. But he also appreciated his mistakes. Exchanges were often tense but always underpinned by loyalty.

When Mendel set his mind to something, he was unstoppable. He had a passion for matters Jewish. A deeply spiritual man, he was always reading, learning and writing. His most recent book recorded his travels as a young man in East Africa. It was written for his grandchildren.

Aman’s most laudable work was the support of South African and international Jewish affairs. He was a household name in the Jewish world. Although he moved in halalowen circles, Mendel always had time for lesser mortals. More than that, he cared for them.

The Kaplan Centre, too, has appreciated his generosity. I know the Centre meant much to him, although it was only one of many flourishing ventures he created in a life dedicated to the Jewish people, to Israel, to fam- ily and to the less fortunate, Jewish and non-Jewish.

Prof Paul Ensor, Dean of the Fac- ulty of Humanities, has added: “Over the years I interacted with Mendel Kaplan often, and greatly enjoyed his forthrightness, his generosity, his curi- osity, and his truly wonderful sense of humour. UCT, and the Faculty of Humanities in particular, have benefit- ed materially and intellectually from his tremendous generosity over many years, and we will miss him greatly. He will be remembered through the Kaplan Centre and its ongoing work, and we will find a fitting way of pay- ing tribute to his legacy. It was a great privilege to have known and worked with him.”

Emer Prof Paul Hare, global sociologist

A Paul Hare, a global sociologist passionately engaged in the world around him, has died at 86.

Emeritus Professor Paul Hare, head of the Department of Sociology, with Robert F Bates and Edgar F Borgatta, Hare edited the classic 1955 collecti- tion titled Small Groups: Studies in Social Interaction. Another focus of Hare’s scholarly contributions was functional analysis of social interaction, derived from the work of Talcott Parsons. Hare blended the functional perspective with other theoretical approaches, such as dramatological analysis and the creativity hierarchy, as a method for examining social change, which included the US civil rights struggle, global peace movements, India’s Shanti Sena, the fight against apartheid in South Africa, and the Hebrew Israeli Community.

Hare’s greatest professional legacy is his life as a model of the sociologist engaged in the currents of social history, across nations and diverse peoples, propelling by his Quaker values to “bear witness” and be a participant observer of social

action for peace and justice.

The Sociology Department, and particularly current members associ- ate Professors Ken Jubber and David Lincoln and administrative assistant Ramela Bhaga (all three of whom knew Hare in the 1970s), paid hom- age to him.

He was a world-renowned scholar who during his UCT involve- ment helped grow and shape the Department of Sociology intellec- tually. Moreover, in 1975 he founded the journal Social Dynamics at UCT and was its first editor. The endur- ance and quality of this journal bears testimony to his foresight, and to the research and publishing he stimulated. As a person, he will be particularly remembered for his political activism in the department and in Cape Town, and for his emphasis on consultation and consensus decision-making.

Hare is survived by his wife, June Rabson Hare; his sons, Simon and Andrew; four grandchildren; and a previ- ous marriage: Sharon, Diana, Maly and Christopher; and two grand- daughters, Eva and Lali.
The three officials are appealing the
amendments that were introduced in Parliament
for the bill, which was supposed to
the bill wouldn’t appeal to the
world’s best universities. This is
but the latest in a series of delays
be a girl from Ames who can not
who died in 1986. The winner will
in 2007.

A newspaper column that led
about the enduring friend-
Obama’s late mother, has been
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The doctoral dissertation of Ann
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Prevention is better than cure, says Van As

Society must prevent injuries to children, and UCT should not be shy to lead the way, Professor Sebastian van As said at his inaugural lecture, Ex Africa Semper Aliquid Novum (There is always something new out of Africa).

Van As, head of the Trauma Unit at the Red Cross War Memorial Children’s Hospital, said trauma is the leading cause of the death of children between the ages of one and 18 in South Africa. Each year, approximately one million children die from the three big killers: motor vehicle accidents, drowning and burns.

Van As drew his argument from recommendations made by the Commission for Africa, instituted by former British Prime Minister Tony Blair, which suggested a shift of emphasis from humanitarian relief to prevention to solve Africa’s problems.

Research at UCT represents a wealth of information that is internationally underutilised, Van As noted. This includes the numerous novel experimental liver and liver transplantation studies at the Liver Research Centre at Red Cross, and the fact that the university’s and hospital’s work has made South Africa a world leader in trauma care.

According to the World Health Organisation, trauma will be the biggest killer by 2010, as other causes such as infectious diseases and cardiovascular diseases will decline in the next decade.

“It’s therefore a concern that there is a tendency among certain administrators to think that dedicated trauma units can be dispensed with,” he said.

The development of paediatric trauma care is another area in which surgeons have excelled and taken leadership. The Red Cross Children’s Hospital Trauma Unit was established in 1984, and extended in 2004 when an additional new state-of-the-art trauma unit was built.

Approximately 10 000 children are treated annually in the unit, and the main causes of injuries are falls, transport-related injuries, burns and assaults.

The prevention – rather than just treatment – of child injuries is not a new concept, as Red Cross established the Child Accident Prevention Foundation of Southern Africa, popularly known as Childsafe, in 1978.

The vision of Childsafe is to create a safer world for children, with its activities focusing on research, education and environmental change and recommendations for legislation. Childsafe’s most prominent initiative was their support for the new child-friendly Firearms Control Bill, which has reduced the number of cases of children treated for gunshot wounds at Red Cross by 70% since 2000.

“Although there are significant campaigns to increase vaccinations for infectious diseases, child-accident prevention is seriously neglected in the Third World. Too often, it is forgotten that child safety is a matter for adults.”

Van As believes that the recently-established Global Health Institute at UCT will contribute significantly to global health, but it requires a strong trauma component.

Drug discovery award for Chin’ombe

It is high time that African scientists found African solutions for Africa, says postdoctoral research fellow Dr Nyasha Chin’ombe.

Chin’ombe has been selected by the National Research Foundation to participate in the South Africa Drug Discovery programme in 2010.

The Drug Discovery programme is a collaboration between Emory University and South Africa and aims to build a high-calibre cadre of scientists who will play an important role in the development of vaccines and other biopharmaceuticals against HIV/AIDS and other communicable diseases.

“We know that vaccines can save millions of lives and we need to start making our own vaccines here in Africa,” said the scholar from the Department of Clinical Laboratory Sciences.

Chin’ombe will spend the next 12 to 24 months in the US to learn cutting-edge research technologies in vaccine discovery. This stint will include a year at Emory University, starting in February next year, to learn about the broader aspects of drug-discovery-driven research.

“When I return to South Africa, I plan to work on vaccines that are badly needed in Africa.”

Chin’ombe graduated from UCT with a PhD in medical virology in 2007. He is currently a postdoctoral research fellow under Professor Anna-Lise Williamson’s SARChI chair for Vaccinology.

“I am looking forward to taking up a new challenge.”

What is the Bill of Rights?

In the Faculty of Law, Professor Anton Fagan has a reputation for clear, ordered and incisive thinking.

Those are qualities he displayed in spades as he delivered his inaugural lecture, titled – pointedly – The secondary role of the spirit, purport and objects of the Bill of Rights in the Common Law’s development. The Constitutional Court has repeatedly – if not always expressly – endorsed the proposition that the spirit, purport and objects of the country’s Bill of Rights may be reason enough for the development of the Common Law, said Fagan, who holds the WP Schreiner Chair in the Department of Private Law.

This means that every court is obliged to adapt the Common Law whenever it does not live up to the spirit, purport and objects of the Bill of Rights.

And, Fagan cited, as the Court put it in one of its leading judgments: “Where the Common Law deviates from the spirit, purport and objects of the Bill of Rights, courts have an obligation to develop it by removing that deviation.”

But, said Fagan, this proposition is false. Rather, to the dismay of judges and legal folk everywhere, perhaps the role of the Bill of Rights in the development of the Common Law is merely a secondary one, argued Fagan.

If this is the case, it could serve only as a “tiebreaker”.

“The Constitution regards the spirit, purport and objects of the Bill of Rights only as reasons for choosing between ways of developing the Common Law that are already justified by reasons that have nothing to do with the spirit, purport and objects of the Bill of Rights.”

In the rest of his lecture, Fagan presented his argument meticulously. It was a lecture that would give many pause for thought, and may demand a few readings, said former dean Professor Hugh Corder in his wrap-up.

“You lecture leaves no-one in any doubt as to your views,” said Corder. “So if you were to be, persist the thought, proven wrong, you’d be wrong clearly.”

Pause for thought: In his inaugural lecture, Prof Anton Fagan refuted the argument that the Bill of Rights is reason enough for changes to the country’s Common Law.

Three decades of architecture chronicled in Noero’s book

The Everyday and the Extraordinary – Three Decades of Architecture charts the “extraordinary period of change” that South Africa has undergone, and illustrates the ways in which the everyday world shapes and gives form to architecture, says author Professor Jo Noero of the School of Architecture, Planning and Geomatics.

The book, launched on 27 November, is drawn from Noero’s exhibition, held at the Iziko South African National Gallery in 2009, and is structured around work done by Noero Architects and Noero Wolff Architects over the past 25 years.

The book consists of a number of selected projects, grouped into three decades: the 1980s, the 1990s and the 2000s.

The material in the book is intended for the professional and the amateur alike.

“Each decade has an essay that highlights themes that run consistently through the conceptual development of the selected projects. A detailed timeline documents the extent of Jo Noero’s impressive and varied body of work,” said editor Jennifer Sorrell.
Pacemakers that can take a beating

UCT’s Cardiovascular Research Unit was recently shortlisted for a major technology award for a project that could lead to the next generation of robust pacemakers.

Engineers have their work cut out for them in designing and building pacemakers. In addition to the growing demand for these life-saving machines – which control heartbeat through a series of electrical pulses – pacemakers also need to last longer these days and, as more may be implanted into children, they should stand up to a few knocks.

It’s just that up to now, no-one’s measured the kinds of pressures and forces they’re subjected to once they’re actually implanted into live subjects.

Which means that the implant in a particularly bouncy child could take a beating, and needs to be designed with this in mind. ( Older children are usually advised to avoid contact sport, for example.)

“Technology now allows for pacemakers to get smaller and thinner,” explains Dr Tom Franz of UCT’s Cardiovascular Research Unit in the Chris Barnard Division of Cardiothoracic Surgery, who has been leading the project on the UCT side.

“The problem is that the thinner they get, the more susceptible they are to bending.”

Recently, however, a team from the unit and their industry partner – including one of Franz’s students, Hannam de Vaal – put numbers and details to the pressures and forces exerted on pacemakers.

The UCT surgeons, led by Dr Jacques Scherman, implanted a measuring device in a pacemaker shape – not much bigger than the original iPod Shuffle – just under the pectoral (chest) muscles of an animal, exactly where a pacemaker would be placed. After about eight weeks healing, during which the body builds a cocoon of fibrous connective tissue around the implant, they switched on the device via remote control, picking up essential data – such as muscle-induced forces on the implant – via its six sensors.

“It’s the first time that these in vivo (in the body) forces have been measured,” says Franz.

That data, which may be extrapolated to humans, has now been passed on to the collaborating company, which will feed it into future design features.

In recognition of their work, the UCT project team was recently shortlisted for the Department of Trade and Industry’s 2009 Technology Award in the advanced high-technology category. Alas, they didn’t win, but they do have the satisfaction of knowing that their work could still save lives.

(M.Lorris@uct.ac.za)

French help foundation in fight against HIV

The Desmond Tutu HIV Foundation – the umbrella organisation for the Desmond Tutu HIV Centre at UCT – received a R3.3-million boost from the French Development Agency (AFD) this week.

After AFD CEO Jean-Michel Severino (right in picture) visited some of the Foundation’s research sites in Cape Town, including the Hannan Crusaid Clinic in nearby Gugulethu, he joined Archbishop Desmond Tutu – and, also in picture, UCT’s Dr Linda-Gail Bekker – for a special signing ceremony.

The financial award follows on a state visit by the French president, Nicolas Sarkozy, early in 2008. The money will go towards a research project that will promote HIV testing and investigate models to streamline treatment of HIV and tuberculosis in co-infected patients.

UCT students shine at conferences

Three PhD students at UCT’s Division of Medical Virology have scooped awards in a variety of international and continental conferences recently.

Lenine Liebenberg (right in picture) was judged the best student for her performance at the 3rd African Flow Cytometry Workshop in Johannesburg, winning an all-expenses-paid trip to Mykonos in Greece to attend the Measuring Antigen-Specific Immune Responses conference in June 2010.

Zzipho Mbitawa and Lindi Roberts (middle and left in picture) each won a bronze medal for their poster and oral presentations, respectively, at the International Union against Sexually Transmitted Infections conference in Cape Town.

Dr Jo-An Passmore, senior lecturer in the division, said that the three students are doing “exceptionally well” in their studies, and these awards acknowledge this.

Liebenberg said the workshop was intense but stimulating, and the best part was to meet doctors Guido Ferrari, Mike Betts, Steve Perfetto and Clive Gray, “my mentors, who laid the foundation for my projects”.

Before the workshop she attended the 2009 Symposium on Infectious Diseases in Africa, where she exhibited her flow cytometry-based work on the role of genital tract immunity in the prevention and control of HIV infection.

Her work focuses on quantifying and comparing immune activation in the blood and genital tracts of HIV-infected and HIV-uninfected women.

Mbitawa won the third award in her promising career when she came second in the poster category for her work, HIV Infection in Women Influences the Low-Risk (LR) HPV Prevalence in their Male Partners but not the High-Risk (HR) HPV Prevalence.

Roberts received her medal for her research on the impact of sexually transmitted infections (STIs) and genital tract inflammation on the risk of HIV acquisition in high-risk HIV-uninfected women in South Africa.

The study demonstrated that STIs are associated with inflammation in the genital tract, and that this inflammation is associated with greater risk of HIV infection.

Mental health for mothers goes digital

The Perinatal Mental Health Project (PMHP) raised the bar in its work to address the “hidden pandemic” of pregnant women and mothers in psychological distress, when it launched a film on the subject this week.

Caring for Mothers, the 15-minute film, is set to help PMHP in its advocacy, fundraising and training functions.

The Project is located within UCT’s Mental Health and Poverty Project (MHaPP) in the Department of Psychiatry and Mental Health.

The film depicts the journey of young Xolelwa, a client of the Project, who becomes pregnant without planning to. Her unplanned pregnancy leads to total isolation and thoughts of committing suicide.

But after meeting a PMHP counsellor, her mood begins to shift, and she starts approaching life positively. At the end, Xolelwa gives birth to a son, and thanks the project’s counsellor.

“Without your help, I would be dead by now,” she says.

Xolelwa is one of the lucky ones. According to research, maternal mental illness has reached epidemic levels in low-income and informal areas, with one in three women in Khayelitsha (where Xolelwa lives) found to suffer from postnatal depression.

This is nearly three times higher than the prevalence in developed countries.

The consequence of untreated maternal mental illness is a “vicious cycle”, said Dr Simone Honikman, director of the Project. Psychological distress in mothers may impact on the foetus during pregnancy and on the child after the birth. “The effects may be physical, intellectual or emotional, and may be long-lasting,” she explained.

“Therefore maternal mental illness poses a significant obstacle to social and economic development.”

The film gives a picture of the nature and potential outcomes of the Project’s work. It is hoped that it will help to foster recognition of its value among policymakers, donors and society at large. “We would love it to generate a response from those in power so that we may reach our vision of integrated and effective mental healthcare for all mothers in South Africa.”

Vice-chancellor Dr Max Price said the film aligns with the university’s broader goals of training, research and social responsibility.

Professor Marian Jacobs, dean of the Faculty of Health Sciences, noted that despite the enormous global burden of disease posed by mental illness, those who live with these disorders have not received adequate attention – both in terms of the Millennium Development Goals and in terms of mortality data, which does not reflect the suffering of those that survive.

The PMHP also launched its website, featuring all the essential information on the project. This multimedia site may be explored at www.mhapp.za.org.
Recruitment gets a makeover

I had been clear for some time that UCT’s bureaucratic staff recruitment procedures needed reviewing. Appointments were often delayed (finding open spots in a DVC’s diary was the stuff of making interesting stories for the media) and often involved a large number of people, including HR and PASS, reviewing the applications and relevant documentation.

The new policies can be found on the HR website at http://www.hr.uct.ac.za.

HR will communicate extensively and host workshops to ensure proper implementation of the policies and procedures over the coming months, but here’s a potted introduction to some—but not all—of the changes in the processes. Key changes include:

• Chairing of selection committees
• Final sign off on appointments
• Quorum on information, selection committees
• HR advisor role changes
• Recruitment advert changes
• Printing of applications
• Questions of professional misconduct and crime

Looking ahead to the 2010 budget

Perhaps the best way to start is to clear up a possible misconception about the university’s operating surplus. UCT is currently budgeting at an operating surplus – profit, if you will – of around R14 million. That number is ironclad and will not be allowed to change, regardless of what else does.

But why do we protect a surplus if we are not a for-profit enterprise, and why do we not use the surplus for salary increases, as an example? The short answer is that it would be irresponsible for the university not to have a surplus that can act as a buffer when we may need it. More importantly, it creates the capacity to undertake capital expenditures.

CAPITAL PROJECTS

To explain a little further: We have R1 billion in capital projects facing us over the next few years, starting with a new academic building of around R1 billion and, then a number of other projects, including new scientific equipment.

The state is giving us R340 million towards these projects. What about the shortfall? Fund-raising would not, realistically, make much of a dent in the R600 to R700 million balance that requires funding.

Instead, that money has to come from annual operating surpluses, which are accumulated over time to build up our free reserves, together with net investment income from our investments and cash earnings.

This year, for the first time, we topped R1 billion in cash holdings; at the peak, we hold R2.1 billion. If that sounds like multiple riches, it’s not; most of that cash is for designated activities and much is sitting in research funds. By the end of the year, we’ll have about R600 to R800 million in cash. We estimate that we have a free cash balance – after money committed to designated activities – of around R200 million.

That’s why we have to manage our cash; as it is, we have no room for anything to go wrong; such as, for example, a cut or misestimate in the state subsidy. This alone wouldn’t break us but it could come as much as R30 million, which has to be covered in some other way. If some of our students don’t pitch up at the start of the year or something happens that keeps our semester-study abroad students away, we may be looking at another R20 or R30 million that has to be covered from within the operating budget while holding the R14.5-million bottom line.

FINANCIAL CUSHION

We need a cushion. (Our high-level finance plan requires that our annual operating surplus should be 5% of our gross income – around R50 million – for our sustainability.)

Next year, 2010, is in fact the first time that we’ve budgeted for a small surplus. We’ve realised a small surplus for a number of years, and for 2009 we projected an operating surplus of around R20 million, at this stage. That’s against a budgeted deficit of R21 million, so we’re talking about a R45 million swing on that. That’s thanks to the university’s various operating units – the faculties and PASS departments.

Some of the annual variables may be of interest. We’re looking at a state subsidy of R827 million, which comes to about an 11% increase. (The subsidy has, of course, not been announced yet, and the increase could be anything between 7% and 15%. Our budgeted subsidy of an 11% increase is based on a considered assessment.)

Another big variable is fees; on the face of it, we’ve not increased fees by 20%. Instead, it comes to around 10%. (A jump in student numbers or a change in the mix of students – for instance, more semester-abroad students – would increase that budgeted income.)

SHUTTLE EXPENSES

Jammie Shuttle is running efficiently. (We assumed, when drawing up the budget last year, that fuel prices would be a lot higher, but that’s come down nicely, saving us some money.) But the Shuttle service is costing us a lot more than we originally thought it would, and demand for it is expanding. If we decide to give more support to the Shuttle service, where do we find the money?

The single biggest variable remains staffing costs. It is true that the university is successful because of the quality of its staff. The reality is that the cost to pay all our staff is a large one – close to R1 billion. We may wish to reward our staff with large increases, but the financial reality is that even a small ‘one percent increase in staff costs (including benefits) means an R10 million additional fund- ing need. The reality is also, of course, that if we make a decision to increase our spending in one area then we must decrease our spending in another area. By example, if we spend more on buildings then we cut our spending on research, or increase our income. Or, in another example, if we increase salaries we might make that up by spending less on maintenance, or increasing our fees, etc. It ultimately is a balancing act, and a difficult one at that!

BALANCING ACT

To illustrate further just how difficult the balancing act is: Council and the Finance Committee have made a provision for 2010 salary increases, which the Remuneration Committee regards as reasonable, given what we know of the market and given projections. If the settlement with unions is within that provision we are okay,

but if it is above what we had planned by say 1%, we will be asked by Council to make up for that through ‘extra’ by cutting 1% from some other planned budget. These are the issues we’re faced with daily.

We’ve also committed R75 million to research. This amount has tripled over the past few years. We are really putting a lot into research, but we’re showing dividends in our research output. And while research does cost us quite a bit, we’re making progress in our research cost- recovery.

Finally, let’s talk about what is to us the defining variable – our cash balances, money in the bank, which varies hugely over the course of a year. (Profit or surplus could be said to be an ‘extra’, in the opinion, total enemy, but cash is reality.)

SWINGS AND ROUNDABOUTS

As mentioned earlier, we estimate free cash of about R200 million at year end. Council and the Finance Committee have instructed that our free cash not drop below this value at any time. There are a couple of dips foreseen in 2010— coinciding with expenditure on major projects—but we know that with the number of projects we have on the go, they will not all take place at the scheduled. (The R500 million residence project is already delayed by a year.) So we’re sure that because of timing and other variables, we will not violate this instruction at any stage.

But you can see that we’re vulnerable to sudden swings, and that is something that we will have to manage.

Prof Enrico Uliana

This piece is based on Prof Enrico Uliana’s presentation to the PASS Forum on 12 November.
**EXECUTIVE AND ACADEMIC POSTS:**

- **Lecturer**: Archaeology; closing date: 11 December 2009; Tel: 021 650 2220; Roslyn.Daniels@uct.ac.za
- **Lecturer**: Physics; closing date: 11 December 2009; Tel: 021 650 3003; Zulile.Ncayiyana@uct.ac.za
- **Chair**: Academic; closing date: 11 December 2009; Tel: 021 650 3003; Zulile.Ncayiyana@uct.ac.za

**ADMINISTRATIVE AND SUPPORT POSTS (PASS)**

- **Office Manager**: School of Economics; closing date: 15 January 2010; Tel: 021 650 2192; Charlotte.Snyders@uct.ac.za
- **Associate Professor/Senior Lecturer**: School of Economics; closing date: 15 January 2010; Tel: 021 406 6646; Nondumiso.Mgniya@uct.ac.za

**RESEARCH, PROFESSIONAL, ADMINISTRATIVE AND SUPPORT POSTS (PASS)**

- **Clinical Psychologist**: University; closing date: 11 December 2009; Tel: 021 650 3003; Zulile.Ncayiyana@uct.ac.za

**POSTS FOR UCT STAFF ONLY:**

- **Transport Administration Clerk**: Properties & Services; closing date: 11 December 2009; Tel: 021 650 3500; June.Reeler@uct.ac.za

**FOR SALE**

- **Klin**: 6,4 cubic feet with IPCO300 controller, for loader 5yrs old, very good condition, inside dimensions 4690x510x520mm with kit furniture. R12000.00. Contact: Mariella 0821385190 or 0834460496.
- **Solid Brass Bed**: Queen size with hardwood base (matress not included). R3500. Contact: joh 0825666898
- **Cheent Freezer**: 220 litre. Excellent condition. R800. Contact: joh 0825666898
- **Camping Freezer**: 42 litre/240 volt. Excellent condition. R600. Contact: joh 0825666898
- **Vacationlets**: Nest of 3 Beechwood, glass topped Weylands tables. R700. Contact: joh 0825666898
- **Wheelchair and Recliner**: 2nd Hand and in working order. R500. Contact: joh 0825666898

**Leisure Transport**

- **Caravans**: Contact: Vanessa 0829258582 or Felicity 0845115992 or feva@teikomsa.net.
- **Accommodation**: UCT postgraduate student seeks 2 bedroomed flat or townhouse in Rondebosch, Newlands, Clarendon, Kenilworth or Wynberg for January 2010. Contact: Grace 0713527145, email: grace.chitima@uct.ac.za.
- **The Lady Bus**

**LEISURE AND SPORTS**

- **Camping Freezer**:
  - 220 litre. Excellent condition. R800. Contact: 0824125679 or yolanda@ymail.com or Lucille at ivdene@mweb.com
- **Gardener**: Pamina Ngombane is looking for additional days work as a gardener. An excellent gardener and general house worker. Contact: 0785993376. For ref contact heather.zar@uct.ac.za.
- **Transport**: From Summer Greens, Phoenix/oe Slovo, Møreront, Rugby/Brooklyn to UCT 06h30 and from UCT 16h00. R10.00 per week to and fro. Contact: Dorothy 0216502107
- **General**
  - **Clinical Psychologist**: Close to UCT (Main Rd entrance opposite Baxter Theatres). Adults, adolescents, children, couples, families. Contact: Clint Steenweid 0833333227 or 0826185261 or clintsteenweid@ absamail.co.za or website:http://clintsteenweid психолог. yolisite.com/
  - **Accommodation**: University Professor seeks house to rent near UCT or in town for June and July 2010. Possible swap for NYC apartment. Contact: jflavin@fordham.edu or jeanineflavin@uct.ac.za
  - **Wanted**: A laptop or/and computer, LCD. Contact: Brian 0747462832 or 0214471025.
  - **Char**: My hardworking, honest and trustworthy char is available one day per week. Contact: Lauren 0216504607 or Lauren.Wild@uct.ac.za
  - **Leisure Transport**: Contact: Vanessa 0829258582 or Felicity 0845115992 or feva@teikomsa.net.
A day in a life of the Public Relations Unit

The unit supports the Office of the Vice-Chancellor on internal and external relationship-development initiatives, on protocol matters relating to visiting heads of state, senior government officials and members of the diplomatic corps, the managing and co-ordinating of high-level visits and events that involve the vice-chancellor; and in organizing his open lectures. The section also implements all the arrangements for the recipients of honorary degrees at UCT. In addition, they advise and assist faculties and support departments on protocol matters, deal with high-level visitors, coordinate tours for visitors, provide support to internal and external communication campaigns run by CMD, and respond to queries from members of the public.

What are the challenges facing the unit?

One of the key challenges is that invitations are sometimes sent from within UCT to high-level visitors without informing the Office of the Vice-Chancellor prior to the event. This can be a problem, particularly if it involves national or foreign government officials. Often it means immediate suspension of the activities that we’re currently working on, so we can redirect our attention to ensure that the ‘unexpected visit’ happens in such a manner that it puts UCT in the most favourable light possible. This places a considerable strain on other support units that we work closely with, such as the risk-management team. A high-level visit to UCT that involves the application of protocol will affect the Office of the Vice-Chancellor, the Public Relations Unit, the Events Unit, UCT media, UCT traffic services, Campus Protection Services, and the Risk Management Team. And that is just the start of it...

What are the highs and the lows?

The highs of the work lie in delivering on projects and visits in a professional manner and which position UCT in the best light possible, because there are really good folks who are also some real characters. Work- ing with the honorary graduates is a high as it is a special time in their lives and always a very happy occasion for all involved. The lows of the work are when high-level visits threaten to resemble something close to a “moveable feast” in the sense that things change by the minute and do not proceed according to script. Then you really need a calm disposition and the ability to think on your feet and adapt quickly, to anticipate and sometimes make something happen out of seemingly nothing. It’s very stressful and at the time that it happens you would rather be a million miles away. Fortunately, this is rare. We do our best to prevent things from ever getting to this point in the first place by thorough planning and anticipating the unexpected.

What is the weirdest thing you have encountered?

We tend to encounter more humorous and quirky situations than the absurd. Recently we had to show an advance party that was preparing for a high-level visit a number of venues at UCT that would be appropriate for the occasion. We showed them the Smuts Residence dining hall as one of the options. They were immediately smitten with the venue. One of the advance party members thrilled: “Oooh, looks just like something out of a Harry Potter movie!” Later, after viewing all the possible options, the senior leader of the advance party emphatically stated, “We want the Harry Potter Hall!” It tickled us no end.

Two hats for alumnus Nair

In May this year, Segran Nair joined the Graduate School of Business (GSB) as the director of its entry-level and middle management core academic programmes, the Associate in Management (AIM) certificate programme and the Postgraduate Diploma in Business Administration (PDBA). The appointment signalled a homecoming for Nair in two ways.

For one, he is an alumnus of the GSB, having completed his MBA there in 2005. In addition, he marked his return to South Africa after a two-year stint in the US. “This is an exciting opportunity to help make a difference in the lives of South Africans, and I am looking forward to working with adult learners and the excellent faculty here at the UCT GSB,” Nair said at the time. We caught up with him briefly to hear what he’s learned over the first six months back at UCT.

MP: How familiar were you with the programmes, as a GSB graduate, before you stepped into office?

Nair: I was fortunate that when I did my MBA here, I interacted regularly with AIM students. I did so, not realising, of course, that it would have some significance in my life down the road. But even back then, I could see what AIM meant for students. MP: What was expected of you when you took over the reins of the two programmes – give them a makeover, or keep the ship sailing true and steady?

Nair: I was in the lucky position of not having to overhaul anything, because there were really good folks that managed the programmes before. There’s a rich history of well-established programmes that met students’ needs. So for me, it’s just carrying on with that tradition. And trying to be innovative in what I perceive as areas that we can improve on.

MP: Such as?

Nair: I think it’s about tapping into the student support that the upper campus offers. So I’ve met with folks from the academic development unit in the Faculty of Commerce. Our programmes are geared towards adults, and as adults we have our own set of unique problems that we need help with. So I’m trying to look at student support services, and how to tailor a programme that is unique, for adult learning and adult learners.

MP: How have the first six months been in office?

Nair: It’s been very interesting. Thankfully I’m quite used to the university environment and culture, and just the rigour of different aspects of university life. The fulfilling thing for me, I think, was just the interaction with students on both programmes, and listening to their experiences.

New staff

Mavo Solomon has joined the Energy Research Centre as a senior research officer. Solomon graduated from UCT with a BSc (Mech Eng) and an MSc (Eng), and has also obtained a BSc in maths and physics from Vista University. He worked for Eskom for six years, at the energy utility’s Koeburg nuclear power plant outside Cape Town and at their head offices in Megawatt Park in Johannesburg. He also had a short stint at the Development Bank of Southern Africa. In 2008, Solomon took time off to focus on his music career and moved to Sydney in Australia. Cohen worked in the area of multi-criteria decision analysis and strategic planning as applied to the sustainability of energy, minerals and water supply systems. Thereafter he joined the Department of Chemical Engineering at UCT as a senior researcher, continuing with his research and lecturing.

Dr Abimbola Windapo has joined the Graduate School of Business (GSB) as the director of its entry-level and middle management core academic programmes, the Associate in Management (AIM) certificate programme and the Postgraduate Diploma in Business Administration (PDBA). The appointment signalled a homecoming for Nair in two ways.

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