



**New Zealand International Doctoral Research Scholarships
Round Two – 2006**

The following PhD students were awarded full scholarships in the second round of the New Zealand International Doctoral Research Scholarships (previously known as the New Zealand International Postgraduate Research Scholarships) in 2006.

Details about the discipline, university and a summary of the research programme are included.

If further information is required, please contact the Scholarships Manager at Education New Zealand.

Magalie Boucher (Canada)
Veterinary Medicine: Pathology and Toxicology
Victoria University of Wellington

Looking at a group of fungal toxins that cause mammalian pathology and that may have potential for development as therapeutics, including antivirals. The project will use proteomics and confocal microscopy to characterise the proteins targeted by the toxins using the cultured human cell line HepG2. Subsequent steps will include interactions with chemists to synthesise chemical analogues that will identify the structural features of the toxins that confer a therapeutic benefit as opposed to the features that confer the toxicologic side-effect.

Michelle Dawn MacCarthy (Canada)
Anthropology: Archaeology
University of Auckland

Michelle will look at the cultural, social and economic repercussions of the phenomenon of cultural tourism on less developed communities. A research plan is being developed which will look at either South East Asia or within Māori communities New Zealand involved in the cultural tourism industry. The study will address issues involving identity and 'traditions', looking at how cultural tourism influences and affects behaviours, activities, attitudes and other aspects of the socio-cultural organisation of the group.

Nicholas Cradock-Henry (Canada)
Geography: Environmental Change & Natural Hazards
University of Canterbury

No one can deny that that decade-plus investment in climate science has delivered continual progress in deepening our understanding of the earth and its climate, including major advances in areas such as abrupt climate change, year to year variability and ocean-land-atmosphere dynamics. However, there has been little work done on the human influences and consequences of global climate change: what are the socio-economic forces that contribute to it, and how societies can and communities best respond to it. Nicholas's proposed research will examine the social and economic implications of global climate change in New Zealand, examining the ways in which coastal communities can effectively manage the novel risks and opportunities associated with climate change. These are issues that world leaders are currently debating furiously and which demand further research. The focus will

be on the interaction between changing the environmental conditions and vulnerability and resilience to environmental hazards.

Wendy Lynn Jackson (Canada)
Environment Policy – International trade in Endangered Species
Lincoln University

Wendy is undertaking an investigation and analysis of the implementation of recommendations emerging from the significant Trade Review process under the Convention on International Trade in Endangered Species (CITES). She would like to discern whether the process has actual conservation benefits for the species reviewed.

Jiamou Liu (China)
Computer Science/Mathematics
University of Auckland

Jiamou's research interests are around the theory of automata and structures, which are fundamental areas in both theoretical computer science and mathematics. The proposal is focused on the Model Checking Problem (MCP) which asks if a given structure satisfies a specific property, and the Query Evaluation Problem (QEP) which asks for all the instances of a given structure that satisfy a particular query, the complexity issues of these problems and a characterisation of the structures that have finite state presentations.

Gun Ulrika Sofia Orre (Finland)
Biology: Ecological Modelling and Biological Control
Lincoln University

The aim of the study is to develop new world-class technologies for sustainable pest management, based upon returning appropriate biodiversity to agriculture. The world population is expected to grow to 9 billion by 2050, requiring increased food production. 'Western' agriculture causes great changes in habitat structure resulting in less biodiversity and its 'Nature's services', such as pollinators, biocontrol etc. Consequently, increased deployment of productive but sustainable management is needed. The proposed work will focus on a leafroller pest and its key natural enemy and will involve fieldwork at Canterbury vineyards.

Anja Mueller (Germany)
Geosciences: Volcanology, Volcanic Hazards
University of Canterbury

Deposits of large hazardous volcanic events like volcanic debris avalanches, lahars etc are recognised at many New Zealand volcanoes, and the major objective of this project is to develop hazard maps for Ruapehu, Tarawera and Taranaki volcanoes. Detailed field data will be gathered from these New Zealand volcanoes and used for Geographical Information System (GIS) based predictions of future event scenarios. To improve hazard zone delineation, and thus hazard management planning, it is crucial that we understand the variables that control the extent of volcanic events. Textural variations within the deposits of the New Zealand volcanoes will provide the basis for a critical study of deposit emplacement mechanisms, using textural analyses from other volcanoes provided in the literature for a statistical approach.

Birgit Karl (Germany)
Linguistics
University of Auckland

The proposed thesis aims at an investigation of the spread of African American English (AAE) through contemporary global musical genre. Starting with a detailed overview of AAE (incl. general linguistic features and structures as well as subjects such as verbal strategies, style and lexicon), the thesis should then briefly provide background and facts on relevant music genre before focussing on the two main parts: A thorough analysis of texts by American artists and texts by artists from New Zealand, Great Britain and Germany.

Julia Seeman (Germany)
Literature and Languages
Victoria University of Wellington

A comparative study – cultural and linguistic, of Witi Ihimaera's novel 'Whale Rider' and of Nikki Caro's subsequent film adaptation. The research will also look at German and Italian translations of the book and of the German and Italian versions of the motion picture. A multidisciplinary project including translation studies, film studies and cultural studies.

Silke Retzer (Germany)
Business Information Systems: Business Engineering
Victoria University of Wellington

Knowledge transfer is an area of knowledge management concerned with the movement of knowledge across the boundaries created by specialised knowledge domains. According to some researchers, two aspects affecting the success of knowledge transfer are the transparency of an organisation (the extent to which it is open to communication) and absorptive capacity (its readiness and ability to recognise the value of new knowledge, and to absorb and apply it). However, very little is known about how ICT can facilitate the development of organisational transparency and its absorptive capacity in an inter-organisational environment. Therefore, the purpose of this study is to explore the role of information technology in facilitating inter-organisational transfer.

Sven Bittner (Germany)
Computer Science, Information Systems and Databases
University of Waikato

Sven's research deals with scalability and expressiveness aspects of publish/subscribe systems. He claims that the introduction of richer subscription languages decreases the memory requirements of such systems. In turn, this improvement in space usage directly increases the scalability characteristics of publish/subscribe solutions, as these systems have to utilise main memory filtering algorithms out of efficiency reasons. He will design a novel filtering approach supporting a richer subscription language and evaluate it against current algorithms. To achieve large scale publish/subscribe systems, filtering algorithms need to be designed as distributed solutions. Current proposals only work on restricted subscription languages and cannot be applied to his filtering solution. He will extend his novel filtering approach to a distributed algorithm that decreases the required network load and thus further increases scalability.

Tanja Bültmann (Germany)
Irish-Scottish Studies Programme
Victoria University of Wellington

The main objective of the proposed research is to examine the patterns of Scottish settler identities in New Zealand in relation to a specific use of social memory to elucidate the development of a distinct New Zealand/Scottish identity. The hypothesis is that the settlers' social memory changed over time and that this change had implications for the Scottish settlers construction of themselves: social memory was central for them to (re-) formulate their identities. Tanja will be tracing changes of Scottish identity patterns in New Zealand within a set timeframe and across a spatial spectrum. It will be qualitative, examining the specific sets of mnemonic practices and mnemonic forms that were used to transmit social memory.

Miu Chi (Vivian) Lun (Hong Kong)
Psychology
Victoria University of Wellington

In light of the increasing cases of cross-cultural encounters in recent years, and that cross-cultural encounters can often cause stress or confusion to the person adapting to the new culture, Vivian has decided to undertake research concerned with the topic of cross-cultural adaptation of international students. She hypothesises that there is a positive relationship between a person's critical thinking ability and his/her cross-cultural adaptation. She intends to study this relationship using international student samples in both New Zealand and Hong Kong.

Arvind Kumar Subbaraj (India)
Floriculture/Horticulture
Massey University

Effects of plant growth regulators on growth of plants, Gibberellic acid on Bud dormancy and flower initiation physiology and morphological development of cut flowers *Zantedeschia* sp. Arvind anticipates the following benefits: Enhancement of the production of *Zantedeschia* sp. in New Zealand, after thorough evaluation of molecular genetic mechanisms of GA signalling and expression; Aid in increased export of Callas Lily's from New Zealand and hence a strong hold for New Zealand in the Callas Lily market.; an increased comprehension of the physiological mechanism behind GA treatment on bud dormancy and flowering of *Zantedeschia* sp. and identification of GA concentration ideal for optimum growth.

Payal Ulhas Diwadkar (India)
Biological Sciences – Genetics
University of Otago

The topic of research is to identify the major genes involved in determining flowering and its variation in legumes. This will be achieved by crossing early and late flowering varieties of *Medicago* and analysing the inheritance of the genes that are responsible for the differences in flowering times using molecular markers. Since the time of flowering determines when its fruit and seeds are produced, genes that control flowering time are important in plant

breeding. Legumes are an important group of plants which includes peas, beans, chickpeas and lentils as well as forage crops such as medicago and clover.

Yatin Motiram Shivkar (India)
Pharmacology
University of Otago

Role of nitric oxide and hepatic stellate cells in concanavalin-A induced T-cell mediated hepatitis in the mouse. Concanavalin-A induces T-cell mediated hepatitis in the mouse. Recent evidence suggests that the extent of the T-cell mediated injury is attenuated by nitric oxide (NO). In this project the involvement of NO in Con-A induced hepatitis will be investigated. Hepatitis will be induced in wild-type and endothelial (eNOS) and inducible (iNOS) NOS knockout mice.

Gegar Sapta Prasteya (Indonesia)
Earth Sciences
University of Waikato

The earthquake and tsunamis of 26 December 2004, tragically demonstrate the regional and global need for tsunami hazards assessment, education and community preparedness. This event brought a new insight to tsunami dynamics, characteristics and hazards for coastal environments and lead scientific investigation of the processes and developing protocols for coastal zone management. Gegar aims to develop models, both mathematical and physical, of tsunami behaviours. He will develop a scenario for future events based upon return interval and seismic gap assessment, developing a tsunami hazards map as well as education outreach programmes and appropriate tsunami warning systems.

Alfio Leotta (Italy)
Communication Studies
University of Auckland

The topic of research is the relationship between cinema, the tourist industry and the movie tours phenomenon. Analysis will focus on the way in which this relationship has been set in New Zealand and how it could develop in future. He will be looking at movies made or set in New Zealand, released in the last 50 years with international distribution, contemporary New Zealand tourist products and European tourists.

Daniel Vecchiato (Italy)
Economics
University of Waikato

Daniel plans to apply the most advanced stated preference techniques, namely choice experiments, in order to build a framework to assess the recreational value of New Zealand's environmental resources. His hypothesis is that private or public investments generate positive spill-overs for the whole community, in particular, for those that demand outdoor recreation. The pilot framework he will develop intends to value, in economic terms, these spill-overs, concentrating on their effects on the demand for outdoor recreation, usually stemming from urban areas. In other terms, it is a valuation of the city driven demand for access to outdoor recreation.

Sok Teng (Amy) Tong (Macau)
Medicinal Chemistry
University of Auckland

Manassantin B has recently been found to be a potential anti cancer therapeutic agent which hinders cancer cells from surviving in a hypoxic environment. The research aims to synthesize in an asymmetric manner Manassantin B and to develop a general methodology for synthesising compounds in the same family of Manassantin B. The applied strategy will allow the establishment of the currently unknown absolute stereo-chemistry of Manassantin B, and permit access to various analogous compounds whose anti-cancer effects can be further investigated.

Yan Liu (Macau)
Relationship Marketing: Relationship Strategy
University of Waikato

This research proposes to explore the lost efforts of relationship marketing during the transmission from companies to end-users. Few studies have focused on why relationship marketing can result in lower levels of customer retention and what is lost during the process. Results from the study will help companies in both New Zealand and China to understand the issues relating to customer satisfaction and retention in each others markets.

Assunta Carolina Antonysamy (Malaysia)
TESL: Writing, The teaching and learning of Mathematics and Science in the English language in Malaysia
Institution not yet confirmed

Bahasa Malaysia, the national language of Malaysia has been the medium of instruction in classrooms for approximately 20 years. During this time, English was relegated to second language status and lost its status as an 'Official Language' of Malaysia, in some remote parts of the country and in monolingual environments, it has become more or less a foreign language. The year 2002 represents a significant milestone in the history of educational development in the country. From 2003, Science and Mathematics has been taught in English. A five pronged strategy of implementation was put into place and this study aims to analyse the effectiveness in bridging the linguistic divide.

Bee Teng Lim (Malaysia)
Psychology
University of Otago

Aging is shown to be associated with a decline in explicit emotion recognition. However, age differences in implicit emotion recognition are unknown. The proposed research aims to dissociate implicit and explicit emotion recognition, particularly in older adults (Age \geq 65 years). Because older adults have slower processing speeds, establishing a threshold of awareness for each individual is necessary. If older adults' implicit emotion recognition is intact, differences in emotion recognition will only be found with longer presentation times.

David Eng Chuan Yeoh (Malaysia)
Civil Engineering

University of Canterbury

The in-plane behaviour of metal-plate-connected wood truss joints is a fundamental understanding, hence the aim is to modify and develop a standard test frame suitable for testing different types of metal-plate-connected (MPC) wood truss joints, and to investigate the stress distribution and concentration within MPC wood truss joint elements (i.e. Plate and wood members). Having done that, the action of each tooth under service load can be established and thus facilitates the derivation of basic working loads for the purpose of design. Suitable theoretical models of MPC wood truss joints can then be developed to represent the in plane behaviour of MPC joints.

Marni Eusebio Cueno (Philippines)
Plant Molecular Biology/Biotechnology
Massey University

The early leaf spot pathogen *Cercospora arachidicola*, produces a range of toxins, including dothistromin, that is both toxic and weakly mutagenic. The production of dothistromin and related metabolites by fresh field isolates of *C. arachidicola* will be confirmed and the potential genes involved in the biosynthesis of these metabolites will be identified. Mutants will also be made by targeted gene replacement and would be screened for their metabolite profile alongside the wild-type to see if the genes are an essential component of a toxin pathway and pathogenicity tested to see if the toxin/s are essential pathogenicity or virulence factors.

Nathaniel Caramat Landingin (Philippines)
Regional Development
University of Auckland

Since 1987, many countries have embodied their plans, the core goals, principles and strategies for Sustainable development. Until now the 'ideal' state of sustainability has remained ambiguous and regional development has not been perceived as an arena for sustainability. How can sustainable development play in the social, economic and environmental agenda of volatile regions? The study will contrast sustainability between developing and modern regions, identify certain sustainable development indicators at regional level, develop models for regional sustainability based on policy and non-policy scenarios and to simulate different future paths.

Laure Steiner (Switzerland)
Soil Science
Lincoln University

This project aims to better understand the fate of biologically active steroid hormones (estrogens, androgens and their primary metabolites) in selected New Zealand soils and sediments. She will assess the extent of risk that may be posed by them to both ground and surface waters following application of land-applied animal wastes.

Eylem Kaya (Turkey)
Petroleum and Natural Gas Engineering
University of Auckland

The research is about 'Modelling of CO₂ Effects in Geothermal Reservoirs; A study on Afyon Ömer Gecek Geothermal Field'. Her research plan includes the following:

Study the effect of CO₂ on thermodynamic properties of reservoir water with some equation of states;

Attempt to develop some analytical lumped parameter models that take into consideration the effects of temperature and CO₂;

She will then compare the results of these models with TOUGH2 simulators results, to study the effects of neglected parameters in lumped models;

Developing some proposals to simulate gas rich geothermal reservoirs.

And applying these proposals to the Afyon Omer-Gecek Geothermal field in Turkey or any other geothermal field which contains CO₂.

Serkan Ates (Turkey)
Agriculture and Animal Science
Lincoln University

A major limitation to realising the nitrogen fixation and animal nutrition benefits of legumes in grass-legume pastures is the typically low legume content (<20%) of the pasture. This project will examine how combinations of annual and perennial legume pasture species might be used to enhance legume content in environments that are predominantly summer-dry, but which are occasionally and irregularly subject to summer rainfall. The project will a) identify the climatic (rainfall) conditions where a combination of annual and perennial pasture legumes leads to higher legume and total pasture production than annual and perennial species grown alone, and b) determine what specific combinations of annual and perennial pasture legume species are most productive in a summer-dry environment that is occasionally and irregularly exposed to summer rainfall events.

Lee-Ann Sharp (UK)
Sports Psychology
University of Otago

Lee-Ann intends to research psychological skills training, and the use of mental imagery, motivation, goal setting and anxiety by athletes prior to, within and post competition. She will be focusing on athletes and their methods of coping with poor performances and loss in competitions. Success for many athletes does not come easily and she wishes to help them cope with, learn from and move past any loss they may experience. She aims to discover which method is best and ultimately structure guidelines for coaches to aid their athletes and cope with the negativity that comes with loss.

Roger Harrison (UK)
Fire Engineering
University of Canterbury

Roger will focus on issues relating to the design of smoke management systems which can provide conditions for safe means of escape during a fire. The design of these systems requires accurate calculation methods to determine the required exhaust capacity per ventilator area. The proposed research aims to address uncertainties and limitations in calculation methods for the thermal still plume. He also aims to provide robust and relevant simplified design formulae to enhance the guidance available to Fire Safety Engineers. The technical approach for this research will involve the use of physical scale modelling and numerical analysis using computational fluid dynamics modelling.

Barbara Ann Shaffer (USA)
Psychology
University of Auckland

As early as the late 1930's, psychologists have long attempted to determine the genesis of the authoritarian personality and the conditions under which authoritarian manifestations arise. While many contemporary researchers would argue that continued exploration of this personality construct is futile, Barbara intends to propose a new model of this construct that incorporates both a personality and situational dimension of authoritarianism and that illustrates both the adaptive and maladaptive characteristics of this personality type as demonstrated through our evolutionary history.

Elizabeth Jarrell Callender (USA)
Systematic Theology: Theology and the Arts
University of Otago

Research will investigate concepts of spatiality as they elucidate aspects of human rationality in an interdisciplinary inquiry of theology and the spatial arts. An essential element of what it means to be human is to live and relate to others (including the divine) in space and time. Since this is basic to both theology and architecture, Elizabeth will consider spatial notions in the Reformed Theology of Karl Barth's Doctrine of Reconciliation Church Dogmatics in dialogue with western architectural theory and practice. Theological concepts of spatiality include elements of formal design, social relationships, and the individual within the community. By developing this unique dialectical interplay of the theological and architectural ramifications of spatiality for relationality, new insights of spatiality for both fields will be gained.

Grant Kaye (USA)
Geosciences
University of Canterbury

Project will contribute to Riskscape (a Crown funded, multi-agency, cross-disciplinary effort begun in 2004 to quantify risk exposure from natural hazards across New Zealand) by determining volcanic hazards risk exposure in Rotorua. Working with the Institute of Geological and Nuclear Sciences, risk will be evaluated via a custom Geographic Information System (GIS) database containing inventory data and volcanic hazards models chosen to adequately gauge risk to population, infrastructure, economic, and agricultural interests. The database and model will be built as a prototype proximal hazards module Riskscape, eventually useful as a template for other natural hazards in New Zealand.

Jennifer Moore (USA)
Herpetology: Animal Behaviour
Victoria University of Wellington

The aim of this research is to investigate the reproductive ecology of the Tuatara to determine what effects various factors have on the fitness of these endangered reptiles. By examining four key factors (territoriality, paternity, the mating system and relatedness), and working in collaboration with numerous researchers from various disciplines Jennifer hopes to shed new light on an unknown facet of the biology of Tuatara.

Kevin Miguel Sherman (USA)
Communication/New Media
Auckland University of Technology (AUT)

The proposed research project is a cross-cultural, multi-generational study that examines the differing uses of and attitudes towards emerging technologies such as computer generated imagery (CGI), the Internet, wireless devices and computer video gaming. Participants will be college students and their parents living in New Zealand, the United States, India and Africa. The goal of the research is to begin to draw conclusions about the ways in which age-differences and culture influence the application of and attitudes towards emerging technologies. Moreover, by shedding light on these areas, scholars and professionals will hopefully come to better understand what about these attitudes and the technologies themselves, if altered, would help to improve the ways in which communication technologies are used for the betterment of society.

Lea Lani Kinikini (USA)
PacificIsland Studies
Victoria University of Wellington

This project, entitled 'Exploring the Borderlands of the Pacific Diaspora: Criminal Deportees in Paradise', aims to conduct ethnographic research in Tonga and Samoa and their diasporic communities overseas (New Zealand and the United States). In particular, the research will focus on criminal deportees from the US, especially those deported after the US enacted the Illegal Immigration Reform and Immigrant Responsibility Act in 1996. Currently there are an estimated 200 criminal deportees in Tonga, with approximately 2-4 returning every month. This project will focus on issues of identity, cultural adjustment, and homeland-Diaspora relations. Data will be collected using ethnographic research methodology, including interviews, surveys, participant observation, educational workshops and community service. The fieldwork, particularly the interviews, will be digitally filmed and the footage will be edited into a documentary which will be a visual counterpart to her written thesis.

Pete Albert Martin
Geography: Spatial Information Theory
University of Otago

Pete intends to develop a theoretical basis for the quantification of spatial order, with applications for those, such as geographers who work with spatial information and patterns. He is interested in global patterns of organisation and information, the complementarity of the two and their dynamics.

Shawn A. Means (USA)
Applied Mathematics
University of Auckland

Shawn will be looking at mathematical biology. Specifically, the dynamics of calcium in an excitable cellular system such as cardiac cells. Intracellular mechanisms such as calcium channels, pumps and buffers are typical players in such biological cells. He will be constructing a mathematical and computational model of a cardiac cell using finite element methods, and trying to discover how a three dimensional model can be simplified into a compartmental, spatially-independent model for use in large scale simulations.

Stephen Beville (USA)
Economics and Local Economic Development
Lincoln University

The economic implications of a new New Zealand water allocation mechanism on the trout fishery. Currently there is a proposal to channel large volumes of water away from the Wairau river. Fishery habitats are highly dependent on flow regimes, but the changes in fishery values contingent upon changed flows are not understood. This study will attempt to consider these changes in value, if any, through various methods including the popular contingent valuation method. In response to increases in angling pressure and in an attempt to retain 'quality angling', New Zealand Fish and Game is piloting a new regulating mechanism on the Greenstone and Caples rivers. There is a need to measure the effectiveness through economic analysis. This could be achieved by looking at the incremental relationship between angling quality, individual angler value and total societal benefit.

* Details about the recipients in the inaugural round follow



**New Zealand International Postgraduate Research Scholarships
Inaugural Round– 2005**

The following PhD students were awarded full scholarships in the inaugural round of the New Zealand International Postgraduate Research Scholarships (now known as the New Zealand International Doctoral Research Scholarships) in 2005.

Details about the discipline, university and a summary of the research programme are included.

Daniele Abreu e Lima (Brazil)
PhD Architecture, Ambient Comfort and Interior Design
The University of Auckland

- This research has its base in two areas of architecture, which are not used in combination by very many theorists.
- Building upon research conducted at Masters level, the proposed hypothesis for this project is as follows, 'Is it possible that influences from the local culture or habits and the environment in NZ are strong enough to breed an architecture that could be considered to have a national identity out of architecture of European origins?'

Alejandra Vasquez Delama (Chile)
PhD International Business Administration and Management
The University of Auckland

- Influences of culture in different aspects of international business occurring in the Asia-Pacific region.
- This will include the internationalisation process of firms towards Asian countries and business practices within the Pacific rim.

Horacio Bown (Chile)
PhD Forestry - Tree Physiology and Modelling
University of Canterbury

- Proposed research aims at the representation of plant nutrition in productivity process based models. More specifically, the research targets constructing a nutrient balance model for *Pinus Radiata*, potentially useful in predicting productivity from a mechanistic perspective.
- The four main factors to be focussed upon are: storage and retranslocation, internal nutrient efficiency, allocation and mycorrhizae.

Alvarro Vaccarezza Gonzalez (Chile)
PhD Civil Engineering
University of Canterbury

- One of the most revolutionary new processes in road construction engineering is recycling and stabilisation of pavement materials using foamed bitumen. This technique consists basically of reclaiming the pavement material from the road with a milling/pulverising machine and adding a small percentage of hot asphalt and water to produce foam. This

produces an excellent quality material while minimising the environmental impact and project costs.

- The implementation of this technology has not been easy, mainly because of gaps in both theoretical knowledge and research of foamed bitumen mixes. Two important aspects of this research proposal are the structural design method (assigning a thickness to the recycled layer), and the development of distress models for foamed material pavements.

Jianyu Chen (China)
PhD Horticultural Science - Floriculture
Massey University

- *Zantedeschia Spreng* (Calla) is New Zealand's second largest export flower crop which contributed 17% (\$6.8 million) towards the export earnings from all cut flowers in 2003.
- In collaboration with Crop & Food Research the proposed research programme will focus on identifying the critical gene expression of key enzymes before and during spathe re-greening.
- The identification of the critical gene expression will be achieved by comparing the genetic difference between Calla cultivars which differ in their rates of re-greening as well as differences in response to experimental treatments such as herbicides using bio-technology.

Yantao Song (China)
PhD Environmental Science and Engineering
The University of Auckland

- Research proposal is based upon new environmental protection technology and environmental evaluation.
- This includes developing new methodology for monitoring pollutants in different samples, building up integrated models of monitoring, controlling, evaluating and predicting pollutants.
- Interested in the degradation of PAHs and agricultural environmental protection. This includes persistent pollutants transformation regulation and developing low or free from pollution pesticides.

Qin (Sarah) Song (China)
PhD Statistics and Computational Mathematics
The University of Auckland

- It has been documented by the NZ Breast Cancer Foundation (2004) that New Zealand has the 6th highest death rate from breast cancer out of 173 Developed countries. At the time, it was also reported that in NZ only 40% of patients with breast cancer can be cured by chemotherapy after a mastectomy.
- With the advent of DNZ microarrays, it has become possible to use gene expression profiles to predict disease subtypes. However, many statistical and biological challenges exist in analysing data. Advanced statistical techniques are needed to enable exploration and extraction of the useful data from microarray data.
- This research aims to use data mining techniques to analyse the variation of gene expression in microarray experiments and ultimately provide more accurate diagnosis and effective therapies for the treatment of cancer and other diseases.

Wei Luo (China)
PhD Screen and Media Studies
University of Waikato

- PhD research will compare and contrast the social acceptability of the local adaptations of the global Reality TV formulas in New Zealand and China.
- The majority of mainland Chinese audiences have never watched anything quite like Reality TV before. There is a need to explore the reception and response of Reality TV in China and compare these with the situation in New Zealand.
- The particular emphasis of this project could be on comparing and contrasting the social acceptability of the local adaptations of the global formulas used in New Zealand and China. This can be explored from their relative television industries, polity, culture and viewership.

Jin Fei Ying (China)
PhD Engineering Management
The University of Auckland

- 'Retrofit Solutions for New Zealand's Earthquake Risk Multi-Storey Buildings.'
- To develop rational and economical approaches, methodology and practical implementation guidelines for seismic rehabilitation of substandard multi-storey buildings.
 - To evaluate the cost-effectiveness of proposed alternative solutions from a probabilistic life-cycle perspective, accounting for capital outlay for rehabilitation implementation, plus operation, maintenance and insurance costs.
 - To implement rehabilitation solutions developed within the framework of New Zealand Standards.
 - To provide the engineering community with a Seismic Retrofit Manual having comprehensive guidelines for daily practice.

Shudong Fang (China)
PhD Electronic and Computer Engineering (Control Theory, Information Science and Modern Communication)
The University of Auckland

- Develop analysis and design methodologies for future generations of networks. The lack of powerful analytical tools has seriously handicapped the development of computer-based simulations and there is an urgent requirement for more tools.
- Network Traffic Engineering on the Internet, including network modelling, AQM design and analysing dynamic behaviours of networks. Results from these topics will play a great part in designing new transmission protocols and estimating network performance.

Hardjo Koerniadi (Indonesia)
PhD Corporate Finance and Financial Investment
Auckland University of Technology

- A growing number of finance literature documents that future stock returns are predictable based upon accruals. This phenomenon violates one of the principles in finance that stock markets are efficient. Several studies also find that managers opportunistically manage accruals to achieve their own personal goals. This occurs because under Generally Accepted Accounting Principles (GAAP), accrual accounting is subject to managerial discretion.
- Although there are several studies which argue that managers may use accruals to convey future profitability to the market, there has been no formal study undertaken to support his hypothesis. Therefore, this study is intended to fill the gap in the literature. Moreover, it will also benefit investors, regulators and corporations in NZ.

Kyungi Chung (Korea)
PhD Commerce/Marketing
University of Canterbury

- Will compare and analyse the different and/or similar propensities between New Zealand and Korean consumers in terms of the influence of each country's economic and social structure on the behaviours of both groups of consumers.
- This will include case studies on the recognition of a certain group of consumers or on the successful internet marketing strategies of the firms.
- Studying ways in which to improve the trading relationships between New Zealand and Korea with regard to each country's trade policy and marketing strategies of export/import firms.

Jae-Hoon Chung (Korea)
PhD Bio-Engineering
The University of Auckland

- In New Zealand, cancer is the leading cause of death among females aged between 25 and 44. A third of these deaths are due to breast cancer. Early detection significantly increases chances of survival and mammography is currently considered to be the best screening tool.
- The current image registration of mammography is based solely upon image properties and as a result are subject to alignment errors. The proposed research will construct a 3D finite element model to mimic the mammographic procedure, allowing only physically plausible deformation of the breast in the registration process.
- Using this model the aim is to improve the accuracy with which clinicians can track the location of suspected tumours, thus aiding detection and treatment strategies for breast cancer.

Wee Sim Choo (Malaysia)
PhD Food Science
University of Otago

- The proposed research would look at encapsulating omega-3 and omega-6 fatty acids along with a suitable antioxidant in a carrier suitable for incorporation into foodstuffs.
- To deliver health benefits to the consumer by providing proven nutritionally beneficial supplements not commonly available in the diet which are likely to be lost during food preparation and storage unless protected by encapsulation.

Teck Hock Lim (Malaysia)
PhD Chemistry
Victoria University of Wellington

- The proposed research involves synthesis, characterisation and investigation of novel smart hybrid materials which are potentially useful in metal catalysis, waste metal recovery and as molecular sensors.
- The chemical and physical properties of the hybrid materials relating to their application would be the prime target of this research. This will be highly valuable for both the understanding of hybrid material sciences and the development and advancement of new polymer technology.

Baljit Kaur Surjit Singh (Malaysia)
PhD Linguistics - Oral Discourse, Pragmatics
The University of Auckland

'Language in the Workplace'

- The study aims at examining the many strategies used to help soften complaints and requests. It will bear in mind that politeness strategies are not the same across languages and cultures and might mean different things in different linguistic and cultural contexts.
- Requests provide an interesting focus for research as they are frequent at customer service counters. Furthermore these acts are highly face-threatening acts (FTA) in which the speaker imposes on the hearer with a risk of loss of face on both parts.
- It also aims to look at the politeness strategies available to a complainer who wants to avoid a direct confrontation with the complaine.

Heng Jin Tham (Malaysia)
PhD Chemical Engineering
The University of Auckland

'Thermal Processing of Food Materials Using Ohmic Heating'

- To investigate thermal processing of food materials using ohmic heating. The focus is primarily on dairy fluids and some liquid foods, including vegetable soups.
- A few parameters will be investigated such as properties of process fluid, types of heat exchangers and heat transfer surface characteristics etc
- The aim of this research is to move a step closer towards establishing the technology as a more economically and technically viable option than that used currently.

Julian Moreno Chan (Mexico)
PhD Forestry - Wood Quality
University of Canterbury

'Prediction And Segregation Of Wood Properties For Structural Use And Solid Products Using Acoustics And Other Non-Destructive Methods'

- Currently one of the most important issues in plantation forestry in New Zealand and elsewhere is the quality of this resource. It is now well accepted that short rotations and intensive silviculture have downgraded the internal quality of the trees. Due to economical reasons, rotations cannot be lengthened over profitable limits so other solutions need to be devised.
- Considerations of the properties of individual trees is critical to developing more detailed strategies for segregating logs using acoustics.
- Aims to contribute to the development and validation of methods using acoustic tools for wood characterisation.

Ma. Socorro Diego Reyes (Philippines)
PhD Psychology/Human Resource Management
Victoria University of Wellington

- The proposed research is on Human Resource Management issues in a cross-cultural working environment.

- Within an industrial setting the study hopes to gather information on the conditions of Asian migrant workers in New Zealand such as: adaptation concerns, compensation and benefits, gender issues and racism if any.
- Results of the study aim to assist both home nations and New Zealand's policy making bodies when looking at legislation or appropriate policies in this sector.

Sinith Sittrak (Thailand)
PhD Womens' Studies
Victoria University of Wellington

- Western Development arrived in Thailand with large scale construction and industrialised agriculture, leaving in its wake social, economic and environmental impoverishment.
- Through a feminist approach to the politics of identity and difference, this thesis will argue for a rearticulation of community knowledge as a critique of development. The core of this research is the exploration of the relationship between the personal, social and political thought through the oral histories of rural women in Thailand.