

BIOSKETCH James C Lech



James C Lech completed his Masters (MSc.) thesis with the Dept. of Information Systems at Rhodes University, South Africa (SA). James's research domain has centered on investigating and examining the phenomenon of the incidence of technological systems in social systems, particularly to model the potential effects Electromagnetic

Field (EMF) radiation has on the population from infrastructure sources. In his MSc. an almost Herculean task: first to develop a geospatial model of exposure to various pollutant emissions from sources of EMFs of special interest; second to establish a framework under which exposure patterns can be mapped into potential health risks for the public; and third to demonstrate that results warrant a legislative public interest override (PIO) procedure to be established in order to gain systematic information about sources of exposure and measurement data. All these steps are complex and require knowledge from diverse fields such as dosimetry, wave propagation physics, geospatial modelling, epidemiology, medicine, risk analysis, legal procedures, finance, and informatics.

It goes without saying that a single person cannot perfectly cover all these diverse fields of science. However, by his examination results, Mr. Lech demonstrated a gain in sufficient knowledge in all these diverse fields to demonstrate, in principle, how such a task could be solved.

Mr. Lech presented the use of a HYGIEIA model used in forecasting the effects of environmental change on human health and human environment interactions. An innovative approach not yet been applied to the EMF issue. It makes use of the MIMES (multiscale integrated models of ecosystem services) framework and dynamic GIS modelling.

To date, the research has presented evidence of a new problem space in South Africa qualifying it as a potential legislative Public Interest Override of 'substances released into the environment' and 'public safety or environmental risk'. The potential PIO shall remain potential until the findings have undergone a process of judicial review.

EMF radiation dosimetry scientific views and models suggest that even a tiny increase in the incidence of diseases resulting from exposure to EMF radiation could have *broad implications* for public health, social accounting and the economy.

Several regulatory and legislative bodies have requested and been presented the research findings. If of relevance, it may be used in the development of new EMF radiation protection regulations in the interest of public awareness and public health.

James has been invited to aid in the development of new policies and legislation by National Assembly in Parliament, drafting additional clauses for the Consumer Protection Act and municipal policy.

HOBBIES:

- Human rights Advocate. Focusing on Unfair Discrimination and Inequality against persons with disabilities. James has filed and represented himself in Magistrate and High Court on separate matters. The rulings were successful resulting in new advances in case law.
- Personal training and physical rehabilitation. Focused on human and canines, James enjoys learning and developing innovative means of aiding to overcome physical obstacles.
- Videography.

AWARDS:

National Research Foundation Innovation Award (2016)
DAAD and National Research Foundation Award (2016)
Konrad Kulesza Award (2016)
BSG Top Honors Information Systems Development Project (2007)
Toast Masters International Impromptu (2006)
Microsoft Project Firefly National Finalist (2006)
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Top Systems Development Project (2005)
Top Final Year Information Systems Student (2005)
Top Final Year Geography Dissertation (2005)
Brightest Young Minds South Africa (2005)

James C. Lech

Profile

To further my studies through a PhD for the purpose in fulfilling the requirements in becoming a lecturer and effective scientific policy developer. I have a solid foundation in consulting with practical experience in teaching. Holding strong roots in business and systems analysis of which I scored well and received academic awards in academia and the South African government. My transcripts and letters of recommendation demonstrate my assets of perseverance and determination. I wish to continue this into my PhD in furthering my hopes to financially provide my wife and two children.

Disabled



Status: Permanent. Functional impairment.

Skills

[**Education & Training**] Design & implement education programs in both technical & social genres. Experience in developing education video and print systems.

[**Feasibility study**] Develop innovative feasibility studies. Developed a renewable energy (RE) financial model for the IDC Bank resulting in RE projects ROI period substantially accelerated by up to 460%.

[**Climatology**] development of renewable energy projects, manufacturing, return on on investment feasibility studies, and public health.

[**Project Management**] Over 9 years experience of small to large scale development cross continental projects with teams of varying sizes, skills level and economic development. While also attaining national awards.

[**Auditing & Reporting**] Experienced in large scale Energy and Data audits. Design, implementation and delivery of scientific, information & financial reports from researched and audited investigations.

[**Human Rights Advocacy**] Draft, submitted and represented oneself in Magistrate and High Courts in South Africa.

[**Innovation & Commercialization**] recipient of numerous national awards in applied innovation.

[**Business Analyst, Design & Implementation**] Generation of paperless business environments, streamlined and integrated workflows, testing, efficiency and optimizations. Increase the “bottom line” through measurable qualitative & quantitative matrices.

[**Spatial & Data Analysis. GIS - Geographic Information Systems**] Experienced Data and spatial analysis.

[**Executive Management**] Applied learning and experience from Harvard Business School learning into a veteran of negotiation, contractual, legal & arbitration resolution. Effective group leadership discussions; constructive feedback; motivating & persuading others; Projection of well-thought out solutions from gathered appropriate information.

[Communication] Experienced Radio and TV show Presenter, writer for Digital and Print publications. Holds a national award for Public Speaking. Clear and concise writing ability. Speaks effectively while listening attentively to expresses ideas targeted to the audience. Experience in explaining complex and scientific material to the general public.

[Videography & Productions] Storyboarding, Radio, Video and Photographic.

[Computer & Technical skills] MS and Mac Office production suites, Google Apps & Business, Systems Administration, Systems Design, Testing & Development, Graphics, Video editing and productions.

AWARDS

Institute	Description	Year
Rhodes University	Konrad Kulesza Award	2016
NRF	National Research Foundation Innovation Award	2016
DAAD & NRF	DAAD and National Research Foundation Award	2016
BSG	BSG Top Honors Information Systems Development Project	2007
Rhodes University	Full Academic Colours	2007
Rhodes University	Deans Merit List	2006
Microsoft	Project Firefly Competition National Finalist	2006
Toast Masters Intl.	Toast Masters International National Impromptu Finalist	2006
SAIAB	Academic Bursary	2006
Rhodes University	BScH. Bursary	2006
Microsoft	Project Firefly Competition National Finalist	2005
Rhodes University	Top Final Year Information Systems Student	2005
Rhodes University	Top Systems Development Project – Information Systems	2005
Rhodes University	Top Final Year Geography Dissertation	2005
Rhodes University	BSc. Dean's Academic Merit List	2005
BYM	BYM (Brightest Young Minds) South Africa National Award	2005

EDUCATION

Institute	[Qualification] Description	Year
Rhodes University, RSA	[Degree] Masters in Science, Information Systems.	2017
Harvard, edX, USA	[Certificate] PH201x Health and Society - study of major social variables - social class, race, gender, poverty, income distribution, social networks/support, community cohesion, the work and neighbourhood environment, and residential segregation - that affect population health. Modules include: Introduction to the Social Determinants of Health; Socio-economic status (SES) and Health; Income inequality and health; Racial and ethnic disparities in health; Social networks, social support, and health; Neighborhood influences on health; Social capital, social cohesion, and health; Psychosocial work environment.	2014

MIT, edX, USA	[Certificate] MITx 4.605x A Global History of Architecture: Part 1 - study architecture in various places around the world. The architectural works covered fall between 100,000 BCE to 1,600 CE. The study includes context in which these architectures are built, how they are situated in the landscape, as well as understanding the social structures that designed and created these works.	2013
UTAustin, edX, USA	[Certificate] UT.1.01x Energy 101 - a multidisciplinary course giving an overview of energy technologies, fuels, environmental impacts and public policies covered quantitative concepts in energy, the differences among fuels and energy technologies, energy policy levers, and the societal aspects of energy, such as culture and economics. Energy history, use real-world examples and looking forward into the future. The models covered energy terminology, units, and magnitudes, such as joule, BTU and quad; Primary sources of energy; The sectors of energy consumption; How energy is connected across sectors; How energy production and conversion technologies work; How energy policy and technology affect one another; How energy needs, sources and uses have changed over time; How energy issues and economic issues are related; Emerging trends in energy issues.	2013
Compass Education, UK	[Diploma] Advanced Canine Behaviour	2011
USGBC, USA	LEED Green Associate - documented, up-to-date understanding of the most current green building principles and practices, and are committed to their professional future.	2009
Motorwind, HK	[Certificate] Wind Turbine Manufacturing and Instructor level training. Mechanical Electrical Engineering	2008
Courtwell, RSA	[Certificate] NQF Level 5 - Advanced Real Estate Investment - modules include Commercial property; Financial mathematics; Lease law; Property finance; Property Law Property management.	2007
Harvard Business School, USA	[Certificate] Harvard ManageMentor (Business Administration & Management) Modules: - <u>Business Essentials</u> - Budgeting; Capitalising on change; Creating a business case; Finance essentials; Focusing on your customer; Implementing innovation; Leading motivating; Making business decisions; Managing crisis; Managing for creativity innovation; Marketing essentials; Preparing a business plan; Project management Solving business problems. - <u>Communication Skills</u> - Making a presentation; Negotiating; Persuading others; Running a meeting; Writing for business. - Personal Development - Becoming a manager; Managing workplace stress; Managing your career; Managing your time. - <u>Strategy Essentials</u> - Implementing strategy; Measuring business performance; Thinking strategically. - <u>Working with teams</u> - Keeping teams on target; Leading a team; Working with a virtual team. - <u>Working with Individuals</u> - Assessing performance; Coaching; Delegating; Dismissing employee; Giving and receiving feedback; Hiring; Laying off employees; Managing difficult interactions; Managing upwards; Retaining valued employees; Setting goals.	2007
University of Cambridge, UK	[Certificate] Prince of Wales's Business & Environment Programme - South Africa: Scenarios for a Sustainable Future	2007
Toast Masters Intl.	[Certificate] Competent Communicator - Public speaking & presentation.	2006
Rhodes University, RSA	[Post Graduate Degree] Cum Laude BScH. Information Systems - modules include Systems design; Software development; Testing; Business Analysis	2006
Rhodes University, RSA	[Degree] Cum Laude BSc. Majors: Geography, Information Systems, Computer Science Minors: Mathematics, Economics, Statistics, Anthropology, Earth Sciences.	2005
Crawford College, RSA	[Certificate] Grade 12 Matric Senior Certificate: Mathematics, Geography, Computer Science, Speech & Drama, English, Afrikaans	2001

EXPERIENCE

Title	[Company] Description	Year
TV, Radio Show Host, Journalist, Educator	<p>Host of TV and Radio Show "K9 Wellness"</p> <p><u>Duties & Responsibilities:</u></p> <ul style="list-style-type: none"> - Produce content into an educational format in the mediums of video, audio and print. - Research past, current and future trends surrounding people, animals, health psychology. - Develop a program schedule with producers. - Develop a program budget. - Broadcast insights, opinions and advice on a topic along with general information and facts. - Source, research and interview potential reality cases for the show. - Project manage prepare & implement production requirements. <ul style="list-style-type: none"> - Participate in community events & aid in charity fundraisers. - Ensure everyone understands & follows all safety and objective requirements. - Interview experts with relevant questions, attend conferences and meetings on latest developments. <p><u>Reason for leaving:</u> Became disabled</p>	2011 - 2012
Consultant	<p>[K9 Wellness] Consultant, product development & training in Canine Psychology and Physical Rehabilitation</p> <p><u>Duties & Responsibilities:</u></p> <ul style="list-style-type: none"> - Entrepreneurial business start-up. - Provide consulting & training to private individuals, trainers, veterinarians, shelters both locally, nationally & internationally. - Business analysis and implementation consultant. - Train staff, develop techniques and protocols. - Cultivate and grow client relationships. <p><u>Reason for leaving:</u> Became disabled</p>	2009 - 2012
Presenter & MC	<p>[HAIKO Energy] Regular radio, print and TV guest presenter on technical topics relating to Science and Renewable Energy</p> <p><u>Duties & Responsibilities:</u></p> <ul style="list-style-type: none"> - Research past, current and future trends surrounding renewable energy, markets and technology. - Seek out fresh stories and inform people on what is happening locally, nationally and internationally. - Accurately and clearly convey findings, case studies. - Be requested as an authoritative figure for Interviews by the media. - Present papers and case studies at the South African Energy Conference two years in a row. <p><u>Reason for leaving:</u> Closed the energy business due to dried up funds and other business start-up gaining momentum.</p>	2008 - 2010

Consultant	<p>[HAIKO Energy] Consult, Design, Manufacture, Install, Maintain small to large scale renewable energy systems in Wind, Solar and Wave. 2007 - 2010</p> <p><u>Duties & Responsibilities:</u></p> <ul style="list-style-type: none"> - Consult and design dematerialisation of business process and operations solution for business in order to achieve efficiency performance values over and above industry standard frameworks. - Develop bankable feasibility studies for renewable energy projects. - Developed for the IDC and DBSA a financial model framework that enabled the potential of improving ROI (return on investment) for wind projects from 15 years down to 4 years through a financial model I developed applicable within the South African context, subsidies and rebate structures. - Led teams and clients across broad technical, financial and business disciplines. Focused teams on business objectives and tracked progress to ensure project milestones were completed on time, on budget and with measured metrics. - Mitigated risk factors through careful analysis of financial and statistical data. Anticipated and managed change effectively in evolving business environments. - Defined processes and tools best suited to each project. This included analysis and design of Systems Engineering, Custom Software Development, Database Development, System Integrations / Migrations and enterprise implementations. - Train distributors in wind renewable energy costing analysis, sales, design installation and maintenance. <p><u>Reason for leaving:</u> Large scale lead times kept increasing due to government legislature delays. Resulted in increased sustainment costs delays in project implementation. Had to close the business due to loss of finances and moved over to another business start-up that was gaining momentum.</p>	2008 - 2009
Educator	<p>[Sasol] Sasol Science Festival educator in renewable energy</p> <p><u>Duties & Responsibilities:</u></p> <ul style="list-style-type: none"> - Provide renewable energy teaching and career counselling to High School students at Sasol Science Festivals. <p><u>Reason for leaving:</u> Became overburdened with commitments and was no longer able to be a speaker on road shows.</p>	2008 - 2009
Factory Manager	<p>[Motorwave Group] Factory Manager and Instructor on Wind Turbine manufacturing and installation in Hong Kong. 2007 - 2008</p> <p><u>Duties & Responsibilities:</u></p> <ul style="list-style-type: none"> - Train distributors internationally in wind turbine mechanical and electrical engineering installation and consulting. Business finance and cost consulting. - Oversee factory floor and staff in wind turbine manufacturing. - Develop cost analysis and budgets. - Oversee Occupational Health and Safety. - Supervise product quality control and site installations. - Supervise and sign-off on outsourced manufacture in mainland China. - Conduct R&D into renewable energy product developments and testing. <p><u>Reason for leaving:</u> Partnership agreement to head up development and installation in Africa.</p>	2007 - 2008
Chairman	<p>[Marcus Behrmann Foundation] NGO Chairman & Project Manager for Eco Housing in rural areas</p> <p><u>Duties & Responsibilities:</u></p> <ul style="list-style-type: none"> - Business Start-up. Develop and implement environmental eco-housing using saw bag building technologies. - Design, project management, train and implement construction management project in Soweto. - Arrange media campaigns and training local community members of around 600 people in the construction training methodology and implementation practice. <p><u>Reason for leaving:</u> During construction change in client management resulted in the project being halted and then cease of completion due to disagreements between client recipient and financial sponsor.</p>	2008

Executive Committee	<p>[Green Building Council South Africa] Executive Panel Representative on Green Building Council South Africa</p> <p><u>Duties & Responsibilities:</u></p> <ul style="list-style-type: none"> - As a representative for the Property Group I had to sit as a representative on the Green Building Council South Africa. - Responsibilities included reviewing entrants to the market, current trends and establishment of metrics and standards for a South African standards assessment system of Green qualification. <p><u>Reason for leaving:</u> No longer a representative when I left the property group.</p>	2007
Green Portfolio & Systems Administrator	<p>[Investec Bank / Growthpoint- Property Group] Green Portfolio Development Property Management Systems Administrator</p> <p><u>Duties & Responsibilities:</u></p> <ul style="list-style-type: none"> - Assistant systems administrator of the Property Management System. - Systems development engineer and tester. Serve as a key member of the software development team as a lead QA tester on development projects for the Property Management System. - Application of business analysis into systems design. - Created and executed automated software test plans, cases and scripts to uncover, identify and document software problems and their causes. - Provide training for new and existing property management software users. - Conduct month-end runs of processing, billable and printing. - Increased stakeholder morale and development in order to meet targets and deadlines. Achieved the upgrade of the communication system and re-design of communications protocol. Stakeholder awareness aptitude was increased resulting in decreased internal company miscommunications and missed month-end deadlines. - Lead analyst for Green Building portfolio. Research, cost analysis and feasibility study on Green Building test cases for investment portfolio growth. <p><u>Reason for leaving:</u> Found an investor to leave and create a business start-up.</p>	2007
Project Manager & Systems Developer	<p>[SAIAB - South African Institute for Aquatic Biodiversity] Project leader and Systems Developer for online aquatic database</p> <p><u>Duties & Responsibilities:</u></p> <ul style="list-style-type: none"> - Project leader and Systems Developer. - Provide object-orientated software design. Developed the solution through the software lifecycle, from requirements definition through successful deployment. - Facilitated user analysis presentations and feedback requirements. - Introduced methodologies and best practices that enhanced product definition, release processes and customisation of the system to user needs. - Produced the first South African online aquatic specimen database. - Received a national software development award from Microsoft <p><u>Reason for leaving:</u> Contract work, project completed successfully.</p>	2006