1. BIOGRAPHICAL SKETCH

1.1 GENERAL INFORMATION

Surname	Lutu		**Maiden name**	Lutu		
First names	Patricia Elizabeth Nalwoga		**ID Number**	570314 0300 082		
Citizenship	South African		**Title**	Dr	**Female**	x Male
Place of birth	Kampala, Uganda		**Date of birth**	14th March, 1957		
Population group	**African** x	**Coloured**	**Indian**	**White**	**Other (Please specify)**	
Marital status	single		**Direct Telefax No.**	012 362 5188		
Direct Telephone	012 420 4116		**E-mail**	Patricia.Lutu@up.ac.za and plutu@cs.up.ac.za		
			Web	http://www.cs.up.ac.za/~plutu		
Residential address	207 Helloise, 313 Pretoria street, Silverton 0184, Pretoria		**Postal address**	Department of Computer Science, University of Pretoria, Pretoria 0002		

1.2 LANGUAGE PROFICIENCY

English (high proficiency)   Luganda (mother tongue)   French (basic)

List the languages that you understand and indicate level of proficiency (read, write, speak)

1.3 HIGHEST SCHOOL QUALIFICATION

INSTITUTION	SUBJECTS	DISTINCTIONS
King's College Budo, Uganda	East African Certificate of Education (O level) – 1972	5 distinctions: Mathematics, English language, English Literature, Chemistry, History
King's College, Budo, Uganda	East African Advanced Certificate of Education (A Level) – 1974	1 Distinction: Mathematics

1.4 ACADEMIC QUALIFICATIONS OBTAINED

Degree/ Diploma	Field of study	Higher education institution	Period	Year of graduation	Distinctions
Hons. Bsc.	Computer Science	University of Manchester, England	1976 – 1979	1979	
Msc.	Computer Science	University of Manchester, England	1979-1981	1981	
PhD	Computer Science	University of Pretoria	2005-2010	2010	

Please attach academic records – highest qualification

1.5 WORK EXPERIENCE TO DATE

Name of employer	Capacity and/or type of work	Period
University of Pretoria	Senior Lecturer, Department of Computer Science	July 2010 to date
University of Pretoria	Lecturer, Department of Informatics	Feb. 2002 to June 2010
Vista University, Mamelodi Campus	Lecturer & Sub-Head, Department of Computer Science & Information Systems	Jan. 1998 to Jan. 2002
University of Transkei	Lecturer A, Department of Computer Science	Feb. 1988 to Dec. 1997
National University of Lesotho	Lecturer, Department of Mathematics & Computer Science	May 1986 to Feb. 1988
University of Ife, Ile-Ife, Nigeria	Assist. Lecturer, Department of Computer Science	1981 to 1985

2. TEACHING AND LECTURING DUTIES

2.1 Courses/modules presented: UNDERGRADUATE

Course	Level (second year, etc.)	Academic Institution	Degree/ Diploma	Compilation of study guides (Yes or No)	Curriculum design (Yes or No)
COS301 – Software Engineering	3rd year	University of Pretoria	Bsc Computer Science / IT	No	No
COS326 – Database Systems	3rd year	University of Pretoria	Bsc Computer Science / IT	Yes	Yes
COS110 – Introduction to programming	1st year	University of Pretoria	Bsc Computer Science / IT	No	No

COS131 – Introduction to programming	1st year	University of Pretoria	Engineering	No	No
COS132	1st year	University of Pretoria	EBIT & NAS	No	No
COS153 – Introduction to programming	1st year	University of Pretoria	Bsc Computer Science / IT	Yes	Yes
SIT153 – Introduction to Computing	1st year	University of Pretoria	Bsc Computer Science / IT	Yes	Yes
INF154 – Introduction to Programming	1st year	University of Pretoria	Bcom. Informatics	No	Yes
INF164 - Programming in VB & Case Tool (Sybase)	1st year	University of Pretoria	Bcom. Informatics	No	Yes
INF273 – Advanced programming for Teachers	2nd Year	University of Pretoria	Bcom. Informatics	Yes	Yes
INF314 – Networking	3rd Year	University of Pretoria	Bcom. Informatics	No	Yes
INF214 – Databases	2nd Year	University of Pretoria	BCom, BSc & others	No	Yes
INF225 – System Architecture	2nd year	University of Pretoria	BCom & others	No	Yes
INF261 – Database System Administration	2nd year	University of Pretoria	BCom & others	No	Yes
INF272 - Business programming	2nd year	University of Pretoria	BCom & other	no	yes
Undergraduate courses in Computer Science	1st, 2nd & 3rd Year	Vista University	BSc & BCom	Yes	Yes
Undergraduate courses in Computer Science	1st, 2nd & 3rd Year	University of Transkei	BSc.	N/A	Yes
Undergraduate courses in Computer Science	2nd & 3rd Year	National University of Lesotho	Bsc.	N/A	Yes
Undergraduate courses in Computer Science	2nd & 3rd Year	University of Ife	Bsc	N/A	Yes

2.2 Courses/modules presented: POSTGRADUATE					
Course	**Level**	**Academic Institution**	**Degree/ Diploma**	**Compilation of study guides (Yes or No)**	**Curriculum design (Yes or No)**
COS781 – Data Mining	Hons	University of Pretoria	Bsc (Hons) Computer Science	Yes	Yes
COS731 – Software Engineering II	Hons	University of Pretoria	Bsc (Hons) Computer Science	Yes	Yes
COS730 – Software Engineering I	Hons	University of Pretoria	Bsc (Hons) Computer Science	Yes	Yes
MIT853 – Corporate IT	Masters	University of Pretoria	Masters in IT (MIT)	Yes	No
MIT860 – IT Infrastructure Management	Masters	University of Pretoria	Masters in IT (MIT)	Yes	No

MIT850 – Life Cycle and Maturity Models for IT	Masters	University of Pretoria	Masters in IT (MIT)	Yes	No
INF780 – Honours research project	Hons	University of Pretoria	Bcom(Hons)(Inf)	No	No
INF785 - Advanced Database Systems (Data warehousing)	Hons	University of Pretoria	Bcom(Hons)(Inf)	Yes	Yes
INF791 – Knowledge acquisition and sharing	Hons	University of Pretoria	Bcom(Hons)(Inf)	No	Yes
Advanced programming Languages	Hons.	University of Transkei	BSc. Hons	N/A	Yes
Artificial Intelligence & Expert Systems	Hons.	University of Transkei	BSc. Hons.	N/A	Yes

2.3 **Educational courses attended**	
Workshops on OBE, 1999-2001	I attended various OBE workshops conducted by Prof. Roy Killen when I worked at Vista University
Education Induction, 2002	University of Pretoria
Oracle 9i Warehouse Builder: Implementation, Jan 2006	Attending practical course on data warehouse implementation using the OWB tool, at Oracle University Midrand
Workshop on Science communication December 2006	I attended the Workshop on science organized by SCIENZA
Course on assessment practice – 2007/2008	I attended a course on assessment practice offered by the Department of Education at UP

2.4   **Lecturer evaluation by students (Appendix A)**

Attach a report by the Head of Department or Dean on the results or representative student evaluations made of your work in recent years.

3.   RESEARCH

RESEARCH FIELD	SPECIALITY
Knowledge discovery in databases	data mining data analysis for big data

3.1   RESEARCH DUTIES

3.1.1   Former supervision or co-supervision (completed)

BCom Informatics (Honours) students - 2002:

Title of research report	Name of student	Supervisor	Duration of studies (years)
Voice over IP: Cost-wise or not?	J.P.L. Dippenaar	P.E.N. Lutu	1 year
VOIP: A suitable alternative?	M. Bezuidenhout	P.E.N. Lutu	1 year
Implementation of a VOIP Network	A.Z. Alex	P.E.N. Lutu	1 year
VOIP: Is it really a threat to Telkom?	W. Kandie	P.E.N. Lutu	1 year
Can VOIP be effectively used in South Africa?	J.P.Clarke	P.E.N. Lutu	1 year

BCom Informatics (Honours) students – 2003:

Title of research report	Name of student	Supervisor	Duration of studies (years)
Electronic payments and smart Cards: Are smart Cards a viable solution for conducting electronic payments in South Africa	H. Mistry	P.E.N. Lutu	1 year
Can the use of smart card payments alleviate the problems associated with payment of government social pensions in South Africa	M. Pitel	P.E.N. Lutu	1 year
On operational security	S. Roos	P.E.N. Lutu	1 year
Knowledge discovery on JSE data to determine financial success factors for organisations	A.C. Hauptfleisch	P.E.N. Lutu	1 year

Masters in IT (MIT) students – 2003

Title of dissertation	Name of student	Supervisor	Duration of studies (years)
Enterprise Voice-over-IP: An Impact case study at Telkom SA (Pty) Ltd	M.R. Stoltz	P.E.N. Lutu	2 years

BCom Informatics (Honours) students – 2004

Title of research report	Name of student	Supervisor	Duration of studies (years)
Dangers on your personnal doorstep – What the home computer user is faced with	H. Bierman	P.E.N. Lutu	1 year

Title of research report	Name of student	Supervisor	Duration of studies (years)
The impact of increasing crime rate of cyber attacks on ICT rganizations	M.T. Kganagka	P.E.N. Lutu	1 year
Security concerns in electronic banking	J. Mpalangana	P.E.N. Lutu	1 year
The impact of crime in banking institutions	T. Maredi	P.E.N. Lutu	1 year
E-commerce vs hackers	K. Phiri	P.E.N. Lutu	1 year
The effect of computer hacking within the financial services sector	J. M. Varughese	P.E.N. Lutu	1 year

BCom Informatics (Honours) students – 2005			
Title of research report	**Name of student**	**Supervisor**	**Duration of studies (years)**
Mobile & Wireless Technology: making a world of difference	E.A. Adigun	P.E.N. Lutu	1 year
Computer crime: Facing the threats of electronic crime when conducting business in the E-commerce environment.	P. Murray	P.E.N. Lutu	1 year
Challenges facing South African business Organizations in a fight against cyber Crime	T.O. Mashao	P.E.N. Lutu	1 year
How organizations in South Africa, are dealing with the threat that computer viruses pose	S.W.J. Swanepoel	P.E.N. Lutu	1 year
Cybercrime and the Financial Industry: a South African perspective	W.A. du Plessis	P.E.N. Lutu	1 year
Computer crime: Impact on financial institution and the prevention thereof.	L. van der Merwe	P.E.N. Lutu	1 year

BCom Informatics (Honours) students – 2006			
Title of research report	**Name of student**	**Supervisor**	**Duration of studies (years)**
Factors Affecting Data Warehouse Success	L. Potgieter	P.E.N. Lutu	1 year

MIT students – 2006			
Title of dissertation	**Name of student**	**Supervisor**	**Duration of studies (years)**
An assessment of the rediness for the successful implementation of business intelligence in a developing country	C.J. Karema	P.E.N. Lutu	2 years
The factors surrounding the electronic commerce environment in a developing country	J. Mpalangana	P.E.N. Lutu	2 years

BCom Informatics (Honours) students – 2007			
Title of research report	**Name of student**	**Supervisor**	**Duration of studies (years)**
The use of business intelligence in customer relationship management in South African organizations: Case study Old Mutual	S. Mbilinyi	P.E.N. Lutu	1 year

BCom Informatics (Honours) students – 2008			
Title of research report	**Name of student**	**Supervisor**	**Duration of studies (years)**
On operational business intelligence	Gideon. van Schalkwyk	P.E.N. Lutu	1 year
On business acquisition, data quality and data warehousing	Sosina Gebregzibher	P.E.N. Lutu	1 year

BCom Informatics Honours students - 2009			
Case study: applying data mining on mobile banking transaction data	M. Moumakoe		1 year

MIT students - 2009			
Title of research dissertation	**Name of student**	**Supervisor**	**Duration of studies (years)**
An explanatory case study of the factors affecting the effectiveness and efficiency of the Lesotho Revenue Authority email system	M. Chere	P.E.N. Lutu	2 years
Data quality issues in the banking supervisory information of SADC central banks	R. Mojolopane	P.E.N. Lutu	2 years
Business Intelligence adoption and utilization in the public sector of South Africa	B. Meyer	P.E.N. Lutu	2 years

MIT students - 2010			
Title of research dissertation	**Name of student**	**Supervisor**	**Duration of studies (years)**
Exploring the Extended Use of Business Intelligence tools in the South African Banking Industry	F. Bobade	P.E.N. Lutu	3 years
BSc Computer Science (Honours) - 2013			
Title of research report	**Name of student**	**Supervisor**	**Duration of studies (years)**
The use of SOA in the implementation of decision support systems.	Litsietsi Montsi	P.E.N. Lutu	1 year
BSc Computer Science (Honours) - 2014			
Methods for effective offline analysis of social networks data: A case study of Facebook.	Eugene de Beer	P.E.N. Lutu	1 year
Sentiment Analysis of Microblog data: A case study of Twitter	Valentino Nhlabano	P.E.N. Lutu	1 year
BSc Computer Science (Honours) - 2015			
MapReduce computations and applications using data mining methods	M. Raseala	P.E.N. Lutu	1 year
BSc Computer Science (Honours) - 2016			
Sentiment Analysis in Multilingual Context to Support Product Marketing	Nkosikhona Dlamini	P.E.N. Lutu	1 year
Analysis of Recommender Systems for Commercial Websites with Focus on Collaborative Filtering.	Lindelo Mapumulo	P.E.N. Lutu	1 year
Text Mining of product discussion forums to support organisational social media marketing activities.	Leeu	P.E.N. Lutu	1 year
BSc Computer Science (Honours) - 2017			
Text mining of product discussion forums to support organisational social media marketing activities	Diana Obo	P.E.N. Lutu	1 year
The application of association rule mining and link analysis to efficiently analyse clickstream data for websites.	Ruan Klinkert	P.E.N. Lutu	1 year
Enhancing the performance of clustering algorithms using MapReduce computations.	Nhlahla Gershom Maluleke	P.E.N. Lutu	1 year
Data mining algorithms for the analysis of social networks data stored in graph databases	Xoliswa Ntshingila	P.E.N. Lutu	1 year
BSc Computer Science (Honours) - 2018			
Analysis of clickstream data to support decision making by e-commerce organisations	Noncedo Mlotswa	P.E.N. Lutu	1 year
Using MapReduce Computations for the Implementation of Clustering algorithms for Big data.	M.A. Mathebula	P.E.N. Lutu	1 year

3.1.2 Current postgraduate students – 2019				
Masters students:				
Name of student	**Degree enrolled for**	**Project title**	**Supervisor**	**Year of registration**
Valentino Nhlabano	MSc Computer Science	Fast and Efficient Methods for the Analysis of Social Media Data	P.E.N. Lutu	2016

3.1.3 Obtaining research funds			
Origin of research funds (e.g. contract research, THRIP, international funding organisations, other(s)	**Title of research project or programme**	**Duration**	**Money allocated (R)**
University of Pretoria, RDP funding	Application of OVA and pVn modeling to commonly used classification algorithms for data mining	3 years (2011 to 2013)	R136 000

3.2   RESEARCH OUTPUT

3.2.1   Publications in refereed accredited journals

1. Lutu, P. E. N. & Engelbrecht A.P. (2013) Positive-Versus-Negative classification for model aggregation in predictive data mining, *Institute for Operations Research and the Management Sciences Journal on Computing (INFORMS JOC),* 25 (4) 792-807.

2. Lutu, P. E. N. & Engelbrecht A.P. (2013) Base model combination algorithm for resolving tied predictions for k-nearest neighbor aggregate models, *Institute for Operations Research and the Management Sciences Journal on Computing (INFORMS JOC),* 25 (3), 517-526.

3. Lutu, P. E. N. & Engelbrecht, A. P. (2012) Using OVA modeling to improve classification performance for large datasets. *Expert Systems with Applications*, 39 (4) 4358-4376.

4. Motjolopane, R. & Lutu, P.E.N. (2012) Improving data quality in the banking supervisory data of Southern Africa central banks. *Electronic Journal of Information Systems in Developing Countries (EJIDC),* 50. (also appears in the *Proceedings of the International Development Informatics Association Conference, IDIA 2010,* Cape Town, November 2010)

5. Lutu, P.E.N. & Engelbrecht, A.P. (2010) A decision-rule based method for feature selection in predictive data mining. *Expert systems with applications*, 37, 602-609.

6. Lutu, P.E.N & Engelbrecht, A.P., (2006) A comparative study of sample selection methods for classification. *SACJ: Joint Special Issue ARIMA & SACJ - Advances in End-User Data Mining Techniques*, 36, 69-85

3.2.2   Papers in peer reviewed publications/journals

3.2.3   Papers *accepted* for publication in refereed accredited journals

3.2.4   Papers *accepted* for publication in peer reviewed publications/journals

3.2.5   Papers *submitted* for publication in peer reviewed publications/journals

3.2.6   Papers *submitted* for publication in referred accredited journals

3.2.7   Papers *presented* and published in national conference proceedings
1. Lutu, P.E.N. (2015) Big Data and NoSQL Databases: New Opportunities for Database Systems Curricula. *Proceedings of the South African Computer Lecturers Association Conference, SACLA 2015, July 3-4 2015, Johannesburg, South Africa. ACM International Conference proceedings.* 2. Lutu, P.E.N. (2011) Empirical comparison of four classifier fusion strategies for positive-versus-negative ensembles. *Proceedings of the South African Institute of Computer Science and Information Technology Conference, SAICSIT 2011, October 3-5 2011, Cape Town, South Africa. ACM International Conference proceedings.* 3. Lutu, P.E.N. (2007) Planning for the Assessment of Group Work for an Honours Level Course in Informatics, South African Computer Lecturers Association Conference, SACLA 2007, Victoria Falls, Zimbabwe, July 2007. 4. Lutu,P.E.N. (2002) An integrated approach for scaling up classification and prediction algorithms for data mining. proceedings of the *South African Institute of Computer Science and Information Technology Conference, SAICSIT 2002. ACM International Conference Proceedings.*

3.2.8   Papers *presented* and published in international conference proceedings
1. Lutu, P.E.N. (2018) Improving Classification Performance for Minority Classes through the use of Positive-Versus-Negative Ensemble Models. *Proceedings of the 2018 IEEE International Conference on Intelligent and Innovative Computing Applications (ICONIC 2018) conference*, Mauritius, 6-7 December, 2018. 2. Lutu, P.E.N. (2018) The use of histogram analysis to support fast selection of predictive features for data stream mining. *Proceedings of the IEEE icABCD 2018 conference,* Durban, 6-7 August, 2018. 3. Nhlabano, V.V. & Lutu, P.E.N. (2018) Impact of Text Pre-processing on the Performance of Sentiment Analysis Models for Social Media Data*. Proceedings of the IEEE icABCD 2018 conference,* Durban, 6-7 August, 2018. 4. Lutu, P.E.N. (2017) Automated selection of training data and base models for data stream mining using Naive Bayes ensemble classification, *Lecture Notes in Engineering and Computer Science: Proceedings of The World Congress on Engineering* 2017, 5-7 July, 2017, London, U.K., pp. 618-623 5. Lutu, P.E.N. (2016) Data analytics to support social media marketing: challenges and opportunities*, Proceedings of the 2016 International Conference on Information Resources Management* (*CONF-IRM 2016),* Cape Town, South Africa, 18-20 May, 2016. 6. Lutu, P.E.N. (2015) Naïve Bayes classification ensembles to support modeling decisions in data stream mining, *Proceedings of IEEE SSCI 2015*, Cape Town, South Africa.

7. Lutu, P.E.N. (2014) Using One-Versus-All classification ensembles to support modeling decisions in data stream mining. *Proceedings of the 3rd Workshop on New Frontiers for Mining Complex Patterns (NFMCP 2014),* collocated with the ECML-PKDD 2014 conference, Nancy, France, 15-19 September, 2014, pp. 86-97. Available at: http://www.di.uniba.it/~loglisci/NFmcp2014//program.html

8. Lutu, P.E.N. (2013) Fast feature selection for Naïve Bayes classification in data stream mining, in S.I. Ao, L. Gelman, D.W.L. Hukins, A. Hunter and A.M. Korsunsky (eds.) *Proceedings of the World Congress on Engineering (WCE 2013),* London, U.K. July 2013, vol. III, 1549-1554.

9. Lutu, P.E.N. (2012) Generation of an empirical theory for positive-versus-negative ensemble classification. *Proceedings of the Silver 2012 Workshop, collocated with the ECML-PKDD 2012 conference,* Bristol, United Kingdom, 24-28 September, 2012.

10. Lutu, P.E.N. (2011) Using confusion matrices and confusion graphs to design ensemble classification models from large datasets, in A. Cuzzocrea and U. Dayal (eds.) *Proceedings of the 13th International Conference on Data warehousing and Knowledge Discovery, DaWak 2011,* Toulouse, France, August / September 2011, *Lecture Notes in Computer Science, LNCS 6862*, 301-315.

11. Motjolopane, R. & Lutu, P.E.N. (2012) Improving data quality in the banking supervisory data of Southern Africa central banks. *Proceedings of the International Development Informatics Association Conference, IDIA 2010,* Cape Town, November 2010.

12. Lutu, P.E.N. & Meyer, B. (2008) An exploratory study of the adoption and usage of business intelligence in public sector organisations in South Africa. *Proceedings of the IFIP WG 9.4 Workshop*, Pretoria, September 2008.

13. Adigun, E.A & Lutu,P.E.N. (2006) Mobile and wireless technology, making a world of difference. *Proceedings of the Conference on Community Informatics for Developing Countries: Understanding and Organising for a Participatory Future Information Society* (CIDC2006) 31 August -2 september 2006, Cape Town, South Africa.

14. Lutu,P.E.N. (2002) An integrated approach for scaling up classification and prediction algorithms for data mining. proceedings of the *South African Institute of Computer Science and Information Technology Conference, SAICSIT 2002*. *ACM International Conference Proceedings.*

15. Lutu, P.E.N. (2001) Optimal multi-splitting of numeric ranges for decision tree induction. *International Conference on Operations Research (ICORD 2001),* May 2001.

3.2.9   Papers *presented* and published in refereed accredited conference proceedings

(Selected from sections 3.2.7 and 3.2.8)

1. Lutu, P.E.N. (2018) Improving Classification Performance for Minority Classes through the use of Positive-Versus-Negative Ensemble Models. *Proceedings of the 2018 IEEE International Conference on Intelligent and Innovative Computing Applications (ICONIC 2018) conference*, Mauritius, 6-7 December, 2018.

2. Lutu, P.E.N. (2018) The use of histogram analysis to support fast selection of predictive features for data stream mining. *Proceedings of the IEEE icABCD 2018 conference,* Durban, 6-7 August, 2018.

3. Nhlabano, V.V. & Lutu, P.E.N. (2018) Impact of Text Pre-processing on the Performance of Sentiment Analysis Models for Social Media Data*. Proceedings of the IEEE icABCD 2018 conference,* Durban, 6-7 August, 2018.

4. Lutu, P.E.N. (2017) Automated selection of training data and base models for data stream mining using Naive Bayes ensemble classification, *Lecture Notes in Engineering and Computer Science: Proceedings of The World Congress on Engineering* 2017, 5-7 July, 2017, London, U.K., pp. 618-623

5. Lutu, P.E.N. (2016) Data analytics to support social media marketing: challenges and opportunities, *Proceedings of the 2016 International Conference on Information Resources Management* (*CONF-IRM 2016),* Cape Town, South Africa, 18-20 May, 2016.

6. Lutu, P.E.N. (2015) Naïve Bayes classification ensembles to support modeling decisions in data stream mining, *Proceedings of IEEE SSCI 2015*, Cape Town, South Africa.

7. Lutu, P.E.N. (2013) Fast feature selection for Naïve Bayes classification in data stream mining, in S.I. Ao, L. Gelman, D.W.L. Hukins, A. Hunter and A.M. Korsunsky (eds.) *Proceedings of the World Congress on Engineering (WCE 2013),* London, U.K. July 2013, vol. III, 1549-1554.

8. Lutu, P.E.N. (2011) Using confusion matrices and confusion graphs to design ensemble classification models from large datasets, in A. Cuzzocrea and U. Dayal (eds.) *Proceedings of the 13th International Conference on Data warehousing and Knowledge Discovery, DaWak 2011,* Toulouse, France, August / September 2011, *Lecture Notes in Computer Science, LNCS 6862*, 301-315.

9. Lutu, P.E.N. (2011) Empirical comparison of four classifier fusion strategies for positive-versus-negative ensembles. *Proceedings of the South African Institute of Computer Science and Information Technology Conference, SAICSIT 2011, October 3-5 2011, Cape Town, South Africa. ACM International Conference proceedings.*

10. Lutu,P.E.N. (2002) An integrated approach for scaling up classification and prediction algorithms for data mining. proceedings of the *South African Institute of Computer Science and Information Technology Conference, SAICSIT 2002*. *ACM International Conference Proceedings.*

3.2.10 Conference papers presented (but not published)

1. Lutu, P.E.N. (2018) Graph mining methods for social networks data. Presentation at the *47th Operations Research Society of South Africa - ORSSA 2018 National Conference,* Pretoria, 16-19 September, 2018.

2. Lutu, P.E.N. (2015) Analysis of social media data: challenges and opportunities, presentation at the *44th Operations Research Society of South Africa - ORSSA 2015 National Conference,* Johannesburg, 14-16 September, 2015.

3. Lutu, P.E.N. (2012) Replication of base models to improve the performance of positive-versus-negative classification ensembles for predictive data mining, presentation at the *41st Operations Research Society of South Africa - ORSSA 2012 National Conference,* Johannesburg, 17-19 September, 2012.

4. Lutu, P.E.N. (2003) An Empirical Study of Classifier Accuracy in Data Mining, Operations research Society of South Africa Annual Conference (ORSSA2003), September 2003.

3.2.11 Published reports

3.2.12 Technical reports

3.2.13 Books / Textbooks

3.2.14 Chapters in books

1. Lutu, P.E.N. (2015) Web 2.0 computing and social media as solution enablers for economic development in Africa. In A. Gamatié (ed.), *Computing in Research and Development in Africa: Benefits, Trends, Challenges and Solutions*, Springer International Publishing Switzerland 2014, DOI 10.1007/978-3-319-08239-4__6

2. Lutu, P.E.N. (2015) The Importance of Data Quality Assurance to the Data Analysis Activities of the Data Mining Process. In K-M Osei-Bryson and C. Barclay (eds) *Knowledge Discovery and Data Mining (KDDM) for Economic Development: Applications, Strategies and Technologies* (to appear)

3. Lutu, P.E.N. (2014), Progressive usage of business and spatial intelligence for decision support in the delivery of educational services in developing countries. In K-M Osei-Bryson and G. Mansingh (eds) *Knowledge Management for Development: Domains, Strategies and technologies for Developing Countries.* Springer 2014.

4. Lutu, P.E.N. (2006) Database sampling for data mining, in J. Wang, (editor) *Encyclopedia for Data Warehousing and Data Mining*, Information Science Reference, Hershey, New York.

3.2.15 Registered patents

3.2.16 Patents – pending

3.2.17 Multimedia material

4   OTHER SCHOLARLY RESEARCH-BASED CONTRIBUTIONS

4.1   Participation in conferences, workshops and short courses - specify type of contribution:

4.1.1   National

Chairing of a conference session at the SAICSIT 2011 conference, Cape Town, South Africa, September 2011.

4.1.2 **International:**

1. Member of the Technical Program Committee (TPC) for the IEEE icABCD 2018 conference in Durban
2. Member of the Technical Program Committee (TPC) for the IEEE MAURICON 2018 conference in Mauritius.
3. Chairing of a session at the IEEE MAURICON 2018 conference in Mauritius.
4. Chairing of a conference session at the DEXA / Dawak 2011 conference in 2011 in Toulouse, France.
5. Chairing of a session at the ECIS 2010 International conference at the University of Pretoria.
6. Chairing of a session at the IFIP WG 9.4 2008 International workshop at the University of Pretoria.
7. Chairing of a session at the IDIA 2006 International conference in Cape Town.

4.2   Teamwork and collaboration with others (please specify):
Other researchers (national and international)
Other research institutions (national and international)
Industry

4.3   Membership of national and international bodies
List all the scientific associations or societies to which you belong. Name your involvement, e.g. honorary member, founder member, full member, chairperson, president, secretary, and dates of such involvement.

1. Member of the South African Computer Lecturers Association (SACLA)
2. Member of the South African Institute of Computer Scientists and Information Technology Conference (SAICSIT)
3. Member of the Operations research Society of South Africa (ORSSA)
4. Member of the IEEE

4.4   Visits to local and overseas universities or research institutes as guest professor or researcher

5. MANAGEMENT AND ADMINISTRATIVE DUTIES (LEADERSHIP)

List your involvement in departmental activities (e.g. administrative functions), faculty (e.g. faculty committees) or other university activities

Departmental administrative functions:
1. Chair person of the library committee   2. Departmental asset manager
3. Organisation of the annual departmental research workshop 4. Collection and submission of Computer Science documents for EBIT degree programs accreditation.

6. COMMUNITY SERVICE OR PROFESSIONAL SKILLS

6.1   Professional activities
(List project titles, institutions and communities involved, etc.)

Member of the Informatics Initiative in the department of Informatics until June 2010.

6.2   Professional service performed
(List the courses you presented, lectures at professional associations/clubs, radio or TV appearances, external expert or appointment committee, etc.)

6.3   Professional societies

6.4   Involvement with other universities/scientific institutions
(e.g. external examiner, editor of journal, advisory council, CSIR, SA Council for Scientific Professions)

1. External examiner for Vista University (2002, 2003)
2. External examiner for TUT (2004)
3. External examining for the UNISA Graduate School of Business Leadership, (December 2007 and January 2008)
4. External examiner for UNISA (2008, 2009)
5. Member of the Advisory Board of the School of Computing, UNISA (2012, 2013, 2014)

6.5   Refereeing duties (e.g. journals, dissertations/theses)

Conferences:
1. IDIA 2010 International conference: I reviewed one paper.
2. ANTS 2012 International conference: I reviewed two papers.
3. SAICSIT 2011, 2013, 2014:   I reviewed one paper for 2011, one paper for 2013, and one paper for 2014
4. SACLA 2015:   I reviewed one paper.
5. CONF-IRM 2016:   I reviewed one paper.
6. IEEE icABCD 2018:   I reviewed two papers.
7. IEEE MAURICON 2018:   I reviewed three papers.

Journals:

1. SWARM Intelligence: I reviewed one paper in 2012.
2. IT for Development: I reviewed one paper in 2013.
3. South African Computer Journal: I reviewed one paper in 2012 and one paper in 2013.
4. Information Systems Frontiers: I reviewed one paper in 2012, two papers in 2013, one paper in 2014, two papers in 2015, four papers in 2016.
5. IEEE Swarm and Evolutionary Computation: I reviewed one paper in 2016.

Book chapters:

1. In 2013, I reviewed one chapter of the book: Knowledge Management and Discovery for Development: Domains, Strategies and technologies for Developing Countries, Osei-Bryson, K-M. and Mansingh, G. (ed), Springer 2014.

2. In 2014, I reviewed one chapter of the book: Knowledge Discovery and Data Mining for Economic Development: Applications, Strategies and Technologies, Bryson and C. Barclay (eds), 2015.

Dissertations/Theses:

1. External examiner for a PhD thesis in Computer Science for the University of Western Cape (2014 and 2015)
2. External examiner for MSc dissertations in Computer Science for the University of the Witwatersrand (2014, 2015, 2017)
3. External examiner for a MSc dissertation in Computer Science for UNISA (2015)
4. External examiner for a MSc Eng dissertation for the University of Cape Town (2017)

6.6   Evaluation status as scientist (e.g. NRF; first evaluation and date, subsequent evaluations and dates)

I plan to re-apply for NRF rating this year (2019)

6.7   Professional registration (e.g. Pr Eng)