

UNIVERSITY OF PRETORIA

FORMAT OF CURRICULUM VITAE

The University prefers the following CV format. Specific items can be added to or omitted to reflect Faculty specific and/or individual circumstances, but the given numbering should, as far as possible, be followed to facilitate the evaluation process.

Provision of information about race and gender is optional, but will assist the University to report in terms of current Employment Equity legislation.

1. BIOGRAPHICAL SKETCH

1.1 GENERAL INFORMATION										
Surname	Yusuf									
First names	Abdullahi Ahmed				ID Number		7806226064189			
Citizenship	SA (Permanent Resident)				Title	Dr	Female		Male	x
Place of birth	Zaria, Nigeria				Date of birth		22 June 1978			
Population group		x	Colour ed		Indian		White	(Please specify)		
Department	Zoology and Entomology				Position		Senior Lecturer			
Direct Telephone	0788876049 (mobile) 012 420 2561/4610 (office/lab)				Direct Telefax					
E-mail	aayusuf@zoology.up.ac.za									
Date of appointment	01 st -January-2018				Permanent full-time		x	Temporary full-time		

1.2 ACADEMIC QUALIFICATIONS OBTAINED				
1. Degree/Diploma	2. Field of study	i. Higher education institution	Year	Distinctions
PhD	Entomology	University of Pretoria, South Africa	2010	NA
MSc	Instrumental Analytical Sciences: Environmental Analysis	Robert Gordon University, Aberdeen, UK	2004	MSc with Distinction
MSc	Biodiversity, Wildlife and Ecosystem Health	The University of Edinburgh, UK	2015	NA
BSc (Hons)	Biological Sciences	University of Abuja, Nigeria	2000	Second Class Hons Upper Division (GPA 4.32/5.00)

1.3 WORK EXPERIENCE TO DATE		
Name of employer	Capacity and/or type of work	Period From (mm//yy to mm//yy)
University of Pretoria	Senior Lecturer	Jan 2018 to Date
Martin Luther University, Halle-Wittenberg, Germany	George Foster Experienced Research Fellow	Nov. 2016 to Feb. 2018
University of Pretoria	NRF Research Career Advancement Fellow	Dec 2014 to Dec 2017
University of Pretoria	Principal Investigator M2B3 SARChI Chair	Nov. 2013 to Date
University of Pretoria	Postdoctoral Research fellow	Nov. 2010 to Nov. 2014
ICIPE Nairobi Kenya	PhD scholar	Sept. 2006 to Feb. 2010
Ahmadu Bello University Nigeria	Lecturer I	Aug. 2006 to Oct. 2010
Kaduna State University Nigeria	Assistant Lecturer	Jul. 2005 to Jul. 2006
Kaduna State School of Health	Biology Tutor	Dec. 2004 to Jun. 2005
FRS Marine Laboratory Aberdeen	MSc Research Scholar	Feb. 2004 to Sept. 2004
NTDC Kano Nigeria	Administrative Officer II	Jun. 2003 to Sept. 2003
Ikwerre Local Government Council	Administrative Officer/Integrated Science Teacher	Jun. 2001 to Jun. 2002
Nat. Research Institute of Chemical Technology, Nigeria	Student Intern	Jun. 1999 to Dec. 1999

2. TEACHING ACTIVITIES

2.1 Courses presented		
Course	Level (e.g. second year, Masters)	Self-developed (Yes or No)
Behavioural Ecology (ZEN 363)	Third year (Since 2011)	Yes (co-developed)
Physiological Processes (ZEN 361)	Third year (From 2015)	Yes (co-developed)
Insect Diversity (ZEN 355)	Third year (From 2019)	Yes (co-developed)
Behavioural Ecology (ZEN 712)	Honours (From 2015)	Yes (co-developed)
Insect Pest Management (ZEN 782)	Honours (From 2018)	Yes (co-developed)

2.2 Other education and pedagogic courses presented		
Course	Year	Institution
Molecular Ecology	2017	Martin Luther University, Halle-Wittenberg, Germany
Insect Taxonomy Evolution and Ecology (ZOOL 735)	Masters (2010)	Ahmadu Bello University, Nigeria
Advance Neurophysiology and Endocrinology (ZOOL 737)	Masters (2010)	Ahmadu Bello University, Nigeria
Research Methodology (HMES 80)	Honours (2012)	Department of Industrial Psychology, UNISA, South Africa
Biology Special Option (BIOL 416)	Fourth year/Hons	Ahmadu Bello University, Nigeria
Nematology (ZOOL 434)	Fourth year/Hons	Ahmadu Bello University, Nigeria
Introductory Ecology (BIOL111)	First year (2010)	Ahmadu Bello University, Nigeria
Statistics for Biology (BIOL 218)	Second year (2009/10)	Ahmadu Bello, University, Nigeria
General Biology I (BIO 101)	First year (2004/5)	Kaduna State University, Nigeria
General Biology II (BIO 102)	First year (2004/5)	Kaduna State University, Nigeria
Biology for Health Technicians (BHT 311)	Third year (2004)	Kaduna State School of Health, Nigeria
Computing in Health Sciences (COMP 301)	Third year (2004/05)	Kaduna State School of Health, Nigeria

3. TEACHING OUTPUTS

3.1 Educational publications and products

Provide full details including full titles, names of all the authors, publishers, dates, page numbers etc. Specify your exact contribution to the publications or products. Note that the publications here should be of a didactic nature e.g. articles in educational publications, papers presented at educational conferences, etc. A summary and description of educational products developed can be provided (e.g. study guides, learning materials, multimedia productions (CDs), educational videos, web materials, text books etc.) relevant to university education.

- Kiwon kudan zuma littafi na daya: A Hausa Beekeeping manual volume 1 (2011). Published by Food and Environment Research Agency (FERA) , UK

4. OTHER TEACHING CONTRIBUTIONS

4.2 Visits to local and overseas universities as guest professor or lecturer in regard to teaching

Provide details

- Institute for Zoology, Martin Luther University, Halle-Wittenberg, Germany as a visiting Professor (1st July 2019- 31st December, 2019)
- Zoology II, University of Würzburg, Germany as a Guest lecturer (November, 2019)
- ICIPE Nairobi, Kenya Trainer at International Course for Chemical Ecology (ICE 19) (10th June 2019- 21st June, 2019)
- Department of Zoology, Makerere University Uganda, as a guest Lecturer (May 2019) Gave lectures on prospecting for semiochemical control strategies and genetics of African honeybees
- Institute for Zoology, Martin Luther University, Halle-Wittenberg, Germany as a guest Professor (1st November 2016- 31st January, 2018)
- Department of Biological Sciences Ahmadu Bello University Nigeria as a guest lecturer (11th to 31st December, 2015)
- Department of Biological Sciences, Kaduna state University Nigeria as a guest lecturer (05th to 15th December 2012). Gave lectures on Insect Chemical Ecology with reference to social insects
- Department of Zoology, Makerere University Uganda, as a guest Lecturer (September 2012). Gave lectures on the chemistry of mandibular gland pheromones in African honeybees
- Department of Biological Sciences, Ahmadu Bello University Nigeria as a guest Lecturer (December 2013, and 2014). Spoke on Behaviour and Chemical ecology as a scientific discipline

5. POSTGRADUATE SUPERVISION

5.1 Supervision and co-supervision of students who have completed degrees

Post-Doctoral fellows

Name of fellow	Degree/Title of dissertation/ thesis and date completed	Host	Co-host	Duration of studies (years)

Dr Olabimpe Okosun	Pheromones synergies in reproductive honey bees	Prof C Pirk	Abdullahi A. Yusuf	2 years (2017-2019)
Dr Sandra Mustapa	Communication in small hive beetles	Prof C Pirk	Abdullahi A. Yusuf	2 years (2017-2019)
Dr Mazi Sanda	Genetic diversity of wild bees	Abdullahi A. Yusuf		1 year (2019)
Dr Jarkko Routo	Genomics of Varroa mites	Abdullahi A. Yusuf		Jan-Feb 2019
Dr Chedly Kastally	Reproduction biology of varroa	Abdullahi A. Yusuf		Jan-Feb 2019
PhDs				
Name of student	Degree/Title of dissertation/ thesis and date completed	Supervisor	Co-supervisor(s)	Duration of studies (years)
Olabimpe Okosun	PhD Entomology , Pheromonal communication in African honeybee workers, <i>Apis mellifera scutellata</i> and <i>Apis mellifera capensis</i> : the role of tergal gland secretions (September, 2016)	Prof Christian Pirk	Abdullahi A. Yusuf Prof Robin Crewe	Four
Nelly Ndungu	PhD Entomology , Discrimination of <i>Hypotrigena</i> species (Apidae: Meliponinae) in Kenya using Nest architecture, cephalic secretions and molecular tools (April 2019)	Prof Christian Pirk	Abdullahi A. Yusuf , Masiga Daniel, Nkoba Kiatoko	Three
Beatrice Nganso	PhD Entomology , Mechanisms of Resistance and Tolerance in African and European Honeybees, <i>Apis mellifera</i> L., against <i>Varroa destructor</i> (April 2019)	Abdullahi A. Yusuf	Profs Christian Pirk and Baldwin Torto	Three
Njelembo Mbewe	PhD Entomology , The ecology of <i>Glossina fuscipes fuscipes</i> (Diptera: Glossinidae) and its responses to 4-Methylguaiacol and specific compounds in waterbuck odour (April 2019)	Prof Christian Pirk	Abdullahi Yusuf , Baldwin Torto, Rajinder Saini, Janet Irungu	Two and half years
Abdelmutalab Gesmalla	PhD Entomology Future distribution and life history traits of three insect pests of Arabica coffee in East Africa: Risks of assessment in the light of	Abdullahi A. Yusuf	Prof Christian Pirk. Dr Regis Babin	Three

	global warming (September, 2019)			
Fiona Mumoki	Using functional genomics to provide insights into social parasitism by Cape honey bee clonal workers based on mandibular gland pheromones (<i>Apis mellifera capensis</i> Eschscholtz) (December 2019)	Prof Robin Crewe	Prof Christian Pirk Abdullahi A. Yusuf	Three
MSc				
Lerata Mataeli	MSc Applied Mathematics (September 2019)	Prof Jean Lubuma (Department of Mathematics)	Abdullahi A. Yusuf	Two
Zoe van Vuuren	MSc Entomology Cohabitation in honey bee hives: Development of HPGs and trophallaxis in Small hive beetles. (September, 2019)	Prof Christian Pirk	Abdullahi A. Yusuf	Two
Johanna Pipelow	MSc Molecular Biology Introgression of Capensis honey bees into the Kruger National park (January, 2019)	Prof Robin Moritz (MLU, Halle)	Abdullahi A. Yusuf	Two
Chamanti Liang	MSc Entomology, Production and secretions from mandibular glands of honeybees (July, 2018)	Prof Christian Pirk	Abdullahi A. Yusuf Prof Robin Crewe, Dr Hannelie Human	Three
BSc Hons				
Chamanti Liang	BSc Hons Entomology, How to sneak and overrun a honeybee colony (2013)	Prof Christian Pirk	Abdullahi A. Yusuf Prof Robin Crewe	One
Nikita Venter	BSc Hons Entomology, Temperature and pheromones production in honeybees (2014)	Prof Christian Pirk	Abdullahi A. Yusuf	One
Zoe van Vuuren	BSc Hons Entomology, Modelling the stability of the hybrid zone between <i>scutellata and capensis</i> (2015)	Abdullahi A. Yusuf	Prof Christian Pirk	One
Lerata Mataeli	BSc Hons Applied Mathematics, Honeybee population dynamics in the presence of a social parasite (June 2016)	Prof Jean Lubuma (Department of Mathematics & Applied	Abdullahi A. Yusuf	Two

		Mathematics)		
Anneke Schoeman	BSc Hons Entomology, Speciation and chemical ecology of <i>Epirinus dung</i> beetles (November 2016)	Prof Catherine Sole	Prof Christian Pirk, Abdullahi A. Yusuf,	One
Frans Reyneke	BSc Hons (Wild Life Management) Repellences of some commercial snake repellents (November 2018)	Dr Mark Keith	Abdullahi A. Yusuf Luke Verburgt	One

5.2 Current post-graduate students (PhDs)					
Name of student	Degree enrolled for and date of first registration	Project title	Supervisor	Co-supervisor(s)	Year of registration
Akua Antwi-Agyakwa	PhD Entomology (2016)	Development of semiochemical based tools for the management of African citrus trizoid (ACT)	Abdullahi A. Yusuf	Prof Christian Pirk	Third (Thesis submitted)
Olabimpe Olaide	PhD Entomology (2016)	The Semiochemical basic of repellency to tsetse by Zebra	Prof Christian Pirk	Abdullahi A. Yusuf	Third (submitted)
Istifanus Aiki	PhD Entomology (2017)	Biogeography and Chemical ecology of Termite species in a Nigerian Savannah	Abdullahi A. Yusuf	Prof Christian Pirk	Fourth
Bethelihem Bekele	PhD Entomology (2017)	Chemical ecology of fruit flies	Abdullahi A. Yusuf	Prof Christian Pirk	Fourth
Pascal Ayelo	PhD Entomology (2018)	Bioprospecting for semiochemicals against the tomato moth <i>Tuta absoluta</i>	Abdullahi A. Yusuf	Prof Christian Pirk Dr Emilie D (CIRAD)	Second
Fairo D. Foryuy	PhD Entomology (2019)	Diversity of plants and pollinators and their networks in East African Afromontane regions	Prof Christian Pirk	Abdullahi A. Yusuf Dr Michael Lattorf (icip, Kenya)	Second

Refilwe Modiba	PhD Entomology (2019)	Population genetics and behavior of the Termite raiding ant <i>Megaponera analis</i>	Abdullahi A. Yusuf	Prof Christian Pirk	Second
Nadia K. Toukem	PhD Entomology (2019)	Optimisation of the management of key avocado pests for its effective integration with pollinators conservation efforts in East Africa	Abdullahi A. Yusuf	Dr Thomas Dubois (icipe, Kenya)	Second
Vongai Pradza	PhD Entomology (2019)	Development of Effective Bio-pesticides against whiteflies infesting vegetables in Kenya	Abdullahi A. Yusuf	Dr Fathiya Khamis (icipe, Kenya)	Second
Lerata Mataeli	PhD Applied Mathematics (2020)	Honey bee population dynamics in the presence of a social parasite	Prof Jean Lubuma	Abdullahi A. Yusuf	First
Ayaovi Agbese	PhD Entomology (2020)	Integrating auto dissemination device and fungal endophytes for sustainable management of <i>Tuta absoluta</i> (Meyrick) (Lepidoptera: Gelechiidae)	Abdullahi A. Yusuf	Dr Akutse Komivi (icipe, Kenya)	First
Jackson Muyobela	PhD Entomology (2020)	Effective methods for identifying isolated populations of Savannah tsetse flies: host-orientation behaviour, chemical ecology and population genetics	Prof Catherine Sole	Prof Christian Pirk, Abdullahi A. Yusuf	First

Current MSc students

Frans Reynecke	MSc Wildlife Management (2019)	The efficacy of two snake repelling agents when applied outdoors	Dr Mark Keith	Abdullahi A. Yusuf	Second
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Eloise Butcher	MSc Entomology (2019)	Cuticular hydrocarbons in honey bee drones	Abdullahi A. Yusuf	Prof Christian Pirk	Second
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RESEARCH FUNDING

6.1 Obtaining research funds (Optional)				
Origin of research funds <i>(e.g. contract research, THRIP, international funding organisations, other(s))</i>	Title of research project or programme	Duration	Money allocated (R) <i>(Optional - exact amounts not required)</i>	
Alexander von Humboldt Foundation	Equipment subsidy grant	2020	320,000 (Eur 20,000)	
African Union Inter-African Bureau for Animal Resources (AU-IBAR)	Genetic support to selection and conservation in member states (South Africa and Zimbabwe)	May-July 2019	710,000 (\$50,000)	
Tandem Research Fellowship, Alexander von Humboldt Foundation, Germany	Pathogen loads and diversity of wild and managed honey bees	July-Dec 2019	895,000 (Eur 56,200)	
Alumni Networking Initiative awards, Alexander von Humboldt Foundation, Germany	Networking and capacity building between Germany and Sub-Saharan Africa	2019-2021	400,000 (Eur 25,000)	
Research Development Grant for Y-rated Researchers NRF	From pheromones to Genes: Drones hold a key to our understanding of chemical communication in honey bees	2019-2021	299,600	
Knowledge and Interchange Collaboration (KIC) African Interaction travel grant	Honey bees in Uganda: visit to Makerere University Uganda	2019	50,000	
Incentive Funding for Rated Researchers NRF		2017-2021	78,429	
Ruckenstipendium Alexander von Humboldt Foundation, Germany	Population genetics and disease loads in African honey bees	2018-2019	97,500 (Eur 6,500)	
DAAD Regional office Cairo	To organise the 22 nd meeting of the AAIS in Wad Medani, Sudan	2017	710,000 (Eur 40,000)	
Thuthuka NRF Rating track	Genomic basis of chemical communication in honeybees	2016-2019	1,173,000	
NRF Research Career Award	Chemical Communication in honeybees	5 years (2014-2019)	2,250,000	
NRF/DST Innovation Post Doc.	Pheromones of the Cape honey bee	3 years (2012-2014)	813,000	
Principal Investigator SARChI Chair in Mathematical Models and Methods in	Pheromones of <i>Apis m. adansonii</i> and mathematical modelling of honeybee population dynamics	Since 2013-date	275,000	

Bioengineering and Biosciences			
Knowledge Interchange and Collaboration (KIC) NRF African Interaction travel grant	To visit Ahmadu Bello University, Zaria, Nigeria	November 2015	27,109
Georg Foster Research Fellowship for experienced researchers Alexander von Humboldt Foundation Germany	Population dynamics and pathogen loads in South African honey bees	September 2016 – February 2018	1,310,000 (Eur 87,000)
DAAD Germany	Organise the 21 st scientific conference of the African Association of Insect Science	October 2015	1,222,936
Commonwealth MSc research scholarship	An assessment of desertification and counter desertification methods in Northern Nigeria	September 2012- August 2015	592,300 (£27,890)
Boehringer Ingelheim Fonds (BIF)	To attend student chemical ecology course	4 th to 16 th June 2007	31,446 (Eur 1,800)

7. RESEARCH OUTPUTS

7.1 Publications in peer-reviewed or refereed journals

Provide full details of each publication, including full titles, names of all the authors, journals, dates, page numbers etc.

1. Abdelmutalab G. A. Azrag, **Abdullahi A. Yusuf**, Christian W. W. Pirk, Saliou Niassy, Ephantus Guandarua, Guillaume David & Régis Babin (2020) Modelling the effect of temperature on the biology and demographic parameters of the African coffee white stem borer, *Monochamus leuconotus* (Pascoe) (Coleoptera: Cerambycidae), *Journal of Thermal Biology*, 89, 102534 <https://doi.org/10.1016/j.jtherbio.2020.102534>
2. Jubril Akolade, Khadeejah Nasir-Naeem, Andri Swanepoel, **Abdullahi Yusuf**, Mohammed Balogun, Philip Labuschagne (2020) CO₂-assisted production of polyethylene glycol / lauric acid microparticles for extended release of *Citrus aurantifolia* essential oil, *Journal of CO₂ Utilisation*, Accepted
3. Fiona N. Mumoki, **Abdullahi A. Yusuf**, Christian W. W. Pirk & Robin M. Crewe (2019), Hydroxylation patterns associated with pheromone synthesis and composition in two honey bee subspecies *Apis mellifera scutellata* and *A. m. capensis* laying workers, *Insect Biochemistry and Molecular Biology* DOI: 10.1016/j.ibmb.2019.103230
4. Okosun, O. O., **Yusuf, A. A.**, Crewe, R. M., & Pirk, C. W.W. (2019), Tergal gland components of reproductively dominant honey bee workers have both primer and releaser effects on subordinate workers, *Apidologie*, 50 (2), 173-182.
5. Abdelmutalab G. A. Azrag, **Abdullahi A. Yusuf**, Christian W. W. Pirk, Saliou Niassy, Kelvin K. Mbugua & Régis Babin (2019), Temperature-dependent development and survival of immature stages of the coffee berry borer *Hypothenemus hampei* (Coleoptera:

6. Olabimpe Y. O., David P. T., **Abdullahi A. Y.**, Christian W. W. P., Daniel K. M., Rajinder K. S., & Baldwin T. (2019), Zebra skin odour repels the savannah tsetse fly, *Glossina pallidipes* (Diptera: Glossinidae), *Plos Neglected Tropical Diseases*, 13(6): e0007460. <https://doi.org/10.1371/journal.pntd.0007460>.
7. Aiki P.I, Pirk, CWW & **Yusuf, AA** (2019), Thermal regulatory mechanisms of termites from two different savannah ecosystems, *Journal of Thermal Biology*, 85:102418 <https://doi.org/10.1016/j.jtherbio.2019.102418>
8. Ndungu, N. N., Kiatoko N., Masiga, D. K., **Yusuf A. A.**, Pirk, C., & Raina S.K, (2019), Nest architecture as a tool for species discrimination of *Hypotrigena species* (Hymenoptera: Apidae: Trigonini), *African Entomology*, 27 (1), 25-35, <https://doi.org/10.4001/003.027.0025>
9. Akua, K. A., Ayuka, A. T. F., Emilie, D., Sunday, E., **Yusuf, A. A.**, Pirk, C., & Torto, B. (2019). Lemon Terpenes Influence Behaviour of the African Citrus Triozid *Trioza erytreae* (Hemiptera: Triozidae), *Journal of Chemical Ecology*, <https://doi.org/10.1007/s10886-019-01123-y>
10. Akolade, J. O, Balogun, M, Swanepoel, A, Ibrahim, B. R., **Yusuf, A. A.** & Labuschagne, P. (2019), Microencapsulation of eucalyptol in polyethylene glycol and polycaprolactone using particles from gas-saturated solutions, *RSC Advances* 9: 34039 DOI: 10.1039/c9ra06419b
11. Njelembo J. Mbewe, Rajinder K. Saini, Janet Irungu, **Abdullahi A. Yusuf**, Christian W. W. Pirk & Baldwin Torto (2019), Responses of *Glossina fuscipes fuscipes* to visually attractive stationary devices baited with 4-methylguaiaicol and certain repellent compounds in waterbuck odour, *Plos Neglected Tropical Diseases*, 13(7): e0007510. <https://doi.org/10.1371/journal.pntd.0007510>.
12. F. Lawal, M.J. Bapela, S.A. Adebayo, S.M. Nkadimeng, **A.A. Yusuf**, K.E. Malteru, L.J. McGawd, & T.E. Tshikalange (2019), Anti-inflammatory potential of South African medicinal plants used for the treatment of sexually transmitted infections, *South African Journal of Botany*, 125: 62-71 <https://doi.org/10.1016/j.sajb.2019.06.023>.
13. **Abdullahi A. Yusuf**, Robin. M. Crewe & Christian W. W. Pirk (2018), Turning workers into false queens- the role of exogenous pheromones in regulating reproduction in worker honey bees, *The Journal of Experimental Biology*, DOI: 10.1242/jeb.175505.
14. Antje Jarosch-Perlow, **Abdullahi A. Yusuf**, Christian W.W. Pirk, Robin M. Crewe & Robin F. A. Moritz (2018), Control of mandibular gland pheromone synthesis by alternative splicing of the CP-2 transcription factor gemini in honey bees (*Apis mellifera carnica*), *Apidologie*, 49(4), 450-458, DOI: 10.1007/s13592-018-0571-5.
15. M.B. Lerata, J. M-S. Lubuma, & **A.A. Yusuf** (2018), Continuous and discrete dynamical systems for the declines of honeybee colonies, *Mathematical Methods in the Applied Sciences*, 41(18), 8724-8740, DOI: 10.1002/mma.5093.
16. Fiona Mumoki, Christian Pirk, **Abdullahi Yusuf**, & Robin Crewe (2018). Reproductive parasitism by worker honey bees suppressed by queens through regulation of worker mandibular secretions. *Scientific Reports*, DOI: 10.1038/s41598-018-26060-w.
17. Beatrice T. Nganso, Ayuka T. Fombong, **Abdullahi A. Yusuf**, Christian W. W. Pirk, Charles Stuhl & Baldwin Torto (2018), Low fertility, fecundity and numbers of mated female offspring explain the lower reproductive success of the parasitic mite *Varroa destructor* in African honeybees, *Parasitology*, 1-7, (DOI:10.1017/S0031182018000616)

18. Abdelmutalab, G. A. A., Pirk, C.W.W, **Yusuf, A. A.**, Pinard, F., Niassy, S., Mosomtai, G., and Babin, R. (2018). Prediction of insect pest distribution as influenced by elevation: combining field observations and temperature-dependent development models for the coffee stinkbug, *Antestiopsis thunbergii* (Gmelin), *PLoS ONE* 13(6): e0199569. <https://doi.org/10.1371/journal.pone.0199569>
19. Njelembo J. M., Rajinder K. S., Baldwyn T., Janet I., **Abdullahi A. Yusuf.**, & Christian W. W. P. (2018), Sticky small target: an effective sampling tool for tsetse fly *Glossina fuscipes fuscipes* Newstead, 1910, *Parasites and Vectors*, 11:268, (DOI:10.1186/s13071-018-2840-6).
20. N. N. Ndungu, N. Kiatoko, D. K. Masiga, S. K. Raina, C.WW. Pirk, & **A. A. Yusuf** (2018), Compounds extracted from heads of African stingless bees (Hypotrigena species) as a prospective taxonomic tool, *Chemoecology*, 28: 51-60, (DOI:10.1007/s00049-018-0256-6).
21. Njelembo, J. M., Saini, R. K., Torto, B., Irungu, J., **Yusuf, A. A.**, & Pirk, C. (2018), Effects of vector control on the population structure of tsetse (*Glossina fuscipes fuscipes*) in western Kenya, *Acta Tropica*, 179: 1-9 (doi.org/10.1016/j.actatropica.2017.12.015).
22. Ndungu, N., Kiatoko, N., Sole, C. L., Pirk, C., **Yusuf, A. A.**, Raina, S. & Masiga, D. (2018), Resolving taxonomic ambiguity and cryptic speciation of Hypotrigena species through Morphometrics and DNA barcoding, *Journal of Apicultural Research*, 57(3): 354-363 (DOI: 10.1080/0028839.2018.1426348).
23. Okosun, O.O., Pirk, C.W.W., Crewe, R.M. & **Yusuf, A.A** (2017), Glandular sources of pheromones used to control host workers (*Apis mellifera scutellata*) by socially parasitic workers of *Apis mellifera capensis*, *Journal of Insect Physiology*, 102: 42-49 (DOI: <http://dx.doi.org/10.1016/j.jinsphys.2017.09.001>).
24. Fabien Démares, **Abdullahi A. Yusuf**, Susan W. Nicolson & Christian, W.W. Pirk (2017). Effect of Brood pheromone on Survival and Nutrient intake of African Honey Bees (*Apis mellifera scutellata*) under Controlled Conditions , *Journal of Chemical Ecology*, 43: 443-450 (DOI: DOI 10.1007/s10886-017-0840-1).
25. Beatrice T. Nganso, Ayuka T. Fombong, **Abdullahi A. Yusuf**, Christian W. W. Pirk, Charles Stuhl & Baldwyn Torto (2017). Hygienic and grooming behaviours in African and European honeybees – new damage categories in *Varroa destructor*, *PLoS ONE* 12(6): e0179329. <https://doi.org/10.1371/journal.pone.0179329>
26. Christian, W.W. Pirk, Ursula Strauss, **Abdullahi A. Yusuf**, Fabien Démares & Hannelie Human (2016). Honeybee health in Africa- A review, *Apidologie*, 47: 276-300 (DOI: 10.1007/s13592-015-0406-6).
27. **Abdullahi A. Yusuf**, Christian W. W. Pirk, & Robin. M. Crewe, (2015). Mandibular gland pheromones from queens and workers of *Apis mellifera adansonii* (Latr.), *Apidologie*, 46 (5): 559-572. (DOI:10.1007/s13592-014-0346-6)
28. Olabimpe O. Okosun, **Abdullahi A. Yusuf**, Robin M. Crewe, & Christian. W. W. Pirk (2015). Effects of age and reproductive status on tergal gland secretions in queenless honeybee workers *Apis mellifera scutellata* and *A. m. capensis*, *Journal of Chemical Ecology*, 41: 896-903.
29. Danica Marlin, Susan W. Nicolson, **Abdullahi A. Yusuf**, Philip C. Stevenson, Heino M. Heyman, & Kerstin Krüger (2014). The only African wild tobacco, *Nicotiana africana*: alkaloid content and the effect of herbivory, *PlosOne* DOI: 10.1371/journal.pone.0102661.

- 30. Abdullahi A. Yusuf**, Robin. M. Crewe, & Christian W. W. Pirk (2014). Olfactory detection of prey by the termite raiding ant *Pachycondyla analis*, *Journal of Insect Science* 14: 53 DOI: 10.1093/jis/14.1.53
- 31. Abdullahi A. Yusuf**, I. Gordon, R. M. Crewe, & C. W. W. Pirk (2014). Prey choice and Raiding Behaviour of the Ponerine ant *Pachycondyla analis* (Hymenoptera: Formicidae), *Journal of Natural History*, 48(5-6): 345-358, DOI:10.1080/00222933.2013.791931
- 32. Abdullahi A. Yusuf**, Robin M. Crewe, & Christian W. W. Pirk (2013). An effective method for maintaining the African termite-raiding ant *Pachycondyla analis* in the laboratory. *African Entomology*, 21(2): 132-136.
- 33. Abdullahi A. Yusuf**, Christian. W. W. Pirk, Robin. M. Crewe, Peter. G. N. Njagi, Ian Gordon & Baldwyn Torto, (2010). Nestmate recognition and the role of cuticular hydrocarbons in the African termite raiding ant *Pachycondyla analis*. *Journal of Chemical Ecology*, 36: 441-448. (DOI 10.1007/s10886-010-9774-6)
- 34.** Heath, M. R., Rasmussen, J., **Abdullahi A. Yusuf**, Allen, J., Anderson, C. I. H., et al. (2008). Spatial demography of *Calanus finmarchicus*, in the Irminger Sea. *Progress in Oceanography*, 76: 39-88. DOI: 10.1016/j.pocean.2007.10.001
- 35. Abdullahi A. Yusuf & L. Webster**, (2008). Seasonal variation in the physical characteristics of the copepod *Calanus finmarchicus* (Gunnerus) along the North Atlantic. *Journal of Biological Science*, 8 (1): 95-100. DOI: 10.3923/jbs.2008.95.100
- 36. Abdullahi A. Yusuf**, B. M. Mofio & A. B. Ahmed (2007). Proximate and Mineral composition of *Tamarindus indica* Linn 1753 Seeds, *Science world Journal* 2 (1): 1-4
- 37.** Lynda Webster, Pam Walsham, **Abdullahi A. Yusuf**, Sarah Richards, Steve Hay, Mike Heath & Collin Moffat (2006). Development and application of an analytical method for the determination of storage lipids, fatty acids and fatty alcohols in *Calanus finmarchicus*, *Journal of Separation Science*, 29(9): 1205 – 1216. DOI: 10.1002/jssc.200500378

7.2 Books and/or chapters in books

1.

Provide full details, including full titles, names of all the authors, publishers, dates, page numbers etc. Specify your exact contribution to the book e.g. editorial role, co-author

- Pirk, C.W.W. and Yusuf, A. (2017) A small hive beetle lesson from South Africa. In N.L. Carreck (Ed) The small hive beetle - a growing problem in the 21st century. International Bee Research Association / Northern Bee Books; Congresbury, UK. ISBN: 978-0-86098-278-4 p. 51-58
- Abdullahi A. Yusuf (2019). Allomonenes. In C. Starr (Ed). Encyclopedia of Social Insects, Springer Nature. https://doi.org/10.1007/978-3-319-90306-4_5-1

7.3 Published full-length conference papers/keynote addresses

Provide full details of each publication, including full titles, names of all the authors, journals, dates, page numbers etc.

- **A. A. Yusuf** (2019) Ecology, behaviour and threats to African honey bees, 23rd Biennial meeting and conference of the African Association of Insect Scientists (AAIS), 18th -22nd November 2019, Abidjan, Cote d'ivoire, Keynote address
- M. B. Lerata*, A.A. Yusuf, J. Lubuma (2017) On continuous models and reliable numerics for the declines of the honeybee colonies. BIOMATH 2017, Biomath Communication supplement: BIOMATH 2018, 4(1).
- **A. A. Yusuf** (2013) How to eat healthy: Dietary aspects of honeybees in the light of global pollinator decline. 20th Conference of the African Association of Insect Scientists (AAIS), 27th – 31st October 2013, Yaoundé, Cameroon. Keynote address
- **A. A. Yusuf**, L. Webster & P. Pollard (2010) Development of an Analytical Method for the Determination of Storage Lipids in *Calanus finmarchicus* Omics Conference on analytical and Bioanalytical methods 01st – 3rd November, 2010, Hyderabad, India DOI: 10.4172/2155-9872.1000091
- **A. A. Yusuf** (2008) Predation on termites of the sub-family Macrotermitinae by the ant *Pachycondyla analis*. Proceedings of ARPPIS Alumni Association Biennial conference/silver jubilee celebrations, 24th -27th November, 2008, icipe, Duduville campus, Nairobi, Kenya, 1- 5

7.4 Non-refereed publications or popular articles

Provide full details of each publication, including full titles, names of all the authors, journals, dates, page numbers etc.

- Mumoki F. N., Pirk C. W.W., **Yusuf A. A** and Crewe R. M (2019) Do scutellata queens influence the mandibular gland pheromones of the *A. m. capensis* clone workers and their ability to lay eggs? South African Bee Journal 91 (3): 23-25.
- **Yusuf Abdullahi Ahmed** (2016). Hope for African Mountain honey bees? African mountain honey bees in the light of climate change and threat to honeybees' diversity. Mountain Research Initiative Blog, March edition <http://www.blogs-mri.org/?p=1036>
- **Yusuf, Abdullahi Ahmed**, & Gordon Ian (2007). Understanding the behaviour and chemical ecology of the African termite raiding ant *Pachycondyla analis* could lead to the development of a novel termiticide, Mpala News, issue 4.*

8. OTHER SCHOLARLY RESEARCH-BASED CONTRIBUTIONS

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

Provide full details of participation in national and international conferences etc

8.1.1 National

1. 10th Oppenheimer Research Conference, 1st 3rd October, 2019, Johannesburg, South Africa. Title of Paper: Queen-mediated regulation of reproductive parasitism in Cape honey bee (*Apis mellifera capensis* Eschscholtz) clonal workers (Oral presentation).
2. 20th Entomological Society of Southern Africa and 38th ZSSA joint congresses, 03th- 07th July 2017, CSIR, Pretoria, South Africa. Title of paper: *Apis mellifera scutellata* queens can control reproductive parasitism in *A. m. capensis* clones by blocking production of the queen substance (Oral presentation).

3. 19th Entomological Society of Southern Africa and 37th ZSSA joint congresses, 12th- 16th July 2015, Rhodes University, Grahamstown, South Africa. Title of paper: Ontogenetic changes in the tergal gland secretions of queen-less honey bee workers, *Apis mellifera scutellata* and *Apis mellifera capensis* (Oral presentation)
4. 19th Entomological Society of Southern Africa and 37th ZSSA joint congresses, 12th- 16th July 2015, Rhodes University, Grahamstown, South Africa. Title of paper: Hot and sort after: Body temperature correlates pheromone production in honeybee workers (Oral presentation)
5. 19th Entomological Society of Southern Africa and 37th ZSSA joint congresses, 12th- 16th July 2015, Rhodes University, Grahamstown, South Africa. Title of paper: Modulation of honeybee nutrient consumption by natural and synthetic compounds (Oral presentation)
6. 18th Entomological Society of Southern Africa (ESSA), 30th June– 3rd July 2013. North-West University, Potchefstroom, South Africa. Title of paper: Does herbivory induce defences in Africa's wild tobacco? (Oral presentation)
7. BeeCon 2012, South African Bee Industry Organisation (SABIO), 15th – 16th June 2012 Pretoria, South Africa. Title of Paper: Addressing the Cape Bee Problem through understanding its biology (Oral presentation)
8. 17th Entomological Society of Southern Africa (ESSA), 3rd – 6th July 2011. University of the Free State, Bloemfontein, South Africa. Title of paper: Caste determines production of volatiles in the African termite raiding ant *Pachycondyla analis* (Hymenoptera: Formicidae) (Oral presentation)

8.1.2 *International*

1. 23rd meeting and scientific conference of the African Association of Insect Scientists (AAIS), 18th -23rd November, 2019, Abidjan, Ivory Coast. Title of Paper: The connection between edible insects and sustainable development goals (Oral presentation)
2. 23rd meeting and scientific conference of the African Association of Insects Scientists (AAIS), 18th – 23rd of November 2019, Abidjan, Ivory Coast: Title of Paper: Thermal regulatory mechanisms of termites from two different savannahs (Oral Presentation)
3. 23rd meeting and scientific conference of the African Association of Insects Scientists (AAIS), 18th – 23rd of November 2019, Abidjan, Ivory Coast: Title of Paper: Trait-mediated avoidance behaviour of fruit flies to Semiochemicals of *Oecophylla longinoda* (Latreille) (Hymenoptera: Formicidae) (Oral presentation)
4. 9th Bonn Humboldt award winners forum, 16th -20th October, 2019, Bonn, Germany. Title of Paper: Queen turnover rates in African honey bees are not the classic textbook example (Poster presentation)
5. 35th Meeting of the International Society for Chemical Ecology (ISCE) 2nd-7th June 2019, Georgia, Atlanta, USA. Title of paper: Eavesdropping into host communication: the bee louse *Braula coeca* selects its host using kairomones (Oral presentation)
6. Advanced Technologies and Treatment for Diabetes (ATTD) conference. Berlin, Germany 20th – 23rd February 2019. Title of paper. Nano formulation of eucalyptus oil with chitosan improves its antidiabetic property (Oral presentation)
7. XVIIIth International Congress of the International Union for the study of Social Insects (IUSSI), 5th – 10th August 2018 Guarujá, Brazil. Title of paper: Pheromonal plasticity of minor and major workers in the African termite raiding ant *Megaponera analis* (Latr.) (Oral presentation).

8. XVIIIth International Congress of the International Union for the study of Social Insects (IUSSI), 5th – 10th August 2018 Guarujá, Brazil. Title of paper: Plasticity in the mandibular gland signals of honey bees (Oral presentation).
9. XVIIIth International Congress of the International Union for the study of Social Insects (IUSSI), 5th – 10th August 2018 Guarujá, Brazil. Title of paper: Use of diverse glandular sources for pheromonal control by reproductively dominant honey bee workers (Oral presentation).
10. XVIIIth International Congress of the International Union for the study of Social Insects (IUSSI), 5th – 10th August 2018 Guarujá, Brazil. Title of paper: Reproductive plasticity in workers of the African honey bee *Apis mellifera capensis* (Oral presentation)
11. 34th Meeting of the International Society of Chemical Ecology (ISCE), 12th – 19th August 2018 Budapest, Hungary. Title of paper: Effects of brood pheromone on survival and nutrient intake of African honey bees under controlled conditions (Oral presentation)
12. 34th Meeting of the International Society of Chemical Ecology (ISCE), 12th – 19th August 2018 Budapest, Hungary. Title of paper: Presence of C10 fatty acids in the cephalic secretions of bees (Poster presentation).
13. 34th Meeting of the International Society of Chemical Ecology (ISCE), 12th – 19th August 2018 Budapest, Hungary. Title of paper: Equids as potential source of repellents for savannah tsetse fly control (Oral presentation)
14. 34th Meeting of the International Society of Chemical Ecology (ISCE), 12th – 19th August 2018 Budapest, Hungary. Title of paper: Behavioural responses of African citrus Trioqid to odours from common host plants-an evidence of host finding by olfaction (Poster presentation).
15. 34th Meeting of the International Society of Chemical Ecology (ISCE), 12th – 19th August 2018. Title of paper: Tergal gland pheromones of honey bee workers (Poster presentation)
16. EUROBEE 8, 18th – 20th September 2018 Ghent, Belgium. Title of paper: Use of quadcopter drones to estimate honey bee population densities and define drone congregation locations (Oral presentation)
17. 22nd Scientific conference of the Association of African Insect Scientists (AAIS), 23rd – 26th October 2017, Wed-Medani Sudan. Title of paper: Exposure to brood pheromones increases nutrient intake and decreases survival of African honey bees *Apis scutellata* (Oral presentation)
18. 34th International Scientific Council for Trypanosomiasis Research and Control, 11th – 15th September 2017 Livingstone, Zambia. Title of paper: Responses of *Glossina fuscipes fuscipes* to 4-methylguaiacol and specific compounds in waterbuck odour at stationary visual attractive devices (Oral presentation)
19. 34th International Scientific Council for Trypanosomiasis Research and Control, 11th – 15th September 2017 Livingstone, Zambia. Title of paper: Effects of vector control on the population structure of tsetse (*Glossina fuscipes fuscipes*) in western Kenya (Poster presentation)
20. 19th International Conference on Apiculture and Bee Health, 11th – 12th December 2017 Rome, Italy. Title of paper: Assessment of tolerance mechanisms in African and European honey bees against *Varroa destructor* (Oral presentation)
21. American Mathematical Society (AMS) Joint Mathematics meeting, 2017. Title of Paper: Continuous and discrete models for the declines of honey bees colonies (Oral presentation).
22. 32nd Meeting of the International Society of Chemical Ecology (ISCE) and 5th meeting of the Association of Latin American Chemical Ecology Society 4th - 8th of July, 2016 Iguassu, Brazil.

- Title of paper: Mandibular gland pheromones from African honeybees: New insights and prospects as a complementary taxonomic tool (Oral presentation)
23. XXV International Congress of Entomology (ICE) 25th – 30th September 2016, Florida, USA. Title of paper: Managing reproduction in workers: The primer and releaser effects of tergal glands secretions in honey bee workers (Oral presentation)
 24. 21st scientific conference of the Association of African Insect Scientists (AAIS), 19th – 23rd October 2015 Cotonou, Benin Republic. Title paper: Pheromonal and reproductive dominance of invasive social parasites, *Apis mellifera capensis* worker clones on its host, *Apis mellifera scutellata* workers (Oral presentation)
 25. 21st scientific conference of the Association of African Insect Scientists (AAIS), 19th – 23rd October 2015 Cotonou, Benin Republic. Title paper: Managing a social parasites using pheromone supplement (Oral presentation)
 26. 31st Meeting of the International Society of Chemical Ecology (ISCE), 29th June – 4th July 2015, Stockholm, Sweden. Title of paper: Prospects of managing a social parasite using pheromone supplements (Oral presentation)
 27. SA-UK pollination and threats to pollinators' workshop, University of Pretoria, South Africa, 11th – 13th March 2015. Title of paper: Prospects of managing a social parasite using pheromone supplements (Oral presentation)
 28. 1st SA-China workshop on honeybees' research, Zhejiang University, Hangzhou, China, 2nd – 9th August, 2014. Title of paper: Composition of mandibular gland pheromones in African honeybees: New insights? (Oral presentation)
 29. 30th Meeting of the International Society of Chemical Ecology (ISCE) and Chemical Signalling in Vertebrates (CSIV), 8th – 12th July 2014, Chicago, USA. Title of paper: Pheromonal plasticity in *Apis mellifera adansonii* (Latr.) (Oral presentation)
 30. 20th Conference of the African Association of Insect Scientist (AAIS), 27th – 31st October 2013, Yaoundé, Cameroon. Title of paper: How to eat healthy: Dietary aspects of honeybees in the light of global pollinator decline (Keynote)
 31. 20th Conference of the African Association of Insect Scientist (AAIS), 27th – 31st October 2013, Yaoundé, Cameroon. Title of paper: Composition of mandibular glands in three subspecies of African honeybees and its implication for apiculture (Oral presentation)
 32. EuroBee 2012, European Bee Organisation conference, 5th -8th September 2012 University of Halle, Germany. Title of Paper: Mandibular glands pheromones in races of African Honey Bee (Oral presentation)
 33. SEMIO 11, Semiochemicals in the African perspective, 12th – 15th November 2011, Nairobi, Kenya. Title of paper: Odour mediated behaviour of the African termite raiding ant *Pachycondyla analis* (Hymenoptera: Formicidae) (Oral presentation)
 34. 19th Conference of the African Association of Insect Scientist (AAIS), 8th – 12th November 2011, Nairobi, Kenya. Title of paper: Do physical challenges affect dominance hierarchies and pheromone production in Honey bees? (Oral presentation)
 35. 41st Annual Conference of the Entomological Society of Nigeria, 4th-7th October 2010. Wesley University of Science and Technology, Ondo (WUSTO). Title of paper: Direct behavioural evidence of olfactory detection of prey by the termite raiding ant *Pachycondyla analis* (Hymenoptera: Formicidae) (Oral presentation)
 36. Development of an Analytical Method for the Determination of Storage Lipids in *Calanus finmarchicus* Omics Conference on analytical and Bioanalytical methods 01st – 3rd November, 2010, Hyderabad, India DOI: 10.4172/2155-9872.1000091 (Oral presentation)

37. 25th Meeting of the International Society of Chemical Ecology (ISCE), 23rd - 27th August 2009, Neuchatel, Switzerland. Title of paper: Cuticular Hydrocarbons as Nestmate recognition cues in the African termite raiding ant *Pachycondyla analis* (Poster presentation)
38. ARPPIS Alumni Association Biennial conference/silver jubilee celebrations, 24th -27th November 2008, icipe, Duduville campus, Nairobi, Kenya. Title of paper: Predation on termites of the sub-family Macrotermitinae by the ant *Pachycondyla analis* (Oral presentation)
39. XXIII International Congress of Entomology (ICE), 5th-12th July 2008, Durban, South Africa. Title of paper: Termite raiding behaviour of the Ponerine ant *Pachycondyla analis* in a Kenyan savannah (Poster presentation)
40. Semiochemicals in Insect Pest and Disease Vector Management: the African Perspective (SEMIO-08), 11th- 15th February 2008, Arusha, Tanzania. Title of paper: Semiochemicals involved in termite raiding by the Ponerine ant *Pachycondyla analis*, observations on raiding behaviour (Poster presentation)

8.2 Teamwork and collaboration with others:

Other researchers (national and international)

International:

- Prof Robert Paxton, Institute of Biology and Zoology, Martin Luther University, Halle, Germany
- Prof Anne Akol, Department of Zoology, Entomology and Fisheries, Makerere University, Uganda
- Prof Robin Moritz, Molecular Ecology Research Group, Martin-Luther University Halle, Germany
- Prof Ado Baba Ahmed, Department of Biological Sciences, Kaduna State University, Nigeria
- Prof Adamu Abu-Kassim, Department of Biological Sciences, Ahmadu Bello University, Nigeria
- Idris Barau, Director Beekeeping Extension Society, Zaria, Nigeria
- Dr Dennis VanEngelsdorp, Honeybee laboratory, University of Maryland, USA
- Dr Naina Razafidaraleva, Department of Entomology, University of Antananarivo, Madagascar
- Prof Huo-Qing Zheng, Honeybee Research Group, Zhejiang University, China
- Prof Suresh Raina, International Centre of Insect Physiology and Ecology, Nairobi, Kenya
- Prof Baldwin Torto, International Centre of Insect Physiology and Ecology, Nairobi, Kenya
- Prof Fu-Liang Hu, Honeybee Research Group, Zhejiang University, China
- Dr Ayuka Fombong, Bee Research Programme, International Centre of Insect Physiology and Ecology, Nairobi, Kenya

National (University of Pretoria):

- Prof Jean Lubuma and Dr Salisu Garba, Department of Mathematics and Applied Mathematics, University of Pretoria (mathematical modelling of honey bee pheromones and population)
- Prof Marion Meyer, Department of Plant Sciences, University of Pretoria (plant natural products)
- Dr Natasha October, Department of Chemistry, University of Pretoria (plant natural products)
- Prof Lucy Moleleki' BGM, University of Pretoria (AHLs and Quorum sensing in bacteria)
- Prof Sue Nicolson and Prof Kerstin Kruger, Department of Zoology, University of Pretoria (Alkaloids from Nicotine plant)
- Dr Emmanuel Tshakeleng, Department of Plant Sciences, University of Pretoria (Anti Inflammatory properties of plants)
- Dr Sekelwa Cosa Department of Biochemistry Genetics and Microbiology (Prospecting for

Other research institutions (national and international)

- Samaru College of Agriculture, Zaria, Nigeria (project on *Apis mellifera adansonii*)

- Dr Robert S. Nomufela, ARC –Plant Protection Research Institute, Pretoria, South Africa
- Dr Rasheed Adeleke, ARG-Soil, Water and Climate Research Institute, Pretoria, South Africa
- Dr Michael Meusel, University of Kwazulu-Natal, Pietermaritzburg (project: population dynamics of honey bee colonies), South Africa
- Dr Mohammed Balogun, CSIR, Pretoria (Natural product chemistry)
- Peter Hawkes, AfriBugs, CC (Chemo-taxonomy of ants)

Industry

- South African Bee Industry (SABIO)

8.3 Membership in 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, chairman, president, secretary

- Registered Professional Natural Scientist (Pr. Sci. Nat.) Reg no. 400260/13
- Entomological Society of Southern Africa (Member)
- African Association of Insect Scientist (AAIS) (Member).
- Entomological Society of Nigeria (Member)
- Royal Society of Chemistry, (RSC) UK (Member)
- International Society of Chemical Ecology (ISCE) (Member)
- South African Chromatography Society (ChromSA) (Member)
- International Union for the Study of Social Insects (IUSI) (Member)

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

Details are required

- Institute of Biology/Zoology, Martin Luther University, Halle-Wittenberg, Germany (July-December 2019)
- Molecular Ecology Research Group, Martin Luther University, Halle-Wittenberg, Germany (August 2016 to February 2018)
- University of Würzburg, Zoology II Zentrum, Germany, Research and Postgraduate training collaboration (June 2018)
- International Centre of Insect Physiology and Ecology (ICIPE), Nairobi, Kenya. Research collaborations in applied arthropods (15th to 21st May, 2016)
- Zhejiang University, Honeybee Research Group as part of the South Africa- China honeybee NRF funded research (2nd to 10th August, 2014)
- Department of Zoology, Makerere University, Uganda, for apicultural research (September 2012 and April 2019)

10. ARTISTIC OUTPUTS (if applicable)

9.1 Provide full details of artistic outputs, including public reviews of work, coordinating reports by experts in the field, publisher, production company etc

NA

10. MANAGEMENT AND ADMINISTRATIVE DUTIES

○ *List your involvement in departmental activities (e.g. administrative functions), faculty (e.g. Faculty Committees) or other university activities.*

- Member Departmental Transformation Committee (Since 2018)
- Research Leader Future Africa (Since 2017)
(<http://www.futureafrica.science/index.php/our-community/research-leaders>)
- Member University of Pretoria Reference Group on UP Africa strategy
- Internal reviewer for NRF Post Doc applications (2014, 2015)
- Departmental coordinator for *UP with science* (2014 to 2016)
- Member Departmental marketing and communication committee (Since 2015)
- Manager Analytical Chemistry facilities of the Chemical Ecology laboratory at the Social Insects Research Group (Since 2010)
- Participated in UP open days (Since 2011)

11. COMMUNITY SERVICE OR PROFESSIONAL SKILLS

11.1 Outreach projects

(e.g. project titles, institutions and communities involved, etc.)

- Annual talk/lectures (since 2010) to the Southern and Eastern Gauteng beekeepers association on the need to embrace proper beekeeping practices
- Beekeeping extension services via the Beekeeping Extension Society (BES) in Zaria, Nigeria
- Speaker at Postgraduate welcome/induction day(s) for Department of Research Support, University of Pretoria

11.2 Professional service performed

(e.g. courses presented, lectures at professional associations/clubs, radio or TV appearances, outside expert or appointment committee, etc.)

- Alternate member representing professional bodies (scientist) NSTF-South 32 awards adjudication panel, 2019 to date
- Scientific committee member 1st African edible insects conference, Harare, Zimbabwe (2019)
- Trainer Insect Chemical Ecology course for PhD students, ICE 2019, icipe, Nairobi, Kenya
- Member adjudication panel for NRF-Sweden research grant (2018)
- Member Executive committee of the AU's African Apicultural Platform (AAP), 2015 to 2018.
- Featured on Living Land an SABC education series on alternative sources of nutrition in the use of Insects for food and feed (April 2016)
- Member Agricultural Sciences adjudication panel for NRF-TWAS-DAAD PhD and MSc applications (December 2015)
- Regularly featured on Voice of America Hausa (VOA) service discussing beekeeping and other related activities (at least twice in a year)

- Featured as a guest on CII International radio programme *Witness Special* discussing Honeybees and beekeeping.
- Presented lectures as part of the BIOMATH coffee meetings, University of Pretoria

11.4 Involvement with other universities/scientific institutions

(e.g. external examiner, editor of journal, advisory council, CSIR, SA Council for Scientific Professions)

- External examiner PhD, University of Madras, Chennai, India
- External examiner MSc, Makerere University, Uganda
- External examiner for MTech at Tshwane University of Technology, Pretoria
- Associate/handling editor International Journal of Tropical Insect Science, Springer

11.5 Referee duties

(e.g. journals, dissertations/theses)

Journals: Served as a reviewer for the following journals:

- *Food chemistry*
- *Journal of Chemical Ecology*
- *Pest Management Science*
- *Journal of Experimental Biology*
- *Plos One*
- *PloS NTD*
- *Journal of Thermal Biology*
- *Crop Protection*
- *Chemoecology*
- *Evolutionary Applications*
- *Parasites and Vectors*
- *Journal of Insect Behaviour*
- *Journal of Insect Physiology*
- *Journal of Apicultural Research*
- *Journal of Applied Entomology*
- *African Entomology*
- *Bulletin of Experimental Research*
- *Heltares*
- *Journal of Biological and Agricultural Sciences*
- *International Journal of Tropical Insect Science*
- *Journal of Hymenopteran Research*
- *Phytoparasitica*

12. AWARDS AND SCIENTIFIC/SCHOLARLY RECOGNITION

12.1 Evaluation status as scientist/scholar

(e.g. NRF; first evaluation and date, subsequent evaluations and dates)

12.2 Research awards and prizes

Full details are required

- Humboldt's Alumni Award for Innovative Networking ideas, Alexander von Humboldt's foundation, Germany (2019-2021)
- Tandem Research Fellowship, Alexander von Humboldt's Foundation, Germany (July-December 2019)
- National Research Foundation (NRF) Research Development Grant for Y-rated Researchers (2019-2021)
- National Research Foundation KIC African Interaction travel grant (January-July 2019)
- National Research Foundation (NRF) Incentive Funding for Y-rated Researchers (January 2017-December 2020)
- National Research Foundation (NRF) Thuthuka rating track grant to study genomic basis of communication in honeybees (March 2016 – December 2019)
- Georg Foster (HERMES) Research Fellowship for Experience Researchers, Alexander von Humboldt Foundation, Germany (August 2016 – February 2018)
- National Research Foundation (NRF) Knowledge Interchange and Collaboration (KIC) Africa interaction travel grant (December 2015-January 2016)
- National Research Foundation (NRF)/Department of Science and Technology (DST) Research Career Advancement Fellowship (2014 – 2019)
- Commonwealth MSc scholarship for Distance learning, at the University of Edinburgh, UK (2012 – 2015) to cover tuition and research
- National Research Foundation (NRF)/Department of Science and Technology (DST) Innovation Post-Doctoral Fellowship (2012 – 2014)
- Dean Assistantship Post-Doctoral Fellow, University of Pretoria, (January 2012 – June 2012)
- University of Pretoria Postdoctoral fellowship (November 2010 – December 2011),
- International Society of Chemical Ecology (ISCE), Scientists in developing countries grant to attend the 25th annual meeting in Neuchâtel, Switzerland (2009), Euro 1, 500 (R26,205)
- PhD fellowship of the African Regional Postgraduate Programme in Insect Science (ARPPIS) through the German Academic Exchange Programme (DAAD) at the International Centre of Insect Physiology and Ecology (ICIPE), Nairobi, Kenya (2006 – 2010)
- European Chemoreception Research Organisation (ECRO) student travel grant (2007)
- Boehringer Ingelheim Fonds (BIF) PhD student travel allowance to attend a PhD student course ICE 07 at the Swedish University of Agricultural Sciences Alnarp Sweden (4th- 16th June, 2007) to attend the Student chemical ecology course
- Overseas MSc Scholarship of the Petroleum Technology Development Fund (PTDF) Nigeria, (2003-2004)
- Total Nigeria PLC prize for Best graduating student in Biological Sciences 1999/2000 session, University of Abuja Nigeria (2000)

13. REFEREES

1. Prof Robin Crewe,

Centre for the Advancement of Scholarship,
University of Pretoria,
Private Bag X20,
Hatfield 0028,
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South Africa
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2. Prof Christian Pirk,
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Department of Zoology and Entomology,
University of Pretoria
Private Bag X20,
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Pretoria
South Africa.
Tel: +27 12 420 4616, email: cwwwpirk@zoology.up.ac.za

3. Prof Baldwyn Torto,
Principal Scientist and Head Behavioural and Chemical Ecology Department,
International Centre of Insect Physiology and Ecology (*icipe*)
Nairobi,
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Tel: +254 20 8632999, email: btorto@icipe.org