**Qualifications**

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| **PhD Plant Pathology****2013-2018** | **Institution** at *University of Pretoria*, Pretoria, South Africa**Title:** Alternaria blight of sunflower caused by *Alternaria alternata* and its control in South Africa**Skills:** droplet digital PCR, diagnostics, disease control, seed science, matrix-assisted laser desorption/ionization (MALDI), Statistical Packages, Research Outreaches; Science Collaborations; Lecturing and Assessment |
| **MSc Plant Pathology****2010-2013** | **Institution** at *University of Pretoria*, Pretoria, South Africa**Title:** Pathogenic seed-borne, small-spored *Alternaria* spp. on sunflower (*Helianthus annuus* L.)**Skills:** Scanning and light microscopy; DNA extraction and PCR; gel electrophoresis; Seed testing techniques; Science Communication |

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| **Hons Plant Pathology****2010** | **Institution:** *University of Pretoria*, Pretoria, South Africa**Study content:** Current Topics in Plant pathology; Integrated Pest Management in Africa; Experimental Design and Plant Disease; Advanced techniques in Microbiology, Molecular Plant Pathology  |

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| **BSc Plant Pathology****2005-2008** | **Institution:** *University of Pretoria*, Pretoria, South Africa**Study contents:** Plant Pathology, Microbiology, Genetics; Virology; Nematology; Entomology, Biochemistry |
| **Extended training** | Science communication (NYS – DST), Seed Science (UP); Advanced molecular phylogenetics (FABI); Science Statistics :SAS, GenStsat (ARC), Automated droplet digital PCR application (NRF);  |

**Competencies**

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| **Research** | * Proposal **writing** and fund sourcing (NRF, Oilseeds, GrainSA, OMT)
* Student **supervision and Lecturing**
* **Collaborations** with Grain South Africa, Agricultural Research Council, Oilseed Advisory Committee and International Seed Testing Association (ISTA)
* Microbiology and plant pathology skills
	+ Management of field, greenhouse and lab trials for fungicides and bio-control agents evaluations
* Statistical data analysis (SAS and GenStat)
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| **Teaching and Training** | * **Plan, compile and deliver lectures, assessments** for different sizes (9-300 students) and learning groups. Give constructive feedback within a reasonable time for courses in Genetics; Molecular and Cell Biology; Plant Pathology; Plant Physiology and Plant Protection.
* **Postgrad supervision** at Honors level
* **Conference** attendance(local and international) and scientific writing
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**Employment History**

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| **05.2016 – 2019** | **Part-time Senior Lecturer** at *University of Pretoria*, South Africa. |
|  | * **Coordinate and manage course work, Lectures and tutors**
* Prepare and give formal lectures, practical, tutorial classes and consultation sessions with students.
* Student assessments (assignment, tests and exams).
* Modules include Life Sciences (JWT 315, JWT 325 and JLS 410), Molecular and Cell Biology (MLB 111, and 143), Plant Physiology (BOT 161)
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| **05.2010 – 12.2015** | **Science Communicator** at *Sci-Enza and NYS-DST*.* UP With Science (UPWS) 2011 **Project** **Leader** – mentored 12 Grade 11 learners on research (Silver medal Gauteng Science Expo).
* **Chess** – **Founder and Manager** of Sci-Enza Chess and liaised with TuksSports to create TuksChess now winners of 2017, 2018 and 2019 University Sports South Africa (USSA) Championships. Awarded **2019 TuksSport administrator of the year**.
* **Outreach** **initiatives** – developed programs to present at science festivals (National Science week, Sci-Fest and Sasol TechnoX) to create public science awareness.
* Daily science programs developed to foster public awareness and appreciation of science.
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| **02.2011 – 12.2017** | **Seed Analyst and Lab** at *University of Pretoria*, South Africa. |
|  | * Evaluate seed lots from seed and chemical companies (Diagnostic and seed vigor tests)
* **Diagnostics**: survey farms and identification (symptom, morphological and molecular) of diseases.
* Conduct **field and greenhouse trials** to evaluate fungicides and bio-control agents as a new option for disease control.
* Coordinate lab duties and **research** with the team.
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| **03.2013 – 01.016** | **Research Assistant** at *University of Pretoria adn ISTA*, South Africa. |
|  | * **Extensive database update** of all plant diseases of crops that are relevant to the ISTA.
* For good quarantine structures to avoid the spread of new diseases across the globe.
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| **2012-2013 and 2017-2018** | **Part-time Assistant Lab technician** at *FABI (Forestry and Agricultural Biotech Institute)*, South Africa.* **Mass produced *Deladenus siricidicola* nematode** and successfully used it as a biocontrol agent by making Sirex wasps infertile in the fields.
* Other entomology projects include the *Gonipterus* species biocontrol using parasitoid wasp *Anaphes nitens*.
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**Academic Profile**

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| **Research Output** | **ISI Publications**:* Alternaria alternata, the causal agent of leaf blight of sunflower in South Africa. 2018. European Journal of Plant Pathology.
* Distribution of Alternaria leaf blight of sunflowers caused by *Alternaria alternata* in South Africa. 2019. Journal of Agriculture and Rural Development in the Tropics.
* Control of Alternaria leaf blight caused by *Alternaria alternata* on sunflower using fungicides and *Bacillus amyloliquefaciens*. 2020. Crop Protection
* Association of the Taxonomic Study of the Flora of Tropical Africa (AETFAT) 2014. Stellenbosch. The morphological, molecular and protein (MALDI-TOF) identification of *Alternaria* species on sunflower (*Helianthus annuus* L.) in South Africa.
* ISTA 7th Seed Health Symposium 2014. Edinburgh, Scotland. The influence of seed infection by *Alternaria* spp. on sunflower (*Helianthus annuus* L.) seed germination and control using fungicides as a bio-control agent.

**Conference Publications*** South African Society of Plant Pathology (SASPP) 2017. Drakensburg. *Alternaria* species: Contaminants, saprophytes or pathogens of sunflower seed?
* Also attended SASPP (2011), 2013 and 2015. Microscopy Society of Southern Africa (MSSA) 2011. South Africa Society of Microbiology (SASM) 2011.

**Industry Publications:*** Crop rotation: Crop rotation: “Refresh button” of a crop farming system. May 2020
* Crossbreeding ‘farm experience and scientific research” for Agricultural knowledge acquisition. August 2019
* South Africa’s plant disease diagnostic clinics: Help on Tap. March 2020
* 2017. Alternaria leaf spot: Assessment of disease incidence in areas of concern. **SAGrain**, 19 (5): 51-52 <http://www.grainsa.co.za/alternaria-leaf-spot-assessment-of-disease-incidence-in-areas-of-concern>
* 2017. Alternaria leaf blight and seed infection: A common disease causing major damage **SAGrain**, 19 (5): 47 [http://www.grainsa.co.za/alternaria-leaf-blight-and-seed-infection:-a-common-disease-causing-major-damage](http://www.grainsa.co.za/alternaria-leaf-blight-and-seed-infection%3A-a-common-disease-causing-major-damage)
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References

References will be sent at request.