

**Curriculum vitae**  
**Tharaga Phumudzo Charles**

**Personal details**

Surname : Tharaga  
Full names : Phumudzo Charles  
Id number : 8405155608089  
Date of birth : 15 – May – 1984  
Gender : Male  
Race : African  
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Driver's License : B

**Educational details**

Matriculation type : Exemption  
School : Patrick Ramaano secondary (1997-2001)  
Additional matriculation : Exemption (2004)

**Tertiary education**

Qualification : **PHD – Agrometeorology (2016 - )**  
Institution : UFS  
Qualification : **Master of Science. MSc. Agric (Agrometeorology)**  
Institution : University of the Free State (2014)  
Qualification : **BSc. Agric. Honors Agrometeorology (2011)**  
Institution : University of the Free State  
Qualification : **BSc Agric. Applied Science (2008)**  
Institution (USA) : Virginia Poly-technique Institute (USA)  
Qualification : **BSc Agric. (4yrs)**  
Institution : University of the Free State (2010)

**Additional educational information (Certificates)**

Certificate in Open path Eddy covariance training (2015)  
A certificate of Agrometeorological services (2008)  
A certificate in Agrometeorology and sustainable development (2008)  
A certificate in public speaking and presentation (2009)  
A certificate in value-driven leadership skills (2009)  
A certificate in group dynamics and managing stereotypes (2009)  
A certificate in roles of student leaders in higher education (2009)  
A certificate in mentorship and guidance (2009)  
A certificate in advance Ms Excels level 1&2 (2010)  
A certificate in Ms Excel Level 3(2010)  
Academic excellence (2010)  
Certificate of Attendance of International Horticulture Congress (2014)

**Workshops and conferences**

Conference : Agriculture and forest Metoeology(Virtual,  
Minneapolis,USA,2021)  
Paper Presented : Ecosystem water use efficiency of sweet cherry trees  
under rainfed conditions in a temperate climate  
Conference :All Africa horticultural Congress  
(ISHS,Virtual,Dakar,Senegal, 2021)  
Paper Presented : Sweet Cherry Yield, Fruit Quality and Water Productivity  
under Rainfed Conditions in Eastern Free State  
Conference and Workshop : Int Workshop on Sap Flow (Helsinki, Finland, 2019)

Paper Presented	: Estimation of sap flow on sweet cherry orchards in the semi-arid region of South Africa.
Conference	: Int Irrigation Symposium (Matera, Italy, 2019)
Paper presented	: Evapotranspiration measurements using eddy covariance system over the Eastern Free State.
Training Workshop	: Scintillometers for Flux Measurements
Institution	: Kipp and Zonnen (Netherlands, 2019)
Training Workshop	: Surface Renewal Technology
Institution	: UC Davis_ California (USA) (2017)
Training workshop	: Weather and Remote Sensing
Institution	: NEON Data Centre, Boulder, Colorado, USA (2017)
Training Workshop	: Open path Eddy covariance (Campbell Scientific)
Institution	: Campbell Scientific (Logan, Utah, USA, 2015)
Paper presented	: Downscaling of hourly temperatures from Daily Minimum and Maximum temperatures
Conference	: AEON- Geo Future- Port Elizabeth, November 2014
Paper Presented	: Impacts of climate change on accumulated chill units at selected fruit production sites in South Africa
Conference	: 29 <sup>th</sup> International Horticultural Congress (IHC), Brisbane, Australia, August 2014.
Presented a paper	: Historical trends of chill units in Bethlehem
Conference	: Combined congress of scientists, Durban- 2013
Presented a paper	: Analysis of climate change impacts of chill units
Conference	: Esri International User Conference (July 2013)
Presented a paper	: Using GIS for producing weather maps.
Venue	: San-Diego, USA
Presented a paper	: Statistical Downscaling of climate change scenarios
Conference	: Inkaba Ye Africa, Germany 2012
Presented a Poster	: Downscaling of climate change scenarios
Workshop	: Inkaba ye Africa 8 <sup>th</sup> workshop, Cape Town -2011
Co-Chair	: South African Society of Atmospheric Sciences
Workshop	: Inkaba ye-Africa 7 <sup>th</sup> workshop, Germany-2010
Research Publications	
	<ul style="list-style-type: none"> <li>• Tharaga, P.C., Steyn, A.S. and Coetzer, G.M., 2021. Climate Change Impacts on Temperature and Chill Unit Trends for Apple (<i>Malus domestica</i>) Production in Ceres, South Africa. <i>Atmosphere</i>, 12(6), p.740.</li> <li>• Tharaga, P.C., Steyn, A.S. and Coetzer, G.M., 2014, August. Impacts of climate change on accumulated chill units at selected fruit production sites in South Africa. In <i>XXIX International Horticultural Congress on Horticulture: Sustaining Lives, Livelihoods and Landscapes (IHC2014)</i>: 1130 (pp. 63-70).</li> <li>• Tharaga, P.C., Savage, M.J., Tesfahuney, W. and Coetzer, G.M., 2019, October. Transpiration rates of rain-fed sweet cherry (<i>Prunus avium</i> L.) using sap flow under warm temperate conditions. In <i>XI International Workshop on Sap Flow 1300</i> (pp. 1-6).</li> <li>• Tharaga PC., Tesfuney W., Coetzer GM., Savage MJ., 2021, Water use of rainfed sweet cherry (<i>Prunus avium</i> L.) quantified using Granier thermal dissipation probes (TDP), Agriculture and forest Meteorology (In press)</li> <li>• Tharaga PC., 2021, Sweet Cherry Yield, Fruit Quality and Water Productivity under Rainfed Conditions in Eastern Free State. In <i>IV International All Africa Horticultural Congress</i> (In Press)</li> </ul>

## Work experience

1. Employer	: University of the Free State
Job Description	: Lecturer (Agrometeorology)
Duration	: 2016 (January – Present)
2. Employer	: (CSIR)
Job Description	: Senior Research Technologist
Duration	: 2015 (May) – 2015 (December)
Duties	
Provide scientific leadership to staff in the Sustainability Science and Resource Economics group employing an excellent field grasp. Ensure the group remains dynamic, innovative, competitive and abreast of the trends; Develop and drive the strategic vision of the research group which responds to the CSIR, NRE and	

Competency Area focus and mandate; Promote a culture of scientific excellence in terms of both quality and delivery; Lead the group in the development and implementation of the Competence Area and group business plans (including strategy, goals, targets, HR, finances); Identify and manage research opportunities in order to secure external R&D contracts, through active networking, developing and managing client relationships, and developing proposals with the group; Conceptualize, lead and deliver on multi-disciplinary and multi-agency proposals, projects and programs; Manage, motivate and develop the people in the research group and enable their career growth; Manage the financial and human capital sustainability of the group, including secured contract R&D income, running expenses and manpower. Contribute to the annual planning process and forecasting; Lead and co-author with the group and internal and external partners in the production of R&D outputs, including peer-reviewed journal articles and conferences proceedings, books, research reports, guidelines and policy briefs, and decision-support tools/ methods; Travel locally and internationally from time to time

### 3. Employer: South African Weather Service

Job description

: Senior Scientist: Climate Information

Duration

: 2012(May) – 2015(April)

Strategic & Business Management and Organizational Support. Assist Unit Manager: Climate Information in setting strategic and business planning objectives for the Climate Information Unit. Act like a Professional Senior Scientist within the Unit to further the operational and leadership effectiveness within the South African Weather Service. Contribute as and when requested to Management feedback sessions with staff and at Management Committee meetings/sessions. Actively promote the South African Weather Service's interests and commitment to professional service delivery to all its stakeholders. Climate Service Operational Activities: Development, Implementation, Maintenance and Support. Manage the section responsible for delivering a Good Public service by publishing near real-time weather data and related information and selling scientific publications. Ensure the quality and cost-effectiveness of climate services provided to clients. Seek client requirements and tailor client services to meet those requirements. Advice Unit Manager: Climate Information of changing trends in demand for climate services and the type of skills, personnel and equipment necessary to meet these demands.

### 4. Employer

: ABSA (Financial Services)

Job description

: Agrometeorologist (Agri Insurance Specialist)

Duration

: 2011(Feb) – 2012(April)

Duties

Analyzing Climate Risk for insured clients in terms of Crop protection against severe weather events, writing advisory articles, supplying information to the Absa capital for inputs in trading of crops, managing the premium book and also tasked with a mandate of increasing the client base by giving advisory which helps in terms of farm management and alleviating risk. Helping in terms of claim assessments. Working with Actuaries in pricing models. Analyzing climate data daily and distributing it to our clients. Interpreting weather forecasts (seasonal and short term, making it simple for Absa clients to understand it). Developing new products for the division.

### 5. Employer

: National Research Foundation/DST

Job description

: Graduate Researcher (Agrometeorology)

Duration

: 2010(April) - 2011(January)

Duties

I worked as Agrometeorologist based at the University of The Free State. I am researching a different aspect of Agriculture and its relation to weather. Research-based on the performance of agricultural products in the error of climate change.

### 6. Employer

: Consolata Estates Cactus Pears (LTD)

Job Description

: Supervisor (Farm Supervisor)

Duration

: 2009(January) - 2010(January)

Duties

Supervising the Harvesting of the cactus pears and managing the farm. Monitoring the packaging process and also the transportation process, which was done either flight or shipping. Registering of the temporary employees and managing the accounts of the farm.

### 7. Employer

: University of the Free State

Job description

: Research Assistant (Agrometeorology)

Duration

: 2007(January – 2008(June)

Duties

Assisting postgraduate students with their research activities, practical demonstration for the first year and second-year students, teaching and marking scripts. Preparing laboratories for the practical sessions.

8. Employer : Virginia Poly Technique Institute (USA)  
Job description : Research/Teaching assistant (2008 – 2009)  
Duties  
Assisting the Soil Judging team with sample preparation, conducting practical and working as a teaching assistant, wherein I was conducting tutorials and consulting on behalf of the lecturer to the students

### References

Name	: Dr. Sebanasi Dzikiti
Occupation	: Senior Researcher – Agriculture (CSIR)
Contact details	: 021 888 2593 e-mail: <a href="mailto:SDzikiti@sun.ac.za">SDzikiti@sun.ac.za</a>
Name	: Dr. Gugu Zuma
Occupation	: Senior Researcher- Agrometeorologist (ARC)
Contact Details	: 0833192036 e-mail: <a href="mailto:gugunc27@yahoo.com">gugunc27@yahoo.com</a>
Name	: Mr. Jerry Dlamini
Occupation	: Lecturer (University of the Free State)
Contact details	: 078 065 9070 e-mail: <a href="mailto:dlaminiJc@ufs.ac.za">dlaminiJc@ufs.ac.za</a>