

30 September 2021

## MEDIA RELEASE

### **#UPGraduation2021: ‘I was caught completely off guard’ – UP master’s student whose thesis was converted into PhD**

PRETORIA – When University of Pretoria master’s student Michael Barnes submitted his thesis for external examination, he got the surprise of his life when it was subsequently converted into a PhD.

“The way in which my thesis was converted was quite unique because when most people get their thesis converted, they do it way before submission of a master’s,” Dr Barnes said. “Whereas I submitted mine as a master’s and it ended up being more than that. It happened very out of the blue and I was caught completely off guard.”

This Cape Town-born meteorologist, who graduated recently with his PhD, has experience in both operational forecasting and research and development. He currently works as a research scientist in the South African Weather Service’s Marine Research Unit, where he is involved in the development of numerical models and associated forecast products and services.

His qualifications reflect his love for weather. “I hold a Bachelor of Science (Honours) Degree in Meteorology from UP. I also have a forecasting diploma from the South African Forecasting Service,” he said. Dr Barnes was on the graduation roll for both a master’s and PhD in Meteorology.

His master’s-turned-PhD dissertation focused on atmospheric dynamics. “I studied the dynamics of upper-tropospheric weather systems called cut-off lows. The study analysed the properties of these weather systems that extend all the way to the surface compared to those that do not,” he said.

Dr Barnes was supervised by Dr Thando Ndarana, BSc Meteorology Programme Coordinator and Senior Lecturer, and co-supervised by Professor Willem Landman, Programme Coordinator and Professor in the Department of Geography, Geoinformatics and Meteorology in the Faculty of Natural and Agricultural Sciences.

“By the time Michael submitted his MSc dissertation for examination, he had already published his first paper from his research in *Atmospheric Research*, which is a very high-impact and reputable journal,” Dr Ndarana said. “He had also submitted a second article in *Climate Dynamics*, an equally reputable journal of the atmospheric sciences. Both these papers closed a knowledge gap in the literature. Based on the depth and breadth of the work that was submitted, an international examiner from Oxford University suggested that an upgrade be considered. To quote him, ‘This thesis is, by any measure, a truly outstanding and exceptional piece of work.’”

Reflecting on his academic journey, Dr Barnes said it was not an easy road. “At the time of completing my master’s, I was working full-time and found it exceptionally challenging. Working and studying is no joke. Finding a work-study-life balance is not easy.”

Dr Ndarana praised Dr Barnes for his work ethic. “The remarkable thing about Michael’s journey is that he was working as a full-time researcher at the South African Weather Service, which is a technically demanding operational organisation. He led the development of the operational marine forecasting system there and

---

published five papers in high-impact journals, that were based on this system. These papers had nothing to do with his academic research; meaning that he needed to find time for the latter after working hours.”

Dr Barnes advised other students who are in the process of completing their studies to keep going. “Perseverance is key. I really struggled during my first year. Finding a friend who is starting their degree around the same time as you and is on the same path can also help you. I was lucky enough to start and complete this course with my friend Anika de Beer from undergraduate studies. Just having someone who understood exactly what I was going through was very helpful.”

He’s unsure about whether or not he will continue his studies. “I’m going to take the rest of the year to explore some opportunities, and then decide what to do next,” he said.

Caption 1: Dr Michael Barnes

Caption 2: Dr Michael Barnes with supervisor Dr Thando Ndarana

### **Media inquiries:**

For interviews, please email Prim Gower at [Primarashni.gower@up.ac.za](mailto:Primarashni.gower@up.ac.za) or call 083 229 9011

---

## **ABOUT THE UNIVERSITY OF PRETORIA**

The University of Pretoria (UP) is one of the largest contact and residential universities in South Africa, with its administration offices located on the Hatfield Campus, Pretoria. This 113-year-old institution is also the largest producer of research in South Africa.

Spread over seven campuses, it has nine faculties and a business school, the Gordon Institute of Business Science (GIBS). It is the only university in the country that has a Faculty of Veterinary Science which is ranked top in Africa, and overall has 120 academic departments, as well as 92 centres and institutes, accommodating more than 55 000 students and offering about 1 100 study programmes.

UP is one of the top five universities in South Africa, according to the 2019-2020 rankings by the Center for World University Rankings. It is also ranked among the top 100 universities worldwide in three fields of study (veterinary science, theology and law), and among the top 1% in eight fields of study (agricultural sciences, clinical medicine, engineering, environment/ecology, immunology, microbiology, plant and animal sciences and social sciences).

In May 2020, the annual UK Financial Times Executive Education Rankings once again ranked GIBS as the top South African and African business school. The University also has an extensive community engagement programme with approximately 33 000 students involved in community upliftment. Furthermore, UP is building considerable capacities and strengths for the Fourth Industrial Revolution by preparing students for the world beyond university and offering work-readiness and entrepreneurship training to its students.

As one of South Africa’s research-intensive universities, UP launched the Future Africa Campus in March 2019 as a hub for inter- and transdisciplinary research networks within UP and the global research community to maximise 4IR innovation and address the challenges and stresses our continent and world is facing. In addition UP also launched the Javett Art Centre in September 2019 as a driver of transdisciplinary research development between the Humanities and other faculties. In November 2020 UP launched Engineering 4.0. as a hub not only for Smart Cities and Transport, but also to link the vast resources in technology and data sciences to other faculties via Future Africa. These initiatives are stimulating new thinking at the frontier of ‘science for transformation’.

For more information, go to [www.up.ac.za](http://www.up.ac.za)