

## CONTACT INFORMATION

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[Personal Website](#)

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[Google Scholar](#)

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## LANGUAGES

- English
- Afrikaans

## LEADERSHIP & COMMITTEES

- APECS-SA National Committee Co-Chair (2019 - 2021): [Link](#)
- SU Earth Science Postgraduate representative (2018-2019)
- Science Faculty Postgrad committee (2018-2019)

## CRUISE EXPERIENCE

### SCALE Winter Cruise (July 2019)

- Atlantic Southern Ocean
- Ship: *SA Agulhas II*

### Winter Cruise 2017 (July-Aug 2017)

- Indian Southern Ocean
- Ship: *SA Agulhas II*

### SANAE 56 Antarctic (Nov'16-Feb'17)

- Atlantic Southern Ocean
- SANAE Antarctic Base
- Ship: *SA Agulhas II*

## PEER-REVIEW

- Communication Biology
- JGR: Biogeosciences
- Global Biogeochemical Cycles
- Biogeosciences

## REFERENCES

**Dr. Robert J. W. Brewin (Postdoc PI)**  
Senior Lecturer  
University of Exeter  
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**Dr. Susanne Fietz (PhD Supervisor)**  
Senior Lecturer  
Stellenbosch University  
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**Prof. Alakendra N Roychoudhury**  
Stellenbosch University  
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**Dr. Peter Morton**  
Texas A&M University  
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# Johannes J. Viljoen

Postdoctoral Research Associate  
Department of Earth and Environmental Science  
University of Exeter, Penryn Campus  
[Website](#)

## Biological Oceanography & Marine Biogeochemistry

## EDUCATION

### Doctor of Philosophy (PhD) - Earth Science (2019-2022)

**Stellenbosch University, South Africa**

Thesis: *Phytoplankton and trace metal dynamics in the Southern Ocean*

### Master of Science (MSc) - Earth Science, Cum Laude (2017-2021)

**Stellenbosch University, South Africa**

Thesis: *Chemtax determination of Southern Ocean phytoplankton distribution and adaption.*

### Bachelor of Sci. (Hons) - Env. Geochemistry (2016)

**Stellenbosch University, South Africa**

### Bachelor of Science (BSc) - Earth Science

**Stellenbosch University, South Africa**

## WORK EXPERIENCE

### **Postdoctoral Research Associate (June 2022 - )**

University of Exeter, UK

UKRI FLF Project: Phytoplankton response to climate change (PRIME).

PI: Bob Brewin

### **TracEx group Geochem lab manager (2017 - 2021)**

Stellenbosch University, South Africa

Responsible for procurement of chemical supplies and consumables, maintenance and student training.

### **Research/Teaching assistant (2017 - 2019)**

Stellenbosch University

Facilitated tutorials and practicals for second-year env. geochemistry students. Presented on the topic of phytoplankton pigments.

## TRAINING (SELECTED)

### **Challenge of Science Leadership - Jan 2024**

Plymouth Marine Station

3-Day course by Barefoot Thinking: Martin Bloxham & Peter Redstone

### **POGO observational training - June 2022**

Best practices for biogeochemical ocean observation: instrumentation, operation, quality control. Hybrid event at SAMS, Oban, Scotland

### **GEOTRACES Summer School - 2019**

Cadiz, Spain (1 week) - [Link](#)

### **Analysis of Phytoplankton Pigments by HPLC - 2018**

LOV/CNRS Villefranche, France. (1 week)

Facilitated by Josephine Ras & Dr. Celine Dimier

### **Helsinki Summer School - 2017**

Helsinki, Finland (2 weeks)

Introduction to Modern Atmospheric Science

### **First Aid at Work - Level 3**

Safety Training Awards, UK

# GRANTS

## Small Grants:

- Departmental research grants: Two departmental research grants (£700x2+£200) for building and customizing a low-cost plankton microscope (PlanktoScope). Funded by the Department of Earth and Environmental Sciences, University of Exeter. 2023-present.
- Pilot Plankton Project with PML: Small intercalibration project using two low-cost microscopes funded internally by PML (£800). Starting Jan 2025.

# PUBLICATIONS

## Published

- **Viljoen, J.J.**, Sun, X., Brewin, R.J.W. (2024). Climate variability shifts the vertical structure of phytoplankton in the Sargasso Sea. *Nature Climate Change*. <https://doi.org/10.1038/s41558-024-02136-6>.
- Sun, X., Brewin, R.J.W., **Viljoen, J.J.**, Li, M. (2024). Generating open-source 3D phytoplankton models by integrating photogrammetry with scanning electron microscopy. *Methods, Front. Microbiol.* <https://doi.org/10.3389/fmicb.2024.1429179>.
- Brewin, R.J.W., Sun, X., Aurin, D., **Viljoen, J.J.**, Walsh, C. & Sathyendranath, S. (2024) Superyachts could support satellite ocean colour validation. *Frontiers in Remote Sensing*, 5, 1336494 <https://doi.org/10.3389/frsen.2024.1336494>.
- Barlow, R., Lamont, T., **Viljoen, J.J.**, Ains, R., Brewin, R., Tilstone, G., Aiken, J. (2023). Latitudinal variability and adaptation of phytoplankton in the Atlantic Ocean. *Journal of Marine Systems*. <https://doi.org/10.1016/j.jmarsys.2022.103844>.
- **Viljoen, J.J.**, Weir, I., Fietz, S., Cloete, R., Loock, J., Philibert, R., Roychoudhury, A.N. (2019). Links between the phytoplankton community composition and trace metal distribution in summer surface waters of the Atlantic Southern Ocean. *Front. Mar. Sci.* 6, 295. <https://doi.org/10.3389/fmars.2019.00295>.
- **Viljoen, J.J.**, Philibert, R., Van Horsten, N., Mtshali, T., Roychoudhury, A.N., Thomalla, S., Fietz, S. (2018). Phytoplankton response in growth, photophysiology and community structure to iron and light in the Polar Frontal Zone and Antarctic waters. *Deep. Res. Part I Oceanogr. Res. Pap.* 141, 118–129. <https://doi.org/10.1016/j.dsr.2018.09.006>.