

## Saachi Sadchatheeswaran

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### CURRENT FOCUS:

PhD in Biological Sciences

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### SKILLS AND QUALIFICATION:

- Established research and publishing skills during postgraduate studies and internships at various institutes
- Regular use of statistical and graphic and equation based modeling programs
- Obtained wide base of design skills with various software suites
- Confident and awarded science communicator

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### EDUCATION:

**University of Cape Town – PhD Student of Biological Science** (Feb 2014 – present)

- Dissertation Title : Sequential invasions on rocky shores: Implications for structural complexity, community structure and ecosystem functioning

**University of Cape Town – Masters of Biological Science** (Sep 2012 – Jan 2014)

- Masters of Science (dissertation only)
- Upgraded to PhD in February 2014

**University of Toronto** (September 2006-April 2011)

- Honours Bachelor of Science: MA Human Biology/ MA Zoology

**Woburn Collegiate Institute, Toronto, ON** (September 2002- June 2006)

- Graduated OSSD in the Gifted Program with Honours

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### AWARDS AND SCHOLARSHIPS:

**Centre of Excellence for Invasion Biology, Annual Research Meeting** (Nov 28, 2014)

- ‘Best Phd Presentation’ – The Habitat Effect: the real estate market on the rocky shores
- Award: ZAR25000 international travel grant

**University of Cape Town, Faculty of Science Fellowship Award** (Jun 2014 - present)

- Award: ZAR320000, three year PhD studies

**UCT International and Refugee Student’s Scholarship** (Feb 2014 – present)

- Doctoral Scholarship – ZAR35000, renewable up to 3 years

**FESTO and Biomimicry South Africa - Harvest Water from Air Challenge** (Nov 28, 2014)

- Overall Winner – Team Hydrator

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## **PUBLICATIONS AND PRESENTATIONS:**

### **Journal Articles**

Sadchatheeswaran S, Branch GM, Robinson TB (2015) Changes in habitat complexity introduced by sequential invasions of a rocky shore: implications for community structure. *Biological Invasions* DOI 10.1007/s10530-014-0837-4

- Published online January 14, 2015

Sadchatheeswaran S, Belanger M, Wittnich C (2012) A comparison of published brevetoxin tissue levels in West Indian manatee, bottlenose dolphin and double-crested cormorants in southwest Florida (student paper). *Journal of Marine Animals and Their Ecology* 5(1):20-27

- Received May 30, 2012; Accepted July 18, 2012

### **Oral Presentations**

Sadchatheeswaran S. Skyscrapers to Bungalows: sequential invasions change rocky shore ecology. *Aquatic Biodiversity and Ecosystems*, Liverpool, United Kingdom, August 2015 (abstract accepted)

Sadchatheeswaran S. I used to be you. First year undergraduate introduction to UCT Faculty of Science, Cape Town, South Africa, February 2015

Sadchatheeswaran S, Pod Leader: Alexander, M. The habitat effect: the real estate market of the rocky shores. *Centre of Excellence for Invasion Biology – Annual Research Meeting*, Stellenbosch, South Africa, November 2014

Sadchatheeswaran S. Sequential invasions on rocky shores: Implications for structural complexity, community structure and ecosystem functioning. *Faculty of Science Fellowship Symposium*, Cape Town, South Africa, November 2014

Sadchatheeswaran S. Skyscrapers to Bungalows. *South African Marine Science Symposium*, Stellenbosch, South Africa, July 2014

Sadchatheeswaran S. Sequential invasions on rocky shores: Implications for structural complexity, community structure and ecosystem functioning. *PhD proposal defense*, Cape Town, South Africa, February 2014

### **Poster Presentations**

Sadchatheeswaran S, Branch GM, Robinson TB. From Bungalows to Skyscrapers: sequential invasions change rocky shore community. *Biodiversity Southern Africa*, Cape Town, South Africa, December 2013.

Sadchatheeswaran S, Belanger M, Wittnich C. A comparison of brevetoxin tissue levels in select marine animals of southwest Florida. *Wildlife Disease Association – Senior Scientist Meeting*, Quebec City, Canada, August 2011.

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## **INTERNSHIPS AND WORKSHOPS:**

**Write Science 2015**

**Course Coordinator: Mathilde Van der Merwe**

**(May 11 – June 5 2015)**

- 4 week extensive course on writing in science outside of a thesis

**Ecopath International Course + Conference – Barcelona, Spain**  
**Course Coordinator: Villy Christensen**

**(Nov 2 – 15 2014)**

- Introduction to Ecopath
- Ecosim Master Class
- Ecospace Master Class

**Biomimicry Student Design Challenge**  
**Course Coordinator: Andrea Broom**

**(Aug - Nov 2014)**

- Workshop by Biomimicry South Africa and FESTO Germany
- Team Competition to extract water from air
- Won competition – Hydrator Toolkit; Team Hydrator

**Winter School – Modelling the marine ecosystem from the ocean to the fish**

**(June 2013)**

**Stellenbosch University**  
**Mentor: Dr. T. Robinson**  
***Research Internship***

**(Feb 1 – March 31, 2012)**

- Focused on identification and quantification of all species present in seven distinct zones within the rocky shores of Marcus Island, Saldanha Bay in South Africa for an update to the data presented in “Changes in South African rocky intertidal invertebrate community structure associated with invasion of the mussel *Mytilus galloprovincialis*” (Robinson et al. 2007)
- Extensive use of microscope, morphological detail, and keys to identify up to 40 species from the annelid, arthropod, gastropod, anthozoan, and echinoderm groups
- Ran various statistic tests using programs STATISTICA and PRIMER to analyze results obtained for Saldanha Bay project

**Oceanographic Environmental Research Society**  
**Mentor: Dr. C. Wittnich**

**(March 2011 –March 2012)**

***Specialized Publishing Research Internship***

- Focus on publishing research topics for scientific meetings and scientific journals
- Published poster

**Oceanographic Environmental Research Society**  
**Mentor: Dr. C. Wittnich**

**(January 2011 – February 2011)**

***Advanced Marine Mammal Research Internship (100 hours)***

- Focus on researching particular topic in marine mammals – in this case ‘Contaminant effect on Marine Mammal Neurophysiology’
- Obtained skills in conducting effective literature searches; article tracking, creation of a rationale and hypothesis
- understanding limitations of collecting/analyzing data; effective data presentation and summary

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## **RELEVANT WORK EXPERIENCE:**

**University of Cape Town**  
***Presenter/Demonstrator for Outreach (unpaid)***

**(Jan 2013 – present)**

- First Year Science Students – Introduction to Faculty of Science

- '3D Graphic Modelling in Marine Science' to Grade 10 and 11 students
- Science Day - Marine invertebrate and algae identifications
- Science Day – Forensic Murder Mystery Game

**University of Cape Town**

**(Jan -Feb 2013, 2014, 2015)**

***Postgraduate Numerical Skills and Statistics Demonstrator (paid)***

- Tutor for Applied Marine Science and Biological Science Honours students
- Demonstrated programming skills for Statistica and R
- Marked 'tuts'

**Toronto Zoo (May 2012 – August 2012)**

**(May 2012 – August 2012)**

***Curatorial Assistant for Curator of Reptiles and Amphibians - Full time, Seasonal (paid)***

- Reptile and amphibian egg field guide: research and text; contact with photographers for donated photographs; egg/egg mass digital paintings in Adobe Photoshop CS5; full compilation of guide in Adobe Photoshop CS5 (most up-to-date digital copy of all guides available)
- Ontario Turtle Tally – entry of observations from all of Southern Ontario into Microsoft Excel
- Cleaning and feeding and data collections of up to 100 headstart turtles (eggs, hatchlings, and juveniles)
- Radio telemetry of adult Blanding's turtle in wetlands
- Presentation on conservation and ecology of leatherback sea turtles and loggerhead sea turtles at Seafood for Thought (Loblaws)

***Curatorial Assistant for Curator of Mammals - Full time, Seasonal (paid)***

- Behaviour research on social behaviour between Indian rhino female and babirusa male in order to assess for multi-species exhibit (2 weeks)
- Behaviour research on Arctic fox (male and female) stereotypical behaviour as affected by enrichment devices
- For both projects the following were performed: literary research, compilation of ethogram, volunteer support, data sheets entered in Microsoft Excel and analyzed in Statistica (Version 10) (2012), and final written report for relevant keepers