

CURRICULUM VITAE OF  
**IAN Z.W. CHAN**  
Ph.D.



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## CONTACT INFORMATION

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## PROFESSIONAL EXPERIENCE

**Since 2021: Lecturer and Principal Investigator.** Animal Behaviour & Ecology Lab, Department of Biological Sciences (DBS), National University of Singapore (NUS).

- Taught more than 800 undergraduate and 250 graduate students to date.
- Supervised or supervising the research of 1 PhD, 7 MSc, 17 undergraduate and 6 high school students: >80% obtained As, 2 are writing up their research for publication and 1 has published as first author.
- Main teaching: (i) Tropical Conservation Biology and (ii) Statistics in R (undergraduate and graduate levels); previously taught multiple environmental-related courses, e.g. Biodiversity, Ecology, and Behaviour.
- In 4 years of teaching: won 1 Annual Teaching Excellence Award, 3 Faculty Teaching Excellence Awards, and 1 Faculty Award for Mentorship Excellence (amongst other prizes).

**2019–2021: Research Fellow cum Grant Manager.** Evolutionary Development Lab, NUS.

- Research: main expertise in (i) Phylogenetic analysis of butterfly colours, (ii) microstructure analysis of butterfly scales, and (iii) gene function analysis using CRISPR-Cas9.
- Grant management: coordinated 4 labs from NUS and SUTD on a \$5-million-dollar NRF grant.

**2018–2019: Research Fellow.** Experimental Marine Ecology Lab, NUS.

- Animal behavioural studies: crab colour patterns and signalling.

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## ACADEMIC QUALIFICATIONS

**Ph.D.** 2018. Sensory & Behavioural Ecology. NUS.

- Thesis: “*Defining and quantifying animal colour patterns*”. Formulated a definition for colour patterns; wrote and software for measuring animal colour patterns (see: [ianzwchan.com/my-research/pat-geom/](http://ianzwchan.com/my-research/pat-geom/)).
- Expertise in marine Ecology: experienced in SCUBA-based and rocky shore experiments on fish behaviour, coral-macroalgal interactions and seawall biodiversity.

**B.Sc.** 2014. Double Major in Life Sciences (Environmental Biology) & Business Management (Hons 1<sup>st</sup> class). NUS.

- Honours Thesis: “*Morphological Patterns in Animals: Definition, Measurement and a Novel Application of the Mantel Test*”.
- F&N Book Prize for academic excellence, Dean’s List (multiple years).

**Dip.** 2006. Biotechnology (Biomolecular Sciences). Temasek Polytechnic, Singapore.

- Final Project: expertise in protein work and cell culturing.
- Merit Award for academic excellence, Bronze Medal, CASE Prize, Honours List (all years).

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## PUBLICATIONS

<sup>1</sup>Co-first authors; <sup>†</sup>Corresponding author

- (11) Todd P.A.<sup>1†</sup>, **Chan I.Z.W.**<sup>1</sup>, Wang W.Y., Boh Z., Soh H.S. & Huang H. (2025). Nature's headlamps: A unique light-focusing structure in *Parasesarma* de Man, 1895 mangrove crabs. **Ecology**, 106(5): e70107.
- (10) Lim, H., **Chan, I.Z.W.**<sup>†</sup>, & Monteiro, A.<sup>†</sup> (2024). Pattern Matters in the Aposematic Colouration of *Papilio polytes* Butterflies. **Insects**, 15(7), 465.
- (9) Teo H.C., Fung T.K., Song X.P., Belcher R.N., Siman K., **Chan I.Z.W.** & Koh L.P. (2023). Increasing contribution of urban greenery to residential real estate valuation over time. **Sustainable Cities and Society**, 96: 104689.
- (8) **Chan I.Z.W.**<sup>1†</sup>, Ngan Z.C.<sup>1</sup>, Naing L., Lee Y., V Gowri & Monteiro A.<sup>†</sup> (2021). Predation favours *Bicyclus anynana* butterflies with fewer forewing eyespots. **Proceedings of the Royal Society: B**, 288(1951): 20202840.
- (7) Bauman A.G.<sup>†</sup>, Hoey, A.S., Dunshea G., Fong J., **Chan I.Z.W.** & Todd P.A. (2021). Fear effects and group size interact to shape herbivory on coral reefs. **Functional Ecology**, 35(9): 1985–1997.
- (6) **Chan I.Z.W.**<sup>†</sup>, Wang W.Y. & Todd P.A. (2021). Facial band colour in the mangrove crab *Parasesarma peninsulare* Shahdadi, Ng & Schubart, 2018 plays a role in mate recognition. **Estuarine, Coastal and Shelf Science**, 248: 106721.
- (5) **Chan I.Z.W.**<sup>1†</sup>, Rafi F.<sup>1</sup> & Monteiro A. (2019). Interacting effects of eyespot number and ultraviolet reflectivity on predation risk in *Bicyclus anynana* (Lepidoptera: Nymphalidae). **Journal of Insect Science**, 19(6): 19.

- (4) Lim A.Y.H.<sup>1</sup>, **Chan I.Z.W.**<sup>1†</sup>, Carrasco L.R. & Todd P.A.<sup>†</sup> (2019). Aposematism in pink warty sea cucumbers: independent effects of chromatic and achromatic cues. **Marine Ecology Progress Series**, 631: 157–164.
- (3) **Chan I.Z.W.**, Stevens M. & Todd P.A.<sup>†</sup> (2019). PAT-GEOM: a software package for the analysis of animal colour pattern. **Methods in Ecology and Evolution**, 10(4): 591–600.
- (2) **Chan I.Z.W.**<sup>†</sup>, Chang J.J.M, Huang D. & Todd P.A. (2019). Colour pattern measurements successfully differentiate two Onchidiidae Rafinesque, 1815 species. **Marine Biodiversity**, 49(4): 1743–1750.
- (1) **Chan I.Z.W.**, Stevens M. & Todd P.A.<sup>†</sup> (2016). Quantifying shell pattern and colour polymorphism in the button snail *Umbonium vestiarium* (Mollusca: Gastropoda: Trochacea) and comparing morph frequencies between two populations using the Mantel test. **Raffles Bulletin of Zoology**, Supplement No. 32: 22–32.

#### SELECTED OTHER PUBLICATIONS & CONFERENCES

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- Aug 2025:** Invited Presenter at NUS AI in Education: Poster Showcase of Teaching Breakthroughs.
- Aug 2025:** Invited Presenter at DBS Teaching Life Workshop.
- Apr 2025:** Invited Speaker at DBS Junior Faculty Promotion meeting. “Gathering data for Teaching Statement Impact Narratives”.
- Aug 2024:** Invited Blog Post at NUS Teaching Connections Magazine. “Should We Encourage Diversity of Opinions in Group Work?”
- Aug 2024:** Spotify Podcast. “Should We Encourage Diversity of Opinions in Group Work?”
- Oct 2023:** Invited Speaker at Empowering Early-Career Female Researchers in Environmental Science.
- Mar–May 2023:** Invited Blog Post Series in ONL231 by Karlstad University, Sweden. “Ian’s Musings—A Blog Series on Open Networked Learning”.

#### GRANTS & FUNDING

**Total funding awarded to date: \$\$\$366,900**

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##### *Research Funding*

- Since 2021: Research Project Funding.** Department of Biological Sciences, NUS. PI of projects. Total of \$18,600.
- 2024: Teaching Enhancement Grant.** NUS Centre for Teaching, Learning and Tech. Co-PI. Awarded \$6000.
- 2020: Science Research Programme.** Singapore Ministry of Education. PI of projects. Awarded S\$2,000.
- 2015–2018: Academic Research Fund Tier 1 Grant.** Singapore Ministry of Education. PhD student, co-writer of grant proposal (PI: Prof Peter A. Todd). Awarded S\$128,800.
- 2014–2018: President’s Graduate Fellow.** NUS. Awarded S\$168,000.

##### *Science-related Funding*

- 2021–2025: Biological Science Graduate Congress Funding.** National Youth Council, SI Biol and various organisations. Awarded \$41,000.
- 2024: Conference Travel Funding to Asian Conference of Education.** NUS. \$3,500.

#### SELECTED AWARDS

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- 2025: Annual Teaching Excellence Award.** NUS.
- 2023, 2024 & 2025: Faculty Teaching Excellence Award.** Faculty of Science, NUS.
- 2024: Faculty Award for Mentorship Excellence.** Faculty of Science, NUS.
- 2023: geNiUSchannel Competition VBlog Award.** NUS.
- 2018: Best Oral Presentation.** 23<sup>rd</sup> Biological Sciences Graduate Congress, Thailand.
- 2014: Best Oral Presentation.** 19<sup>th</sup> Biological Sciences Graduate Congress, Singapore.

#### LEADERSHIP & SERVICE

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- Since 2023: Academic Advisor.** DBS Graduate Students’ Society, NUS.
- Since 2022: Co-Chairperson.** Student Life Committee, DBS, NUS.
- Since 2021: Academic Advisor.** Life Sciences Society, NUS.
- Since 2021: Committee Member.** MSc of Biodiversity Conservation and Sustainability committee, DBS, NUS.
- 2017: Chairman of Organising Committee.** 22<sup>nd</sup> Biological Sciences Graduate Congress, NUS. 200+ pax.
- 2016–2017: President.** DBS Graduate Students’ Society, NUS.