

Vikram Singh
Oceans Graduate School
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Biography

I am a seasoned geotechnical engineer with a background in both research and industry, specialising in offshore engineering. My work focuses specifically on the geotechnical aspects of offshore energy projects. Currently, my research at the Centre for Offshore Foundation Systems is centered on advancing geotechnical design tools and methodologies to reduce conservatism in anchor design for floating offshore wind turbines, ultimately making them more economically viable.

With extensive experience in numerical modelling of offshore engineering problems, particularly within the realm of geotechnical considerations, I have contributed significantly to the development and integration of constitutive models for sensitive fine-grained soils into commercial finite element codes. Additionally, I possess specialised skills in laboratory soil characterisation using cutting-edge techniques such as advanced soil element analysis and physical model testing.

My professional interests revolve around development of innovative and pragmatic design solutions for affordable and clean offshore energy infrastructure, achieved through robust collaborations between academia and industry.

Qualifications

Offshore geotechnical engineering, PhD, Unlocking the changing strength of fine-grained soils in numerical analyses, The University of Western Australia

24 Oct 2017 → 18 Mar 2022

Award Date: 28 Jul 2022

Geotechnical Engineering, Master of Technology, Numerical modelling of strip and plate anchor behaviour in clay, Indian Institute of Technology Bombay

Jul 2014 → Jul 2016

Award Date: 13 Aug 2016

Civil Engineering, Bachelor of Technology, Utilisation of Kota stone slurry in concrete as a cement replacing material, Rajasthan Technical University

2010 → 2014

Award Date: 28 Feb 2015

Employment

Research Fellow

Oceans Graduate School

5 Mar 2024 → present

Geotechnical Engineer

Norwegian Geotechnical Institute

Perth, Norway

1 Mar 2022 → present

Lecturer

MNIT Jaipur, Malaviya National Institute of Technology Jaipur, Dept Civil Engn

Jaipur, India

9 Jan 2017 → 30 May 2017

Research outputs

Calibration of strain-softening constitutive model parameters from full-field deformation measurements

Singh, V., Stanier, S., Bienen, B. & Randolph, M. F., Jun 2023, In: Canadian Geotechnical Journal. 60, 6, p. 817-833 17 p.

Characterisation of interface friction strain-rate dependency of soft sediments at low stresses using a ring penetrometer
Singh, V., Mohr, H., Stanier, S., Bienen, B. & Randolph, M. F., Jan 2023, (E-pub ahead of print) In: Geotechnique. 16 p.

A viscoplastic recoverable sensitivity model for fine-grained soils

Singh, V., Stanier, S., Bienen, B. & Randolph, M. F., Jul 2022, In: Computers and Geotechnics. 147, 104725.

Unlocking the changing strength of fine-grained soils in numerical analyses

Singh, V., 2022, (Unpublished)

Modelling the behaviour of sensitive clays experiencing large deformations using non-local regularisation techniques

Singh, V., Stanier, S., Bienen, B. & Randolph, M. F., May 2021, In: Computers and Geotechnics. 133, 104025.

Elastoplastic consolidation above and beneath strip anchors under uplift forces

Singh, V. & Chatterjee, S., 4 Jul 2018, In: Marine Georesources and Geotechnology. 36, 5, p. 505-514 10 p.

Generalized Design Approach for Inclined Strip Anchors in Clay

Singh, V., Maitra, S. & Chatterjee, S., 1 Jun 2017, In: International Journal of Geomechanics. 17, 6, p. 1-15 15 p., 04016148.

Engagement/activities

New tools and measurement technologies

Vikram Singh (Speaker)

17 Nov 2021

Australian Geotechnical Webinar Series Seminar

Vikram Singh (Speaker)

21 May 2021

Society for Underwater Technology, Offshore Site Investigations and Geotechnics (Perth) Subcommittee (External organisation)

Vikram Singh (Member)

2021 → ...

Mozambique Development: RIGSS Laboratory Testing Report

Vikram Singh (Consultant)

2020 → ...

Browse Development: RIGSS Laboratory Testing Report

Vikram Singh (Consultant)

2019

Scarborough Development: RIGSS Laboratory Testing Report

Vikram Singh (Consultant)

2019 → ...

Marine Georesources and Geotechnology (Journal)

Vikram Singh (Reviewer)

2018 → ...

Prizes/awards

Overseas Research Grant

Singh, Vikram (Recipient), 2019

Ad Hoc Top Up Scholarship

Singh, Vikram (Recipient), 2017

Scholarship for International Research Fees

Singh, Vikram (Recipient), 2017

University Postgraduate Award

Singh, Vikram (Recipient), 2017

MHRD GATE Scholarship

Singh, Vikram (Recipient), 2014

University College of Engineering Kota Topper - Graduate Aptitude Test in Engineering 2014

Singh, Vikram (Recipient), 2014