

V. S. OZGUR KIRCA

CURRICULUM VITAE
AND LIST OF PUBLICATIONS

Updated August 11th, 2026

Curriculum Vitae and List of Publications of V. S. Ozgur Kirca

Contents

Contents	2
Short Biography of Ozgur Kirca	3
Personal Information	4
Professional Experience	4
Education	4
Research Subjects of Interest	6
Professional skills	6
Grants and Awards	6
Professional Memberships	6
Membership in Committees of Academic Meetings	7
International Research Projects	8
National Research Projects	8
Courses Instructed	9
Undergraduate Courses	9
Graduate Courses	9
Special Courses	10
Supervised Graduate Theses	10
Academic Editorship/Review Experience	11
Publications	14
A. Liquefaction in marine soils	14
B. Design and Assessment of Coastal/Offshore Structures	18
C. Turbulence, Sediment Transport, and Scour	20
D. Marine and Fluvial Hydrodynamics	24
E. Physical Hydrology	26
F. Miscellaneous	28
Consultancy for the Industry: Physical Modelling Projects	30
Consultancy for the Industry: Design, Analysis and Numerical Modelling Projects	32

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Short Biography of Ozgur Kirca

V.S. Ozgur Kirca is a Professor of Hydraulics and Coastal Engineering at Istanbul Technical University, Department of Civil Engineering.

He has authored and co-authored over 120 scientific papers, and has been involved in many international and national research programs, including projects under EU-FP7, EU-Horizon 2020, and EU-Horizon programmes. He worked as a post-doctoral researcher in Technical University of Denmark (2009-2011). His fields of expertise cover seabed-flow-structure interaction, turbulent processes, sediment transport and morphodynamics, physical and numerical modelling of coastal/hydraulic processes, design and assessment of coastal protection structures, statistical and spectral wave analysis. He received “2014’s Outstanding Reviewer Award” from ASCE Journal of Waterway, Port, Coastal, and Ocean Engineering.

Ozgur Kirca has been actively involved in consulting for the industry for over 25 years in different aspects of Coastal, Offshore and Hydraulic Engineering. He has done consultancy work in projects in many countries including Azerbaijan, Belgium, Cyprus, France, Germany, Georgia, Jordan, Libya, Namibia, the Netherlands, Pakistan, Oman, Saudi Arabia, Taiwan, Turkey, and Turkmenistan.

Personal Information

Full Name	Veysel Şadan Özgür Kırca
Date of Birth	21 October, 1977
Nationality	Turkish
Profession	Civil Engineer, Hydraulics/Coastal Engineer (Ph.D.)
Present Positions	Professor in <i>Istanbul Technical University, Dept. of Civil Engineering.</i> (https://akademi.itu.edu.tr/en/kircave/) Managing Director , <i>BM SUMER Consultancy & Research.</i> (https://bmsumer.com)

Professional Experience

2025 - to date	Director of Water and Marine Sciences and Technology Research Center , <i>I.T.U. Rectorate</i> , Istanbul.
2025 - to date	Head of Coastal Sciences and Engineering Department , <i>I.T.U. Graduate School</i> , Istanbul.
2023 - to date	Co-director of Hydraulics Lab , <i>I.T.U. Faculty of Civil Engineering</i> , Istanbul.
2022 - to date	Professor , <i>I.T.U. Department of Civil Engineering</i> , Istanbul.
2016 - to date	Co-founder , <i>BM SUMER Consultancy & Research</i> , Istanbul.
2013 - 2025	Consultant for Marine Structures , <i>ECAP Engineering and Consultancy (STFA Group)</i> , Istanbul.
2014 - 2022	Associate Professor , <i>I.T.U. Department of Civil Engineering</i> , Istanbul.
2010 - 2014	Assistant Professor , <i>I.T.U. Department of Civil Engineering</i> , Istanbul.
2009 - 2011	Post-doctoral Research Fellow , <i>DTU Dept. of Mechanical Eng'g. Coastal, Maritime and Structural Eng'g Sec.</i> , Lyngby, Denmark.
2002 - 2009	Research/Teaching Assistant , <i>I.T.U. Department of Civil Engineering</i> , Istanbul.
2002	Civil Engineer/Inspector , <i>Halcrow-Dolsar JV. TERRA-1 SBY1 Project</i> , Yalova, Turkey.
2000 - 2001	Civil Engineer , <i>VINSAN Construction Co.</i> , Istanbul & Ankara.

Education

2003–2008	Ph.D. in Coastal Engineering , <i>Istanbul Technical University, Turkey.</i> (PhD Thesis, <i>Effect of Frontface Configuration on the Performance of Vertical Faced Coastal Structures</i>)
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- 2000–2003 **M.Sc. in Hydraulic Engineering**, *Istanbul Technical University*, Turkey.
(MSc Thesis, *Investigation of Near Shore Behaviours of Long Waves*)
- 1995–2000 **B.Sc. in Civil Engineering**, *Middle East Technical University*, Ankara, Turkey.

Research Subjects of Interest

- Seabed-Flow-Structure Interaction
- Liquefaction Around Marine Structures
- Scour/Erosion Around Hydraulic/Marine Structures
- Bottom-fixed and Floating Offshore Wind Structures
- Turbulent Processes
- Sediment Transport
- Flow-Vegetation Interaction
- Coastal, Marine and Hydraulic Structures
- Marine Renewable Energy
- Physical Hydrology

Professional skills

Computer Skills: MATLAB, R, Octave GNU, Mathematica, Mapple, MathCad, Fortran, C++, L^AT_EX, LyX, AutoCAD, Surfer, Q-GIS, miscellaneous data acquisition, logging and analysis software.

Modelling Tools: Numerical hydrodynamic models, Hydro-morphodynamic and transport models, DNS modelling, RANS Modelling of 2D-3D turbulent flows, Spectral wave transformation models, Flood models.

Instruments: LDA, PIV, Laser Sheet, CTA, ADV, ADCP, Resistance type wave probes, Pressure transducers, Thermocouples, Hydrophones and related interfaces, Directional wave buoys, CTD probes and related equipment.

Grants and Awards

- Istanbul Technical University Academic Performance and Publication Award, 2026.
- Istanbul Technical University Academic Performance Award, 2025.
- Istanbul Technical University Academic Performance and Publication Award, 2024.
- Istanbul Technical University Academic Performance Award, 2023.
- 2014's Outstanding Reviewer for ASCE Journal of Waterway, Port, Coastal, and Ocean Engineering, 2015.
- TÜBİTAK-2219 Post-doctoral Research Grant, 2009 (Scientific and Technological Research Council of Turkey).

Professional Memberships

- Member of American Society of Civil Engineers (ASCE)
- Member of Coasts, Oceans, Ports, and Rivers Institute of ASCE (COPRI)
- Member of International Society of Offshore and Polar Engineers (ISOPE)
- Member of Turkish Chamber of Civil Engineers (IMO)

Membership in Committees of Academic Meetings

- Member of the International Coastal Engineering Committee of International Symposium on Offshore and Polar Engineering (ISOPE, <http://www.isope.org/>):
ISOPE 2016-Rhodes, Greece (26 June-2 July, 2016);
ISOPE 2017-San Fransisco, USA (June 25-30, 2017);
ISOPE 2018-Sapporo, Japan (June 10-15, 2018);
ISOPE 2019-Honolulu, USA (June 16-21, 2019);
ISOPE 2020-Shangai, China (June 14-19, 2020);
ISOPE 2021-Rhodes, Greece (June 20-25, 2021);
ISOPE 2022-Shangai, China (June 6-10, 2022);
ISOPE 2023-Ottawa, Canada (June 19-23, 2023);
ISOPE 2024-Rhodes, Greece (June 16-21, 2024);
ISOPE 2025-Seoul, Korea (June 1-6, 2025);
ISOPE 2026-Orlando, USA (May 31-June 5, 2026)
ISOPE PACOMS 2026-Shangai, China (October 18-21, 2026).
- Member of the Organizing and Scientific Committee of 11th National Symposium on Coastal Engineering, 8-10 October, 2026, Mugla.
- Co-chair of the 10th National Symposium on Coastal Engineering, 16-17 November, 2023, Izmir.
- Member of the Local Organizing Committee of 14th International Hydroscience and Engineering, ICHE 2021, 26-27 May, 2022, Cesme, Turkey. (<http://www.iche2020.org/>)
- Member of the Local Organizing Committee of 35th International Conference on Coastal Engineering, ICCE 2016, 17-22 July, 2016, Istanbul. (<http://www.icce2016.com/>)
- Member of the Organizing Committee of 3rd European Offshore Mechanics Symposium EUROMS, 25-27 June, 2012, Istanbul. (http://www.isope.org/call4papers/2012/EUROMS2012_Call_for_Audiences.pdf)
- Member of the Organizing and Scientific Committee of 8th National Symposium on Coastal Engineering, 7-9 November, 2014, Istanbul.

- Member of the Scientific Committee of 7th National Symposium on Coastal Engineering, 21-23 November, 2011, Trabzon.
- Member of the Organising Committee of 4th National Congress on Hydrology, 21-24 June, 2004, Istanbul.

International Research Projects

- EU-Horizon Project “INFI⁴NiTY: Integrated Designs for Future Floating Offshore Wind Farm Technology ” under the call CINEA-HORIZON-CL5-2023-D3-01. Coordinator: Nils Goseberg, 2024-2027 (<https://nulimas.info>). (O. Kirca is the project director in BM SUMER.)
- EU-Horizon 2020 ERA-NET Cofund Project “NuLIMAS: Numerical Modelling of Liquefaction Around Marine Structures” Coordinator: Nils Goseberg, 2020-2023 (<https://nulimas.info>). (O. Kirca is the director of the project in Türkiye with the Project No. TEYDEB-1509/9190068.)
- EU 7th Framework Projects “MERMAID: Innovative Multipurpose Offshore Platforms: Planning, Design and Operation” Coordinator: Eric Damgaard Christensen, 2012-2016 (<http://www.mermaidproject.eu>) (O. KIRCA is the person in charge of scientific and technical/technological aspects in this project in the ITU team).
- EU-Black Sea Basin Collaboration Program, “SciNetNatHazPrev: A Scientific Network on Earthquake, Landslide and Flood Hazard Prevention”. Coordinator: Kontantinos Papatheodorou, 2014-2016 (<http://www.scinetnathaz.net/>).
- “Seabed Windfarm Interaction”, Coordinator: B. Mutlu Sumer, 2008-2012. Danish Strategic Research Funding Agency (O. Kirca took part in the project as researcher between 04.2010-04.2011)(<http://sbwi.dhigroup.com/>).

National Research Projects

- Qualitative and Quantitative Investigation of Laminar-to-Turbulent Transition in Steady and Unsteady Boundary Layers (2022-2025), TUBITAK (The Scientific & Technological Research Council of Turkey), Project No: 122M024, **Coordinator:** V. Ş. Ö. Kirca.
- Wave-induced Liquefaction Around Marine Structures. Development of Apps for Smart Devices (2018-2020), TUBITAK (The Scientific & Technological Research Council of Turkey), Project No: 7170678, **Coordinator:** V. Ş. Ö. Kirca.

- Investigation of Interaction Between Unsteady Flow and Bridge Piers with Different Cross-Sectional Shapes (2018-2020), TUBITAK (The Scientific & Technological Research Council of Turkey), Project No: 117M969, **Coordinator:** V. Ş. Ö. Kirca.
- Experimental Investigation of Interaction of Cylinder Arrays with Current and Waves (2012-2015), ITU BAP –Istanbul Technical University Scientific Research Project, **Coordinator:** V. Ş. Ö. Kirca.
- Temporal Variation of Hydraulic Characteristics in the Rise and Falling Stages of a Flood Hydrograph (2012-2015), ITU BAP –Istanbul Technical University Scientific Research Project.
- Assessment of General Characteristics of Filyos Creek Basin Using Satellite Images, Field Measurements, DEM and Flow Models (2005-2007), TUBITAK (The Scientific & Technological Research Council of Turkey), Project No: 104Y296, 2007.
- Establishment of a geographical information system on coastal areas under possible earthquake risk (1999-2002), TUBITAK (The Scientific & Technological Research Council of Turkey), Project No: 100Y085, 2002.
- Determination of coastal areas under risk and definition of required preventive measures in case of possible earthquake in Marmara Region (2000-2002), TUBITAK (The Scientific & Technological Research Council of Turkey), Project No: 100Y086, 2002.

Courses Instructed

Undergraduate Courses

- Fluid Mechanics
- Hydraulic Engineering/Hydraulics
- Coastal and Harbour Engineering
- Probability and Statistics
- Water Supply and Environmental Sanitation
- Water Resources
- Engineering Hydrology

Graduate Courses

- Coastal Sediment Transport
- Turbulence Theory
- Wave Climatology
- Advanced Topics in Coastal Engineering

- Advanced Fluid Mechanics
- Marine Structures
- Flow-Structure-Bed Interactions in Coastal Structures
- Hydraulics of Unsteady Flows
- Project Cycle Management

Special Courses

- Liquefaction Around Marine Structures
(Advanced short course on Liquefaction Around Marine Structures, Nov. 30-Dec. 1, 2020, organized by BM SUMER Consultancy & Research for the NuLIMAS Project participants.)
- Liquefaction Around Marine Structures
(Advanced short course on Liquefaction Around Marine Structures, ITU Teknokent, Istanbul, Turkey, September 21-22, 2017, organized by BM SUMER Consultancy & Research.)
- Scour Around Marine Structures
(Advanced short course on Scour Around Marine Structures, ITU Teknokent, Istanbul, Turkey, September 20-21, 2018, jointly organized by DHI Water & Environment and BM SUMER Consultancy & Research.)
- Modelling Coastal Morphodynamics
- Performance Based Design of Coastal Structures
- Physical Modelling of Hydraulic, Coastal and Marine Structures

Supervised Graduate Theses

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|---------------------------|---|
| Selman Baysal | “Numerical Investigation of Laminar-to-turbulent Transition in Oscillatory Boundary Layers”, Supervised Ph.D. Thesis, ITU, 2025. |
| Efe Çiltas | “The Influence of Hydro-meteorological Factors on the Bosphorus Flow”, Supervised MSc. Thesis, ITU, 2025. |
| Dicle Narin
Korkmaz | “Investigating Nonstationary Characteristics of Long-term and Extreme Long-term Metocean Statistic”, Supervised MSc. Thesis, ITU, 2025. |
| Mert Angin | “Numerical Modeling of Wave-induced Liquefaction Around a Gravity-based Structure”, Supervised MSc. Thesis, ITU, 2023. |
| Selahattin
Bayram | “Hydrodynamics of Stratified Currents, Mathematical Modeling of Current and Mixture Parameters”, Supervised MSc. Thesis, ITU, 2022. |
| Selahattin
Utku Yilmaz | “Numerical modelling of wave induced soil liquefaction around buried pipelines and cables”, Supervised MSc. Thesis, ITU, 2022. |

- Mehrnoush Kohandel “*Experimental Study on Interaction of Unsteady Flow With Bridge Piers with Different Cross Sections*”, Supervised Ph.D. Thesis, ITU, 2021.
- Ömer Sarı “*Reliability-Based Analysis of Inception of Motion of Bed Sediment*”, Supervised MSc. Thesis, ITU, 2020.
- Rıza Evren Kılçı “*Investigation of Novel Methods for the Foundation Design of Coastal Structures Placed on Embankments*”, Supervised Ph.D. Thesis, ITU, 2019.
- Giray Çıvık “*Numerical Modelling of Earthquake-Induced Seabed Liquefaction*”, Supervised MSc. Thesis, ITU, 2019.
- Berrak Doğan “*Investigation of Scour and Backfilling Mechanism Around a Single Slender Pile in Steady Current and Waves*”, Supervised MSc. Thesis, ITU, 2019.
- Nazlı Çiçek Söylemez “*Effect of Channel Cross-sectional Shape on the Initiation of Motion and Bed Load Discharge*”, Supervised MSc. Thesis, ITU, 2019.
- Selman Baysal “*Sedimentation Analysis in Navigational Channels and a Simplified Model for Practitioner*”, Supervised MSc. Thesis, ITU, 2018.
- Ece Ünsal Karakuş “*Investigation of Heavy Water Discharges via Numerical Modelling*”, Supervised MSc. Thesis, ITU, 2018.
- İpek Kutlu “*A New Method for Calculation of Wave Forces on Exposed Marine Structures with Group Piles*”, Supervised MSc. Thesis, ITU, 2018.
- Seyedmahdi Saghebian “*Investigation of Dune Bedforms and Their Influence on Hydraulic Characteristics of Open Channel Flows*”, Co-supervised Ph.D. Thesis, University of Tabriz, 2018.
- Filippo Favero “*Experimental Investigation of Current Interactions with Cylinder Arrays*”, Co-supervised MSc Thesis, University of Trento (Universita Degli Studi di Trento), 2015.
- M. Buğra Baykuş “*The Influence of Unsteadiness Degree on Hydraulic Characteristics in Free Surface Flow via Numerical Modeling*”, Supervised MSc Thesis, ITU, 2015.
- Selçuk Demirbaş “*Longitudinal Dispersion of Heavy Particles in a Free Surface Flow over Rough Bed*”, Supervised MSc Thesis, ITU, 2015.
- Eren Tandoğan “*Turbulence and Flow Structures at Downstream of a Group of Inclined Cylinders*”, Supervised MSc Thesis, ITU, 2015.
- A. Lami Açıkanal “*Experimental Examination of Performance of an Inclined Thin Plate Type Breakwater*”, Co-supervised MSc Thesis, ITU, 2013.

Academic Editorship/Review Experience

○ Editorship for scientific journals

Associate editor for *Journal of Ocean Engineering and Marine Energy* (2026 - present).

Guest co-editor for *ASCE Journal of Waterway, Port, Coastal, and Ocean Engineering*, of the special issue “[Modelling of Liquefaction Around Marine Structures](#)”.

Guest co-editor for *Fluids*, of the special issue “Hydrodynamics and Sediment Transport in Estuarine and Coastal Environments”.

Guest co-editor for *Journal of Marine Science and Engineering*, of the special issue “[Coastal Geohazard and Offshore Geotechnics](#)”.

○ Reviewer for scientific journals including

Physics of Fluids

Coastal Engineering

ASCE Journal of Waterway, Port, Coastal, and Ocean Engineering

ASCE Journal of Hydraulic Engineering

Ocean Engineering

Journal of Coastal Research

Applied Ocean Research

Nature (Scientific Reports)

Journal of Hydraulic Research

Applied Mathematical Modelling

ICE, Maritime Engineering

ASME Offshore Mech. and Arctic Engineering

ASCE Journal of Engineering Mechanics

International Journal of Ocean and Coastal Engineering

International Journal of Offshore and Polar Engineering

Soil Dynamics and Earthquake Engineering

Engineering Geology

Journal of Ocean Engineering and Marine Energy

Journal of Ocean University of China

Journal of Ocean and Wind Energy

Regional Studies at Marine Science

Geo-Marine Letters

Geomatics, Natural Hazards and Risk

Arabian Journal of Science and Engineering

Teknik Dergi

European Water

○ Reviewer for the book

“*Liquefaction around Marine Structures*” by B. M. Sumer, 2014, World Scientific.

- Reviewer of project proposals for funding bodies including

EU Horizon Europe Project Calls for European Climate Infrastructure and Environment Executive Agency (CINEA)

EU Clean Energy Transition Partnership (CETPartnership)

The Scientific and Technological Research Council of Turkey (TUBITAK)

Istanbul Technical University, Scientific Research Projects Unit

Middle East Technical University, Scientific Research Projects Unit

Yildiz Technical University, Scientific Research Projects Unit

Aydın Adnan Menderes University, Scientific Research Projects Unit

Kırıkkale University, Scientific Research Projects Unit

- Reviewer for international conferences including

International Conference on Coastal Engineering, ICCE (ASCE, COPRI)

International Symposium on Offshore and Polar Engineering (ISOPE)

Pacific/Asia Offshore Mechanics Symposium, PACOMS (ISOPE)

Offshore mechanics and Arctic Engineering Conference (OMAE)

Geotechnical Frontiers (ASCE, G-I)

Publications

A. Liquefaction in marine soils

A.1. Peer-refereed journal papers

- A.1.1. Sumer, B.M., **Kirca, V.S.O.**, Fredsøe, J. (2012) “Experimental validation of a mathematical model for seabed liquefaction in waves”. International Journal of Offshore and Polar Engineering, 22(2), 133-142.
- A.1.2. **Kirca, V.S.O.**, Sumer, B., Fredsøe, J. (2013) “Residual Liquefaction of Seabed Under Standing Waves”. J. Waterway, Port, Coastal, Ocean Eng., 139(6), 489-501.
- A.1.3. **Kirca, V.S.O.** (2013) “Sinking of irregular shape blocks into marine seabed under wave-induced liquefaction”. Coastal Eng., 75, 40-51.
- A.1.4. **Kirca, V.S.O.**, Sumer, B.M., Fredsoe, J. (2014) “Influence of clay content on wave-induced liquefaction”, ASCE J of Waterway, Port, Coastal, and Ocean Eng., 140(6), 04014024/1-11.
- A.1.5. **Kirca, V.S.O.**, Sumer, B.M. (2018) “Sinking failure of drag embedment anchors due to wave-induced seabed liquefaction”. International Journal of Ocean and Coastal Engineering, 1(4), 1850006, DOI: 10.1142/S25298070185000694.
- A.1.6. Jeng, D.-S., Zhang, J., **Kirca, V.S.O.** (2020) “Coastal Geohazard and Offshore Geotechnics”. J. Mar. Sci. Eng. 8(12), 1011. <https://doi.org/10.3390/jmse8121011>.
- A.1.7. Sumer, B.M., **Kirca, V.S.O.**, (2022) “Scour and liquefaction issues for anchors and other subsea structures in floating offshore wind farms: A review”. Water Science and Engineering, 15(1), 3-14.
- A.1.8. Shanmugasundaram, K. R., Rusche, H., Windt, C., **Kirca, V. S. O.**, Sumer, B. M., Goseberg, N. (2022). Towards the Numerical Modelling of Residual Seabed Liquefaction Using OpenFOAM. OpenFOAM® Journal, 2, 94-115.
- A.1.9. Sui, T., **Kirca, V.S.O.**, Sumer, B. M., Carstensen, S., & Fuhrman, D. R. (2022). Wave-induced liquefaction in a silt and seashell mixture. Coastal Engineering, 178, 104215.
- A.1.10. Sui, T., Sumer, B. M., **Kirca, V.S.O.**, Carstensen, S., Zheng, J., & Fuhrman, D. R. (2023). Effect of history of wave exposure on seabed liquefaction. Coastal Engineering, 183, 104307.
- A.1.11. Windt, C., Goseberg, N., Schimmels, S., Kudella, M., Shanmugasundaram, R. K., Rusche, H., Vanjakula, V. K., Majewski, D., Kazimierowicz-Frankowska, K., Pietrzekiewicz, M., **Kirca, V. S. O.**, Sumer, B. M. (2024). Liquefaction Around Marine Structures: Development of a Numerical Modelling Framework in OpenFOAM®. International Journal of Offshore and Polar Engineering, 34(02), 182-190.

- A.1.11. **Kirca, V. S. O.**, Angin M, Sumer, B. M. (2025). Numerical modeling of wave-induced liquefaction around a gravity-based structure. *Frontiers in Built Environment*, 11, 1525046.
- A.1.12. Windt, C., Kudella, M., Schimmels, S., Smyczyński, M., Kazimierowicz-Frankowska, K., **Kirca, V. S. O.**, Sumer, B. M., Adam, F., Vanjakula, V. K., Goseberg, N. (2025). Experimental Modeling and Investigation of Seabed Liquefaction at Large Scale, Part I: Wave–Soil Interaction. *Journal of Waterway, Port, Coastal, and Ocean Engineering*, 151(5), 04025024.
- A.1.13. Windt, C., Kudella, M., Schimmels, S., Smyczyński, M., Kazimierowicz-Frankowska, K., **Kirca, V. S. O.**, Sumer, B. M., Adam, F., Vanjakula, V. K., Goseberg, N. (2025). Experimental Modeling and Investigation of Seabed Liquefaction at Large Scale, Part II: Wave–Structure Interaction. *Journal of Waterway, Port, Coastal, and Ocean Engineering*, 151(5), 04025025.
- A.1.14. Shanmugasundaram, R. K., Rusche, H., Windt, C., **Kirca, V. S. O.**, Sumer, B. M., Goseberg, N. (2025). Numerical Modeling of Wave-Induced Seabed Liquefaction: A Drift-Flux Model for Liquefied Soil. *Journal of Waterway, Port, Coastal, and Ocean Engineering*, 151(6), 04025028.
- A.1.15. Yilmaz, S.U., **Kirca, V. S. O.**, Sumer, B.M., Shanmugasundaram, R., Rusche, H. Windt, C., Goseberg, N. (2026). Liquefaction Around a Buried Pipeline in a Backfilled Trench. *Journal of Waterway, Port, Coastal, and Ocean Engineering*, 152(1), 04025038.
- A.1.16. Vanjakula, V. K., Shanmugasundaram, R. K., Windt, C., Adam, F., Rusche, H., **Kirca, V. S. O.**, Goseberg, N. (2026). Numerical investigation of wave-induced residual liquefaction: Model calibration and experimental validation. *Journal of Waterway, Port, Coastal, and Ocean Engineering*, 152(1), 04025035.
- A.1.17. Windt, C., **Kirca, V. S. O.**, Goseberg, N. (2026). Modeling of Liquefaction Around Marine Structures. *Journal of Waterway, Port, Coastal, and Ocean Engineering*, 152 (2), 02026001.

A.2. Peer-refereed conference papers

- A.2.1. **Kirca, V.S.O.**, Fredsøe, J. and Sumer, B.M. “Wave liquefaction in soils with clay content”, PIANC-COPODEC 8th International Conference on Coastal and Port Eng’g in Developing Countries, 20-24 February, 2012, Madras, India.
- A.2.2. **Kirca, V.S.O.**, Sumer, B.M. and Fredsøe, J. “Residual Liquefaction Under Standing Waves”, 22nd ISOPE Conference, 22-28 June, 2012, Rhodes, Greece.
- A.2.3. **Kirca, V.S.O.**, Sumer, B.M., Fredsoe, J. "Influence of Clay Content on Wave Induced Liquefaction in Waves", 34th ICCE Conference, June 15-20, 2014, Seoul, Korea.

- A.2.4. **Kirca, V.S.O.**, Ulker, M.B.C. "Recent Developments in Wave-Induced Liquefaction", 11th ACE Advances in Civil Eng. Congress, October 21-25, 2014, Istanbul, Turkey.
- A.2.5. **Kirca, V.S.O.** "Sinking Damage of Heavy Structures in the Case of Wave-Induced Liquefaction of Sea Bed", 8th National Conference on Coastal Eng'g (in Turkish), Istanbul, 7-9 November, 2014.
- A.2.6. **Kirca, V.S.O.**, Sumer M. B. "Wave-Induced Liquefaction Damage of Anchor Systems for Permanent Floating Structures", 9th National Conference on Coastal Eng'g (in Turkish), 1-3 November, 2018, Adana, Turkey.
- A.2.7. **Kirca, V.S.O.**, Sumer M. B. "Determination of Wave-Induced Liquefaction Risk for a Two-Layered Seabed", 9th National Conference on Coastal Eng'g (in Turkish), 1-3 November, 2018, Adana, Turkey.
- A.2.8. **Kirca, V.S.O.**, Civak, G., Sumer M. B. "A Novel Modelling Approach For Earthquake-Induced Seabed Liquefaction", 9th National Conference on Coastal Eng'g (in Turkish), 1-3 November, 2018, Adana, Turkey.
- A.2.9. **Kirca, V. S. O.**, Sumer, B. M. "Sinking of Anchors and Other Subsea Structures due to Wave-Induced Seabed Liquefaction". In: Goseberg, Nils; Schlurmann, Torsten (Hg.): Coastal Structures 2019. Karlsruhe: Bundesanstalt für Wasserbau. S. 598-607.
- A.2.10. **Kirca, V. S. O.**, Sumer, B. M. "Mathematical Modelling of Wave-Induced Liquefaction of a Multi-Layered Seabed", MARINE 2021: 9th International Conference on Computational Methods in Marine Engineering, 2-4 June, 2021, Edinburgh, Scotland.
- A.2.11. Windt, C., Goseberg, N. Schimmels, S., Kudella, M., Shanmugasundaram, R. K., Rusche, H., **Kirca, V. S. O.**, Sumer, B. M., Kumar, V., Adam, F., Majewski, D., Kazimierowicz-Frankowska, K., Hrycyna, G. "Numerical Modelling of Liquefaction Around Marine Structures - Progress and Recent Developments", OMAE 2022: 41st International Conference on Ocean, Offshore and Arctic Engineering, June 5-10, 2022, Hamburg, Germany.
- A.2.12. Shanmugasundaram, R. K., Rusche, H., **Kirca, V. S. O.**, Sumer, B. M., Windt, C., Goseberg, N. "Numerical Modelling of Residual Liquefaction in the Subsoil Under a Vibrating Plate", OMAE 2022: 41st International Conference on Ocean, Offshore and Arctic Engineering, June 5-10, 2022, Hamburg, Germany.
- A.2.13. **Kirca, V. S. O.**, Yilmaz, S. U., Sumer, B. M., Shanmugasundaram, R. K., Rusche, H., Windt, C., Goseberg, N. "Numerical Modelling of Wave-induced Liquefaction Around Pipelines and Offshore Cables", OMAE 2022: 41st International Conference on Ocean, Offshore and Arctic Engineering, June 5-10, 2022, Hamburg, Germany.

- A.2.14. Windt, C., Goseberg, N., Schimmels, S., Kudella, M., Shanmugasundaram, R. K., Rusche, H., Vanjakula, V. K., Adam, F., Majewski, D., Kazimierowicz-Frankowska, K., Pietrzkiewicz, M., **Kirca, V. S. O.**, Sumer, B. M. "Development of a numerical model for liquefaction around marine structures." In ISOPE International Ocean and Polar Engineering Conference, pp. ISOPE-I. ISOPE, 2023.
- A.2.15. Windt, C., Shanmugasundaram, R. K., Schimmels, S., Kudella, M., Rusche, H., **Kirca, V. S. O.**, Sumer, B. M., Vanjakula, V. K., Adam, F., Majewski, D., Kazimierowicz-Frankowska, K., Pietrzkiewicz, M., Goseberg, N., "Numerical modelling of liquefaction around marine structures in the OpenFOAM framework", 10th European Conference on Numerical Methods in Geotechnical Engineering (NUMGE2023), 26-28 June, 2023, London, UK.
- A.2.16. Windt, C., **Kirca, V. S. O.**, Sumer, B. M., Schimmels, S., Kudella, M., Rusche, H., Shanmugasundaram, R. K., Vanjakula, V. K., Adam, F., Majewski, D., Kazimierowicz-Frankowska, K., Pietrzkiewicz, M., Goseberg, N. "Severe seabed response around marine structures: Numerical modelling of seabed liquefaction", 11th International Conference on Scour and Erosion (ICSE-11), 17-21 September, 2023, Copenhagen, Denmark.
- A.2.17. Windt, C., Goseberg, N., Schimmels, S., Kudella, M., Shanmugasundaram, R., Rusche, H., Sumer, B. M., **Kirca, V. S. O.**, Yilmaz, S. U., Vanjakula, V. K., Adam, F., Smyczynski, M., Kazimierowicz-Frankowska, K. "Experimental Modelling of Wave-Structure-Soil Interaction of a Floating Offshore Wind Turbine at Large Scale". In International Conference on Offshore Mechanics and Arctic Engineering (OMAE 2024), Vol. 87868, p. V008T10A023. American Society of Mechanical Engineers.

A.3. Invited/keynote lectures

- A.3.1. **Kirca, V.S.O.** (Invited Speaker) "Wave-Induced Liquefaction Risk Around Coastal and Marine Structures", 2nd National Conference on Coastal and Marine Geology (in Turkish), Istanbul, 15-16 October, 2015.
- A.3.2. **Kirca, V.S.O.** (Invited Lecture) "Seabed-Structure Interaction: Liquefaction and Scour around Marine Structures", International Conference on Water, environment and Sustainable Development, Ardabil, Iran, 27-29 September, 2016.

B. Design and Assessment of Coastal/Offshore Structures

B.1. Peer-refereed journal papers

- B.1.1. Yagci, O., **Kirca, V.S.O.**, Kabdasli, M.S., Celik, A.O., Unal, N.E., Aydingakko, A. (2006) "An experimental model application of wavescreen: dynamic pressure, water particle velocity, and wave measurements" *Ocean Engineering*, 33, p. 1299-1321.
- B.1.2. **Kirca, V.S.O.**, Kabdasli, M. S. (2009) "Reduction of non-breaking wave loads on caisson type breakwaters using a modified perforated configuration" *Ocean Engineering*, 36, p. 1316-1331.
- B.1.3. Acanal, L., Loukogeorgaki, E., Yagci, O., **Kirca, V.S.O.**, Akgul, A. (2013) "Performance of an inclined thin plate in wave attenuation", *Journal of Coastal Research*, SI. 65, 141-146.
- B.1.4. Yagci, O., **Kirca, V.S.O.**, Acanal, L. (2014) "Wave attenuation and flow kinematics of on an inclined thin plate acting as an alternative coastal protection structure", *App. Ocean Res.*, 48, 214-226.
- B.1.5. **Kirca, V.S.O.**, Kilci, R.E. (2018). Mechanism of Steady and Unsteady Piping in Coastal and Hydraulic Structures with a Sloped Face. *Water*, 10(12), 1757.
- B.1.6. Aksel, M., Yagci, O., Valyrakis, M., **Kirca, V. S. O.** (2024). Flow Structures around a Sphere Attached to the Bottom of a Prismatic Sloshing Tank: Problem-oriented basic research. *Sustainable Marine Structures*, 42-63.

B.2. Peer-refereed conference papers

- B.2.1. Unal, N.E., Kabdasli, S., Yagci, O., Celik, A.O., **Kirca, V.S.O.**, Aydingakko, A., "Usage of Piled Wavescreen for Wave Attenuation", 5th National Conference on Coastal Eng'g (in Turkish), May 5-7, 2005, Bodrum, Mugla.
- B.2.2. **Kirca, V.S.O.**, Kabdasli, S., Seker, D. Z., Celikoyan, M., Akgul, A., "Experimental Investigation of Displacements for Antifer Protected Caissons", 5th National Conference on Coastal Eng'g (in Turkish), October 25-28, 2007, Izmir.
- B.2.3. **Kirca, V.S.O.**, Kabdasli, M.S., Seker, D.Z., Celikoyan, M. "Stability and energy dissipation of an antifer layer protected caisson", 23rd ISOPE Conference, June 30-July 5 2013, Anchorage, Alaska, USA.
- B.2.4. Yagci, O., **Kirca, V.S.O.**, Acanal, A.L. "Performance of a Thin Inclined Plate Type Coastal Protection Structure", 8th National Conference on Coastal Eng'g (in Turkish), Istanbul, 7-9 November, 2014.
- B.2.5. Mutlu, Ç., **Kirca, V.S.O.**, Kabdasli, S. "The Model Experiments and On-site Application of a Core-Loc™ Breakwater", 8th National Conference on Coastal Eng'g (in Turkish), Istanbul, 7-9 November, 2014.
- B.2.6. **Kirca, V.S.O.**, Caglar, B., Bagci, T., Kilci, R.E., Kabdasli, M.S. "Use of Steel Slag in Rubble-Mound Marine Structures", 3rd International Iron and Steel Symposium, Karabuk, Turkey, 3-5 April, 2017.

- B.2.7. Kilci, E., **Kirca, V.S.O.** "A Modified Piping Criterion for Determination of Effective Filter Thickness under Revetment Slopes", 13th ACE Advances in Civil Eng. Congress, September 12-14, 2018, Izmir, Turkey.
- B.2.8. **Kirca, V. S. O.**, Sumer, B. M., Ghasempour, R., Battal, D. B. "Pressure Distribution Around a Pile Inside Scour Protection", 13th International Conference on Fluvial Hydraulics IAHR (River Flow 2026), June 30–July 4 2026, Thessaloniki, Greece.

C. Turbulence, Sediment Transport, and Scour

C.0. Lecture Notes

- **Kirca, V.S.O.** Lecture Notes on Sediment Transport Outside Surf Zone (in Turkish). Istanbul Technical University, 2013. Downloadable at http://web.itu.edu.tr/kircave/kkmh_ders_notlari.pdf

C.1. Peer-refereed journal papers

- C.1.1. Kabdasli, M. S., **Kirca, V.S.O.**, Aydingakko, A. (2005) “2D numerical modelling of bed profile changes due to tsunami effects on near shore coasts: Kadikoy case study” *Water Sci. and Tech.*, 51(11), 231-238.
- C.1.3. **Kirca, V.S.O.**, Kabdasli, S. (2006) “Bed profile changes due to tsunami effects on near shore coasts: Tuzla case study” *Journal of Coastal Research*, 3, 1484-1487.
- C.1.4. Cokgor S., Kabdasli, S., **Kirca, V.S.O.**, Aydingakko, A., Unal, N.E. (2006) “Stability of armour layer over sand bed in waves/currents: A case study” *Journal of Coastal Research*, 2, 754-758.
- C.1.5. **Kirca, V. S. O.**, Sumer, B. M., Steffensen, M., Jensen, K. L., & Fuhrman, D. R. (2016) “Longitudinal dispersion of heavy particles in an oscillating tunnel and application to wave boundary layers” *Journal of Ocean Engineering and Marine Energy*, 2(1), 59-83.
- C.1.6. Yagci, O., Celik, M.F., Kitsikoudis, V., **Kirca, V.S.O.**, Hodoglu, C., Valyrakis, M., Duran, Z. and Kaya, S. (2016) “Scour patterns around isolated vegetation elements”, *Adv. Water Resour.*, 97, 251–265.
- C.1.7. Kitsikoudis, V., Yagci, O., **Kirca, V. S. O.** and Kellecioglu, D. (2016) “Experimental investigation of channel flow through idealized isolated tree-like vegetation”, *Env. Fluid Mech.*, 16(6), 1283-1308.
- C.1.8. Yagci, O., Yildirim, I., Celik, M.F., Kitsikoudis, V., Duran, Z., **Kirca, V.S.O.** (2017) “Clear water scour around a finite array of cylinders”, *App. Ocean Res.*, 68, 114-129.
- C.1.9. Kitsikoudis, V., **Kirca, V.S.O.**, Yagci, O., Celik, M.F. (2017) “Clear-water scour and flow field alteration around an inclined pile”, *Coast. Eng.*, 129, 59-73.
- C.1.10. Spiliotis, M., Kitsikoudis, V., **Kirca, V. S. O.**, & Hrisanthou, V. (2018). Fuzzy threshold for the initiation of sediment motion. *Applied Soft Computing*, 72, 312-320.
- C.1.11. Roushangar, K., Saghebian, S. M., **Kirca, V. S. O.**, & Ghasempour, R. (2020). Prediction of form roughness coefficient in alluvial channels using efficient hybrid approaches. *Soft Computing*, 24(24), 18531-18543.
- C.1.12. Saghebian, S. M., Roushangar, K., **Kirca, V. S. O.**, & Ghasempour, R. (2020). Modeling total resistance and form resistance of movable bed channels via experimental data and a kernel-based approach. *Journal of Hydroinformatics*, 22(3), 528-540.

- C.1.13. **Kirca, V. S. O.**, Saghebian, S. M., Roushangar, K., & Yagci, O. (2020). Influence of surface roughness of dune bedforms on flow and turbulence characteristics, *International Journal of Sediment Research*, DOI: 10.1016/j.ijsrc.2020.06.003
- C.1.14. Kitsikoudis, V., Yagci, O., **Kirca, V. S. O.** (2020). Experimental analysis of flow and turbulence in the wake of neighboring emergent vegetation patches with different densities. *Environmental Fluid Mechanics*, 20(6), 1417-1439.
- C.1.15. Aksel, M., Yagci, O., **Kirca, V. S. O.**, Erdog, E., & Heidari, N. (2021). A comparative analysis of coherent structures around a pile over rigid-bed and scoured-bottom. *Ocean Engineering*, 226, 108759.
- C.1.16. Gargari, M. K., **Kirca, V. S. O.**, & Yagci, O. (2021). Experimental investigation of gradually-varied unsteady flow passed a circular pile. *Coastal Engineering*, 168, 103926.
- C.1.17. Sumer, B. M., & **Kirca, V. S. O.** (2022). Scour and liquefaction issues for anchors and other subsea structures in floating offshore wind farms: A review. *Water Science and Engineering*, 15(1), 3-14.
- C.1.18. Erdog, E., Yagci, O., & **Kirca, V. S. O.** (2022). Hysterical effects in flow structure behind a finite array of cylinders under gradually varying unsteady flow conditions. *Journal of Ocean Engineering and Marine Energy*, 1-21.
- C.1.19. Yagci, O., **Kirca, V. S. O.**, Kitsikoudis, V., Wilson, C. A. M. E., Furkan Celik, M., & Sertkan, C. (2024). Experimental study on influence of different patterns of an emergent vegetation patch on the flow field and scour/deposition processes in the wake region. *Water Resources Research*, 60, e2023WR034978.
- C.1.20. Gargari, M. K., **Kirca, V. S. O.**, & Yagci, O. (2025). Influence of length-to-width ratio on flow and turbulence in the wake of piles with elongated cross-sections. *Journal of Hydraulic Engineering, ASCE*, 151(5), 04025026.
- C.1.21. Baysal, S., **Kirca, V. S. O.** (2025). Numerical Investigation of Transitional Oscillatory Boundary Layers: Turbulence Quantities. *Fluids*, 10(6), 143.

C.2. Peer-refereed conference papers

- C.2.1. Cokgor, S., **Kirca, V.S.O.**, Kucukali, S., Erturk, A., Dikmen, M., Simsek, M. "Variation of Turbulence Intensities in Emergent Vegetation", 12th International Symposium on Environmental Pollution, Antalya, Turkey, (2003).
- C.2.2. Kabdasli, S., Gunbak, A.R., Cokgor, S., **Kirca, V.S.O.**, Aydingakko, A., Unal, N.E., "Investigation of Revetment Stability Under Flow and Wave Effect", 5th National Conference on Coastal Eng'g (in Turkish), May 5-7, 2005, Bodrum, Mugla.

- C.2.3. Bağcı, T., **Kirca, V.S.O.**, Çokgör, S., Kabdaşlı, M.S. "Physical Modelling of Foaming Problem in a Cooling Water Discharge System ", 7th National Conference on Coastal Eng'g (in Turkish), Trabzon, 21-23 November, 2011.
- C.2.4. Valyrakis, M., Yagci, O., Kitsikoudis, V., **Kirca, V.S.O.** & Koursari, E."Experimental investigation of the modification of the flow field, past instream vegetation elements, for distinct bedsurface roughness", 36th IAHR World Congress, April 2015, The Hague, Netherlands.
- C.2.5. Yagci, O., Kitsikoudis, V., Celik, M. F., Hodoglu, C., **Kirca, V.S.O.** "The Variation of Local Scour Pattern Around Representative Natural Vegetation Elements", 36th IAHR World Congress, (Vol. 17, p. 13566), April 2015, The Hague, Netherlands.
- C.2.6. **Kirca, V.S.O.**, M. B. Baykuş, E. Erdog, O. Yağcı, "The Effect of Unsteadiness Degree of Hydrographs on Flow Characteristics", 8th National Hydrology Congress (in Turkish), Sanliurfa, 8-10 October, 2015.
- C.2.7. Majd, S.F., **Kirca, V.S.O.**, O. Yağcı, Kitsikoudis, V., Lentsiou, L.N. " Flow and Turbulence around an Inclined Pile", 26th ISOPE Conference, June 26-July 2 2016, Rhodes, Greece.
- C.2.8. Kitsikoudis, V., O. Yağcı, **Kirca, V.S.O.**, Kellecioglu, D. " Flow Field Alteration due to Permeability and Subcanopy Flow for Emergent Vegetation", 26th ISOPE Conference, June 26-July 2 2016, Rhodes, Greece.
- C.2.9. **Kirca, V.S.O.**, Sumer, B.M., Steffensen, M., Jensen, K.L., Fuhrman, D.R. "Longitudinal Dispersion of Sediments in Wave Boundary Layers", 35th International Conference on Coastal Engineering, 17-20 November, 2016, Antalya.
- C.2.10. **Kirca, V.S.O.**, Demirbaş, S., Kabdaşlı, M.S. "Longitudinal Dispersion of Heavy Particles in Open Channel Flow over Rough Bed", 9th National Hydrology Congress (in Turkish), 4-6 October, 2017, Diyarbakır.
- C.2.11. Baysal, S., **Kirca, V.S.O.** "Sedimentation Analysis in Navigational Channels and a Simple Model for Practitioners", 9th National Conference on Coastal Eng'g (in Turkish), 1-3 November, 2018, Adana, Turkey.
- C.2.12. Kohandel Gargari, M., **Kirca, V. S. O.**, Dolaman, U., Yagci, O. (2019). "Effect of Unsteadiness on the Flow around a Circular Pile." In: Goseberg, Nils; Schlurmann, Torsten (Hg.): Coastal Structures 2019. Karlsruhe: Bundesanstalt für Wasserbau. S. , 567-576.
- C.2.13. **Kirca, V. S. O.**, Ghasempour, R., Sumer, B. M. (2023). "Scour Around and Sinking of Subsea Structures Under Current and Waves." 11th International Conference on Scour and Erosion (ICSE-11), 17-21 September, 2023, Copenhagen, Denmark.
- C.2.14. **Kirca, V. S. O.**, Sumer, B. M. (2023). Time Variation of Scour Around a Single Pile Under Continuously-Changing Metocean Conditions: A Mathematical Model." 11th International Conference on Scour and Erosion (ICSE-11), 17-21 September, 2023, Copenhagen, Denmark.

- C.2.15. **Kirca, V. S. O.**, Ghasempour, R., & Sumer, B. M. (2024). Scour Around and Sinking of Subsea Structures Under Combined Waves and Current. International Ocean and Polar Engineering Conference (ISOPE 2024), ISOPE-I-24-175, 16-21 June, 2024, Rhodes, Greece.
- C.2.16. Ghasempour, R., **Kirca, V. S. O.**, & Sumer, B. M. (2024). Scour Around and Sinking of Subsea Structures Exposed to Current and Waves. 38th International Conference on Coastal Engineering (ICCE 2024), 8-14 September, 2024, Rome, Italy.
- C.2.17. Windt, C., Goseberg, N., Schimmels, S., Rusche, H., Adam, F., Swidzinski, W., Kazimierowicz-Frankowska, K., **Kirca, V.S.O.**, Sumer, B. M., Petersen, T.U., Rojas, N., Penalba, M., Bracco, G., Giorgi, G., Troch, P., Streicher, M., Halvorsen-Weare, E., Braaten, H., Christensen, E.D., Sorensen, J.N. (2024). Integrated designs for future floating offshore wind farm technology - Towards nature inclusive innovations. RENEW 2024. 6th International Conference on Renewable Energies Offshore. 19-21 November 2024, Lisbon, Portugal.
- C.2.18. Baysal, S., **Kirca, V.S.O.**, Valyrakis, M. (2025). Reliability-Based Analysis of Initiation of Sediment Motion on Movable Bed. EGU25. EGU General Assembly, Poster presentation in session “Measuring and modelling geomorphic processes across scales”. No. EGU25-8745, 27 April–2 May 2025, Vienna, Austria.
- C.2.19. Baysal, S., **Kirca, V.S.O.**, Valyrakis, M. (2026). Reliability-based Analysis of Bed Load Transport Under Turbulent Flow Conditions. 13th International Conference on Fluvial Hydraulics IAHR (River Flow 2026), June 30–July 4 2026, Thessaloniki, Greece.

D. Marine and Fluvial Hydrodynamics

D.1. Peer-refereed journal papers

- D.1.1. **Kirca, V.S.O.**, Kabdasli, S., Cokgor S., Aydingakko, A., Unal, N.E. (2006) “3D physical modelling of thermal discharge: A case study” Journal of Coastal Research, 3, 1775-1779.
- D.1.2. Yagci, O. and **Kirca, V.S.O.** (2010) “Comments on “Flow resistance of one-line emergent vegetation along the floodplain edge of a compound open channel” by Xin Sun, Koji Shiono”, Adv. Water Resour., 33, 947–948.
- D.1.3. Koşucu, M. M., Demirel, M. C., **Kirca, V. S. O.**, Özger, M. (2019). Hydrodynamic and Hydrographic Modeling of Istanbul Strait. Processes, 7(10), 710.
- D.1.4. Orhon, D., Sözen, S., **Kirca, V. S. O.**, Duba, S., Mermutlu, R., & Sumer, B. M. (2021). Pollutant dynamics between The Black Sea and The Marmara Sea: Basis for wastewater management strategy. Marine Pollution Bulletin, 168, 112388.
- D.1.5. Sözen, S., Orhon, D., **Kirca, V. S. O.**, & Sumer, B. M. (2023). Impact of mixing on water quality in the Bosphorus–Implications on sustainable management of wastewater marine discharges. Marine Pollution Bulletin, 189, 114799.
- D.1.6. Sumer, B. M., **Kirca, V. S. O.** (2025). Flow through the Bosphorus. Journal of Waterway, Port, Coastal, and Ocean Engineering, ASCE, vol. 151, No.3, 04025010.
- D.1.7. **Kirca, V.S.O.**, Sumer, B. M. (2025). Potential impact of Canal Istanbul on Flow through the Bosphorus. Journal of Waterway, Port, Coastal, and Ocean Engineering, ASCE, vol. 151, No.3, 04025008.
- D.1.8. Güçlü, Y. S., Baysal, S., & Kirca, V. Ş. Ö. (2025). Izmit Bay Recent Extreme Wave Climate Analysis and Nearshore Wave Transformation Modelling (in Turkish), Turkish Journal of Engineering Research and Education , 4(1), 102-114.
- D.1.9. Sumer, B. M., **Kirca, V. S. O.** (2025). Flow through the Golden-Horn estuary. Journal of Waterway, Port, Coastal, and Ocean Engineering, ASCE, vol. 151, No.4, 04025013.
- D.1.10. **Kirca, V.S.O.**, Sumer, B. M. (2025). Retention time in the Golden-Horn estuary. Journal of Waterway, Port, Coastal, and Ocean Engineering, ASCE, vol. 151, No.4, 04025016.
- D.1.11. Sözen, S., **Kirca, V.S.O.**, Basa, S., Orhon, D. (2025). Scientific appraisal of water quality in Golden Horn based on hydrodynamic modeling – Adverse effect of treated wastewater discharge. Journal of Waterway, Port, Coastal, and Ocean Engineering, ASCE, Vo. 151, No. 5, 04025023.

D.2. Peer-refereed conference papers

- D.2.1. Kabdasli, S., Seker, D. Z., Ulusoy, I., **Kirca, V.S.O.**, Aydingakko, A., “Integrated Usage of Hydraulic Models and GIS for the estimation of Tsunami Effects on near Shore”, 5th National Conference on Earthquake Engineering (in Turkish), May 26-30, 2003, Istanbul.
- D.2.2. Kabdaşlı, M.S., **Kirca, V.S.O.** “The Effects of Marine Grass on Coastal Zones and Coastal Structures: Yayla Case Study”, 7th National Conference of Turkish Coastal Zones (in Turkish), Ankara, 27-30 May, 2008.
- D.2.3. **Kirca, V.S.O.**, Bağcı, T., Günbak, A.R., Kabdaşlı, M.S. “Investigation of Hydrodynamic Balance in an Estuarine-Delta System by use of Different Numerical Models”, 7th National Conference on Coastal Eng’g (in Turkish), Trabzon, 21-23 November, 2011.

E. Physical Hydrology

E.1. Peer-refereed journal papers

- E.1.1. Aksoy, H., **Kirca, V. S. O.**, Burgan, H. I., & Kellecioglu, D. (2016). “Hydrological and hydraulic models for determination of flood-prone and flood inundation areas”, Proc. IAHS, 373, 137-141.
- E.1.2. Roushangar, K., Ghasempour, R., **Kirca, V. S. O.**, Demirel, M. C. (2021). Hybrid point and interval prediction approaches for drought modeling using ground-based and remote sensing data. Hydrology Research, DOI: 10.2166/nh.2021.028.
- E.1.3. Ghasempour, R., Roushangar, K., **Kirca, V. S. O.**, Demirel, M. C. (2022). Analysis of spatiotemporal variations of drought and its correlations with remote sensing-based indices via wavelet analysis and clustering methods. Hydrology Research, 53(1), 175-192.
- E.1.4. Ghasempour, R., Aalami, M. T., **Kirca, V. S. O.** (2022). SM2RAIN-ASCAT satellite-based spatiotemporal drought monitoring using multiscale WT-VMD-ENERGY method. Geocarto International, 1-29.
- E.1.5. Ghasempour, R., Aalami, M. T., **Kirca, V. S. O.**, Roushangar, K. (2022). Remote sensing-based drought severity modeling and mapping using multiscale intelligence methods. Stochastic Environmental Research and Risk Assessment, 1-14.
- E.1.6. Ghasempour, R., Aalami, M. T., & **Kirca, V. O.** (2023). A multi-criteria remote sensing-based data-driven framework for monitoring lake drying and salinization and mapping its environmental impacts. Stochastic Environmental Research and Risk Assessment, 37(11), 4197-4214.
- E.1.7. Ghasempour, R., Aalami, M. T., **Kirca, V. S. O.**, & Roushangar, K. (2023). Assessing the soil salinity vulnerability and groundwater quality variations due to drying up of the lake. Environmental Science and Pollution Research, 30(54), 115611-115627.
- E.1.8. Ghasempour, R., Aalami, M. T., Sagheblian, S. M., & **Kirca, V. S. O.** (2024). Analysis of spatiotemporal variations of drought and soil salinity via integrated multiscale and remote sensing-based techniques (Case study: Urmia Lake basin). Ecological Informatics, 81, 102560.
- E.1.9. Kacar, F. S., Bayhan, K., Gassner, A., Ergun, E., Halat, O. M., Balov, M. N., Demirel, M. S., Avcuoglu, M.B., Babagiray, S., Calli, S.S. and Ghasempour, R., **Kirca, V. S. O.**, Demirel, M. C., Booij, M. J. (2025). Effects of Model Spatial Structure and Basin Characteristics on the Performance of Three Hydrologic Models. Water Resources Management, 1-20.
- E.1.10. Ghasempour, R., **Kirca, V. S. O.** (2025). Spatiotemporal assessment of groundwater quality under climate change using multiscale clustering technique. Groundwater for Sustainable Development, 28, 101407.

E.2. Peer-refereed conference papers

- E.2.1. Aksoy, H, **Kirca, V.S.O.**, Papatheodorou, K. “Flood hazard assessment and modelling practices in turkey”, Proceedings of the MEDFRIEND “Monitoring, modelling and early warning of extreme events triggered by heavy rainfalls”. PON 01_01503 - MED-FRIEND project, June 26-28, 2014, Cosenza, Italy.
- E.2.2. Ghasempour, R., Kirca, V. O., & Saghebian, S. M. (2022). Assessing the Spatiotemporal Variability of Groundwater Level and Quality Using Hybrid VMD-DSE-K-means Thechnique. In IWA 4th Regional Conference on Diffuse Pollution & Eutrophication (DIPCON 2022), 24-28 October, 2022, Istanbul, Turkey.

F. Miscellaneous

F.1. Peer-refereed journal papers

- F.1.1. Kacmaz, S.E., Kabdasli, M.S., Elginöz Yasa, N., **Kirca, V.S.O.** (2008) “Monitoring differential urbanisation to integrate with basin management and a basin information system modelling for Istanbul”, *Environmental Forensics*, 9:258-264.
- F.1.2. Kosucu, M. M., Sari, O., Demirel, M. C., Kiran, S., Yilmaz, A., Aybakan, A., Albay, E., **Kirca, V. S. O.** (2021). “Water Leakage Reduction in the Water Distribution Network with Real Time Pressure Management”, *Teknik Dergi*, 32(1), 10541-10564.
- F.1.3. Öztürk, O., Bozkurtoğlu, E., & **Kirca, V. S. O.** (2023). A geology and geomorphology-based decision matrix methodology for route determination of new roads. *Arabian Journal of Geosciences*, 16(7), 434.
- F.1.4. Abdi, A. P., Damci, A., **Kirca, V. S. O.**, Turkoglu, H., Arditi, D., Demirkesen, S., Korkmaz. M., Arslan, A. E. (2024). A Spatial Decision-Support System for Wind Farm Site Selection in Djibouti. *Sustainability*, 16(22), 9635.
- F.1.5. Abdi, A. P., Damci, A., Turkoglu, H., **Kirca, V. S. O.**, Demirkesen, S., Sadikoglu, E., & Arslan, A. E. (2025). A Geographic Information System-Based Integrated Multi-Criteria Decision-Support System for the Selection of Wind Farm Sites: The Case of Djibouti. *Sustainability*, 17(6), 2555.
- F.1.6. Erucar, S., Bagci, T., **Kirca, V. S. O.** (2026). A Low-Cost Time Calibration Validation Method for Synchronized PIV Systems Using Readily Available Components. *Fluids*, 11(6), 154.

F.2. Peer-refereed conference papers

- F.2.1. **Kirca, V.S.O.**, Elginöz, N., Çıvak, Ç., Özkan, E., Baş, B., Kabdaşlı, M.S. “Today and Tomorrow of Multiuse Offshore Platforms in European Seas: The MERMAID Project”, 8th National Conference on Coastal Eng’g (in Turkish), Istanbul, 7-9 November, 2014.
- F.2.2. Varol, Ö.E., **Kirca, V.S.O.**, Çıvak, Ç., Kabdaşlı, M.S. “Investigation of Performance Parameters for an Overtopping Type Wave Energy Converter”, 8th National Conference on Coastal Eng’g (in Turkish), Istanbul, 7-9 November, 2014.
- F.2.3. Papatheodorou, K., Tzanou, E., Carmen, M., **Kirca, V.S.O.**, Aksoy, H. “Earthquake, Landslide and Flood Disaster Prevention: The SciNet-NatHaz Project”, International Conference Frontiers in Environmental and Water Management, Kavala, Greece, 19-21 March, 2015.
- F.2.4. **Kirca, V.S.O.**, Aksoy, H., Papatheodorou, K., Stepanova, K. “Legislative Aspects of Flood Hazard Prevention and Resilience in Non-EU Member European Countries” 9th World Congress of European Water Resources Association, EWRA 2016, June 10-13, 2015, Istanbul.

- F.2.5. Aksoy, H., **Kirca, V.S.O.**, Burgan, H.İ., Kellecioglu, D., Ermis, İ.S. “Determination of Flood-Prone Areas by Soil Wetness Index in River Basins”, 8th National Hydrology Congress (in Turkish), Sanliurfa, 8-10 October, 2015.
- F.2.6. Papatheodorou, K., Tzanou, E., Carmen, M., **Kirca, V.S.O.**, Aksoy, H. “Towards flash flood disaster prevention: the SciNetNat Haz proposal”, Proc. EGU General Assembly Conference, Vol. 17, EGU2015-15176, 2015.
- F.2.7. Burgan, H.İ., Kellecioglu, D., Aksoy, H., **Kirca, V.S.O.**, “GIS Supported Hydraulic Flood Model Application”, Proc. 4th National Water Structures Congress (in Turkish), p. 260-267, Antalya, 19-21 November, 2015.
- F.2.8. Papatheodorou, K., Tzanou, E., Carmen, M., **Kirca, V.S.O.**, Aksoy, H., Ntouros, K. “Harmonized Flood Hazard & Risk Assessment”, Proc. of 3rd International Conference on Water Across Time in Engineering Research, p. 11-20, Constanta, Romania, IAHS, 23-25 June, 2016.
- F.2.9. **Kirca, V.S.O.**, Aksoy, H., Burgan, H.I. "A comparison of flood vulnerability using different resolution digital elevation models", 8th Atmospheric Sciences Symposium ATMOS 2017 (p. 484-489), 1-4 November, 2017, Istanbul, Turkey.

F.3. Invited/keynote lectures

- F.3.1. **Kirca, V.S.O.** (Keynote Lecture) “The Concept of Multi-Use Offshore Platforms and the MERMAID Project”, International Conference on Water, environment and Sustainable Development, Ardabil, Iran, 27-29 September, 2016.

Consultancy for the Industry: Physical Modelling Projects

1. Sohar Industrial Area Intake and Discharge Structure: Physical Modelling of Armour Layer Stability, and Dispersion of Thermal Discharge, Sultanate of Oman, 2003.
2. Physical Modelling of the Stability of Caisson Type Breakwater in Port Barbaros Yacht Harbour, Karpas, Northern Cyprus, 2003.
3. Erdemir Iron and Steel Co. Completion of Coastal Protection Structure; Design and Physical Modelling Study, Erdemir, Zonguldak, 2003.
4. Aqaba Naval Harbour – 2D Physical Modelling Study of Northern Wavescreen, Aqaba Bay, Jordan, 2004.
5. Soyak Horozgedigi Container Terminal 2D and 3D Physical Modelling Study, Horozgedigi-Izmir, 2005.
6. Karpaz Bay Resort, Marina Utility - Physical Modelling of Caisson Breakwater, Karpas, Northern Cyprus, 2006.
7. Monolithic Cascade Caisson Breakwater Physical Modelling Study for DALSAN Construction Co., General Application Tests for Patent, 2006.
8. 3D Physical Modelling of Loading Chamber and Outfall Structure of ISKEN Coal Fired Power Plant Circulation Water — Air Entrainment and Foam Discharge Problem, Iskenderun Bay, Adana, February, 2007.
9. 2D and 3D Physical Modelling of Al-Khatmat Harbour for Harbour Tranquillity and Breakwater Stability, Sultanate of Oman, March, 2007.
10. İDO Mudanya Pier, Physical Modelling of the Floating Breakwater, 2008.
11. ASYAPORT (Tekirdağ), Physical Modelling of Agitation and Floating Breakwater Performance, 2009.
12. TAQAH (Sultanate of Oman) Fishery Harbour, Physical Modelling of Core-LocTM Armour Units Breakwater Stability, 2013.
13. EREN Energy ZETES III Coal Fired Power Plant, Physical Modelling of Loading Chamber for Cooling Water Outfall, Zonguldak, 2014.
14. Physical Modelling of Sea Walls in Tuzla Marina for Stability and Overtopping, Istanbul, 2015.
15. MUSANNAH (Sultanate of Oman) Fishery Harbour, Physical Modelling of Core-LocTM Armour Units, Breakwater Stability and Wave Overtopping, 2015.
16. ERDEMİR & İSDEMİR Steel Production Companies, Evaluation of Steel Slag as a By-Product for Coastal Protection and Reclamation, 2016.
17. Physical Modelling of Agitation, Siltation, and Breakwater Stability for a Naval Harbour Project in Pakistan, 2019. (Name of the project is confidential).

18. Physical Modelling of Scour Assessment and Scour Protection Studies for BorWin-6 (Kappa) Platform, McDermott and GEIRI/C-EPRI Consortium (Consultancy work under BM SUMER Consultancy & Research), Germany, 2023.
19. Physical Modelling of Scour Assessment and Scour Protection Studies for the 2 GW IJ Muiden Ver Alpha Platform, Petrofac(replaced by L&T) and Hitcahi Consortium. (Consultancy work under BM SUMER Consultancy & Research), the Netherlands, 2025.
20. Physical Modelling of Scour Assessment and Scour Protection Studies for the 2 GW LanWin1 Platform, McDermott and GE Energy Consortium. (Consultancy work under BM SUMER Consultancy & Research), Germany, 2025.
21. Physical Modelling of Scour Assessment and Scour Protection Studies for the 2 GW BalWin4 Platform, McDermott and GE Energy Consortium. (Consultancy work under BM SUMER Consultancy & Research), Germany, 2025.
22. Physical Modelling of 2D and 3D Breakwater Stability Tests for a Port in Libya, STFA Marine Construction. (Name of the location is confidential, Consultancy work under BM SUMER Consultancy & Research), Libya, 2026.

Consultancy for the Industry: Design, Analysis and Numerical Modelling Projects

1. Aqaba Naval Harbour Agitation Analysis Breakwater Layout and Design, PartI: Aqaba Bay, Jordan, 2003.
2. Aqaba Naval Harbour Agitation Analysis Breakwater Layout and Design, PartII: Aqaba Bay, Jordan, 2003.
3. Ship Manoeuvring Simulation and Ship Response Analysis of UND Ro-Ro Terminal Structure, Pendik, 2003.
4. Marine Facilities at Rize Free Zone: Cayeli Terminal Ship Mooring Response Analysis, 2003.
5. Baku-Tblisi Ceyhan Crude Oil Pipeline Project Ceyhan Terminal Temporary Breakwater: Numerical Modelling of Wave Transformation with Harbour Agitation and Breakwater Design, 2003.
6. UND Pendik Ro-Ro Terminal, Long Term Wave Analysis and Numerical Modelling of Harbour Agitation, 2003.
7. Izmir Tuzla Container Terminal: Layout Design and Numerical Modelling of wave Transmission, 2003.
8. Datca Knidos Marina Preliminary Design and Ecological Investigation Study, 2003.
9. Iskenderun Imported Coal Fired Power Plant Conceptual Planning at the Civil Portion of Marine Terminal: Wave Analysis, Transformation and Agitation, 2003.
10. Iskenderun Imported Coal Fired Power Plant Conceptual Planning at the Civil Portion of Marine Terminal: Numerical Modelling of the Effect of Terminal Construction on Thermal Discharge, 2003.
11. Ship Mooring Response Analysis for Marine Facilities at Rize Free Zone, Cayeli, Rize, 2003.
12. Aqaba Private Royal Marina Evaluation Report-Service and Operational Conditions, Jordan, 2003.
13. Aqaba Private Royal Marina Evaluation Report-A Numerical Model Solution for Circulation Problems, Jordan, 2003.
14. Numerical Hydrodynamics and Wave Interaction Model for Kurbagalidere Creek, Istanbul-Kadikoy, 2003.
15. Reclamation and Rehabilitation Project of Kaynarca Creek: Numerical Hydrodynamics and Wave Interaction Modelling Study, Istanbul-Tuzla, 2004.
16. Aqaba Naval Harbour Numerical Vessel Manoeuvring Simulations, Aqaba Bay, Jordan, 2004.
17. Quay and Breakwater Design Layout for ICDAS Karabiga Terminal, Canakkale-Karabiga, 2004.

18. Design and Layout of Additional Breakwater and Numerical Agitation Analysis for Development of Atakoy Marina: I, Istanbul-Atakoy, 2004.
19. Analysis of Sedimentation and Accumulation of Organic Residuals Problem in the vicinity of Yayla Fishery Harbour, Saros Bay, Edirne, 2004.
20. Numerical Sediment Transport and Sedimentation Modelling Study for the Dredged Area of Yesilyurt Metal-Works Facility, Samsun-Tekkekoy, 2004.
21. Preliminary Design and Construction Methodology Statement Study for Yalova Dry Dock, Bogazici Shipyard Co., Yalova, 2005.
22. “Olivya Houses” Shoreline, Sediment Transport Analysis and Renourishment Study, Bodrum, Mugla, 2005.
23. Boomerang Touristic Complex, Coastal Planning and Design of Recreation Facilities, Girne, T. R. N. Cyprus, May 2005.
24. Municipality of Beylikdüzü, Coastal Planning, Design of Marina and Recreation Facilities, Istanbul, May 2005.
25. Numerical Sediment Transport and Sedimentation Potential Modelling Study for Yalova Dry Dock, Bogazici Shipyard Co., Yalova, August, 2005.
26. CEKISAN Fuel Refill Co., Numerical Ship Mooring Analysis and Design of Multi-point CBM Mooring System for Iskenderun Terminal, Iskenderun, October 2005.
27. CEKISAN Fuel Refill Co., Numerical Ship Mooring Analysis and Design of Multi-point CBM Mooring System for Antalya Terminal, Antalya, October 2005.
28. CEKISAN Fuel Refill Co., Numerical Ship Mooring Analysis and Design of Multi-point CBM Mooring System for Ambarli Terminals, Istanbul, October 2005.
29. Libya Iron and Steel Company (LISCO) - Numerical Wave Agitation Modelling Report, November, 2005.
30. Libya Iron and Steel Company (LISCO) - Current Measurements and Current Pattern Evaluation Report, November, 2005.
31. Numerical Sediment Transport and Sedimentation Potential Modelling Study for Pendik Marina, Municipality of Pendik, Istanbul, November, 2005.
32. Design and Layout of Additional Breakwater and Numerical Agitation Analysis for Development of Atakoy Marina: I, Istanbul-Atakoy, November, 2005.
33. Libya Iron and Steel Company (LISCO) - Numerical Vessel Manoeuvre Modelling and Manoeuvring Simulation Report, November, 2005.

34. Numerical Sediment Transport and Sedimentation Potential Modelling Study for New Gemlik Terminal of Borusan Logistics Co., Gemlik-Bursa, February, 2006.
35. Numerical Agitation Modelling, Planning and Preliminary Design for Tuzla Multi-Purpose Service Harbour of Istanbul Greater City Municipality, February, 2006.
36. Numerical Agitation Modelling for Catalagzi Terminal of EREN Energy Production & Distribution Co., Muslu-Zonguldak, April 2006.
37. Numerical Sediment Transport and Sedimentation Potential Modelling Study for EREN Energy Production & Distribution Co., Muslu-Zonguldak, May, 2006.
38. Numerical Sediment Transport and Sedimentation Potential Modelling Study for Dutlimani Celal Yildirim Shipyard, Bandirma-Balikesir, June, 2006.
39. Numerical Vessel Manoeuvring Simulations for Kumcular Shipyard, Pendik-Istanbul, June, 2006.
40. Numerical Sediment Transport and Sedimentation Potential Modelling Study for Bandirma Shipyard and Stockyard, Bandirma-Balikesir, June, 2006.
41. Numerical Vessel Manoeuvring Simulations for Post-Construction Conditions of Solventas Terminal and Altintel Terminal, Dilovasi-Izmit, July, 2006.
42. Wave Climate and Numerical wave Transformation/Agitation Study for Dalsan Shipyard, Tuzla-Istanbul, July, 2006.
43. Wave Climate, Numerical Wave Transformation/Agitation and Terminal Efficiency Study for AsyaPORT, Barbaros-Tekirdag, August, 2006.
44. Numerical Sediment Transport and Sedimentation Potential Modelling Study for AsyaPORT, Barbaros-Tekirdag, August, 2006.
45. Numerical Vessel Manoeuvring Simulations for Post-Construction Conditions of IGSAS Terminal, Kocaeli, August, 2006.
46. Design and Numerical Modelling of Wave Agitation, Sediment Transport Study for Guzelcamli Multipurpose Harbour (Ferry Terminal, Marina and Fishery Harbour), Kusadasi-Aydin, September, 2006.
47. Numerical Modelling of Wave Agitation, Sediment Transport Study for Karasu Gundogdu Shipyard, Karasu-Sakarya, September, 2006.
48. Numerical Sediment Transport and Sedimentation Potential Modelling Study for Al-Khatmat Harbour, Sultanate of Oman, February, 2007.
49. Numerical Modelling of Harbour Agitation Study for Al-Khatmat Harbour, Sultanate of Oman, February, 2007.

50. Numerical Wave Transformation Modelling and Determination of Design Waves Characteristics Study for New Gemlik Terminal of Borusan Logistics Co., Gemlik-Bursa, February, 2007.
51. Metocean Conditions Study and Numerical Modelling of the Effect of Terminal Construction on Thermal Discharge for AKSA Yalova Power Plant, May, 2007.
52. Numerical Modelling of the Effect of Terminal Construction on Thermal Discharge for EREN Energy Production & Distribution Co., Muslu-Zonguldak, July, 2007.
53. Soan River City-Numerical Flow Modelling and Flood Control Study Defence Housing Authority Islamabad, Pakistan, July, 2007.
54. Hydraulic Evaluation Studies for DHA Waterfront Works: Chronological Evaluation of Bathymetry; Numerical Modelling of Wave, Flow and Thermal Transport; Applicability Evaluation of New Structures; Discussion of Erosion Problem; DHA Karachi Facility, Pakistan, November, 2007.
55. Numerical Modelling of Flow and Transport Processes of Kucukusu, Kubagalidere, Cirpici and Baltalimani Creeks, Istanbul, December, 2007.
56. Preliminary Evaluation Study of the Wadi Itwad Pipeline Installation Project, Shuqaiq Phase-2 Water Transmission System, Asir, Saudi Arabia, February, 2009.
57. Gerze Power Plant 180000DWT Terminal “Numerical Modelling of Sediment Transport Study: Sedimentation in the Navigation Channel”, Gerze, Sinop, 2011.
58. Karachi Port Quasim LNG Terminal, Modelling of Flow and Morphodynamics, 2012.
59. Cyprus Bafra Tourism Region, Design of an Artificial Beach and Modelling of Sediment Transport and Morphodynamics, 2012.
60. Batumi Boat Basin, Follow-up Design and Consultancy Work, Batumi, Georgia, 2014.
61. Outside Consultant for “The Influence of Climate Change on Water Resources of Turkey”, Ministry of Water and Forestry, Water Management General Directorate (IO Environmental Solutions Co.), Istanbul, 2014-2016.
62. DP World, Yarımca Container Terminal, Follow-up Design and Consultancy Work (Consultant to ECAP A. S.), Yarımca, Kocaeli, 2014.
63. Kyanli Port, Sediment Transport and Morphodynamics, Caspian Sea, Turkmenistan, 2015.
64. Mersin International Port Development Project, Consultancy Work (Consultant to ECAP A. S.), Mersin, 2015.

65. STAR Refinery, Preliminary Numerical Analysis of Dynamic Wave Loading on the Trestle Structure, Consultancy Work, Aliğa, İzmir, 2015.
66. Walvis Bay, Gas Port Marine Works Project, Metocean and Jetty Design Study (Consultant to ECAP A. S.), Namibia, 2015.
67. Musannah Fishery Harbour, Modified Design of Breakwater sections with Core-LocTM Armour Units, Sultanate of Oman, 2016
68. Nador West Med NWM Container Port Project, Consultancy Services for Design and Construction Consultant (Consultant to STFA & ECAP A. S.), Morocco, 2016.
69. ERGENE Waste Water Deep Sea Outfall, Numerical Modelling of Pipeline and Diffuser Hydraulics, 2016.
70. Antalya Great Bogacay Project, Design and Consultancy Work for Bogacay Marina, 2016.
71. Mersin International Port, Inventory, Status and Capacity Investigation of Berths, Consultancy Work (Consultant to ECAP A. S.), Mersin, 2017.
72. Akçay Hydroelectric Power Plant, Hydraulic Performance Assessment for the Transmission and Irrigation Channel, Aydın, 2018.
73. Liquefaction / Scouring Geohazard Preliminary Study. Groix & Belle-Ile Offshore Floating Wind Farm, France. Phase 1. (Consultancy work under BM SUMER Consultancy & Research) EOLFI, France, 2017.
74. Liquefaction / Scouring Geohazard Preliminary Study. Groix & Belle-Ile Offshore Floating Wind Farm, France. Phase 2. (Consultancy work under BM SUMER Consultancy & Research) EOLFI, France, 2018.
75. Crescent Development Project, Cofferdam Design for Shore Protection (Consultancy for ECAP A. S. under BM SUMER Consultancy & Research), Baku, Azerbaijan, 2018
76. Scour Around OSY Jacket Foundation in the Belgian Sector of the North Sea, Consultancy for FIDES Engineering (Consultancy work under BM SUMER Consultancy & Research), Belgium, 2018.
77. Scour Assessment for Nordersund-Hano Pipeline, Consultancy for DHI Water & Environment (Consultancy work under BM SUMER Consultancy & Research) , Sweden, 2018.
78. Master Planning Services for Development of SASA Port Project At Yumurtalık (Consultant to ECAP A. S. under BM SUMER Consultancy & Research), Mersin, 2019.
79. Preliminary Breakwater Design and Engineering Services for OYAK South Container Terminal Project (Consultant to ECAP A. S. under BM SUMER Consultancy & Research), İskenderun, 2019.
80. Scour Protection Studies for Hollandse Kust Zuid (HKZ) Project – Alpha Platform, Petrofac Norge, The Netherlands, 2019.

81. Scour Studies for Changhua Offshore Windfarm Phase 1 Project in Taiwan, Jan De Nul Dreging B.v. (Consultancy work under BM SUMER Consultancy & Research), The Netherlands, 2019.
82. Liquefaction / Scouring Geohazard Study. Groix & Belle-Ile Offshore Floating Wind Farm, France. Phase 3. (Consultancy work under BM SUMER Consultancy & Research) EOLFI, France, 2020.
83. Wave Hindcasting and Numerical Wave Transformation Modelling for the Seawall of İÇDAŞ Dry Dock (Consultancy work under BM SUMER Consultancy & Research), Çanakkale, 2020.
84. Scour Protection Studies for Hollandse Kust Zuid (HKZ) Project – Beta Platform, Petrofac Norge (Consultancy work under BM SUMER Consultancy & Research) , The Netherlands, 2021.
85. Hydro-geotechnical Investigation of Impacts of Vessel-induced Scour Around the HKZ-Alpha Platform, Petrofac Norge (Consultancy work under BM SUMER Consultancy & Research), The Netherlands, 2021.
86. Numerical Wave Transformation and Agitation Modelling for the New Terminal of İÇDAŞ Dry Dock (Consultancy work under BM SUMER Consultancy & Research), Çanakkale, 2022.
87. Hydrodynamic Modelling and Water Quality Assessment of the Bosphorus and Haliç for the Master Plan of Istanbul Water and Sewerage Administration, Yuksel Proje (Consultancy work under BM SUMER Consultancy & Research), Istanbul, 2023.
88. Scour Assessment and Scour Protection Studies for BorWin-6 (Kappa) Platform, McDermott and GEIRI/C-EPRI Consortium (Consultancy work under BM SUMER Consultancy & Research), Germany, 2023.
89. Scour Assessment and Scour Protection for the 2 GW IJMuiden Ver Alpha Platform, Including Physical Model Testing, Petrofac International and Hitachi Energy (Consultancy work under BM SUMER Consultancy & Research), , the Netherlands, 2024.
90. Scour Assessment and Scour Protection for the 2 GW LanWin1 Platform, Including Physical Model Testing, McDermott and GE Energy Consortium. (Consultancy work under BM SUMER Consultancy & Research), Germany, 2025.
91. Scour Assessment and Scour Protection for the 2 GW BalWin4 Platform, Including Physical Model Testing, McDermott and GE Energy Consortium. (Consultancy work under BM SUMER Consultancy & Research), Germany, 2025.
92. Design of a Marina in Libya (Name of the location is confidential, Consultant to STFA Group under BM SUMER Consultancy & Research), Libya, 2026.
93. Damage Assessment and Rehabilitation Project of LISCO Steel Port Breakwater (Consultant to TML A.S. under BM SUMER Consultancy & Research), Libya, 2026.

94. Design of Marine Structures of a Port in Libya (Name of the location is confidential, Consultant to STFA Group under BM SUMER Consultancy & Research), Libya, 2026.
95. Scour Assessment and Scour Protection for the 2 GW Nederwiek-1 Platform, Including Physical Model Testing, Petrofac International and Hitachi Energy (Consultancy work under BM SUMER Consultancy & Research), the Netherlands, 2026.