BİRUNİ ÜNİVERSİTESİ
"Bilimin Geleceği"

ÖZGEÇMİŞ VE ESERLER LİSTESİ



ÖZGEÇMİŞ

Adı ve Soyadı: Serdar Beji

Akademik Unvanı: Prof. Dr.

İş Adresi: Biruni University, Faculty of Engineering and Natural Sciences, A320, Zeytinburnu, Istanbul, Turkey

E-postası: sbeji@biruni.edu.tr

Uzmanlık Alanı:
Deniz Bilimleri ve Teknolojisi
Enerji
Gemi Hidromekaniği
Gemi İnşaatı ve Gemi Makinaları Mühendisliği
Kıyı Bilimleri
Makina Mühendisliği
Matematik
Mekanik
Mühendislik ve Teknoloji
Oşinografi
Temel Bilimler

Derece	Bölüm/Program	Üniversite	Yıl
Doktora	Ocean Engineering	University of Rhode Island	1988
Yüksek Lisans	Gemi İnşaatı	İstanbul Teknik Üniversitesi	1984
Lisans	Gemi İnşaatı	İstanbul Teknik Üniversitesi	1982

Yüksek Lisans Tez Başlığı (özeti ekte) ve Tez Danışman(lar)ı:

Gemi Çarpışmaları

Doktora Tezi/S.Yeterlik Çalışması/Tıpta Uzmanlık Tezi Başlığı (özeti ekte) ve Danışman(lar)ı:

Attenuation of Heave and Pitch Motions of Floating Bodies by means of an Active Mechanism

Görev Unvanı	Görev Yeri	Yıl
Prof. Dr.	İstanbul Teknik Üniversitesi	1999-2024
Doç. Dr.	İstanbul Teknik Üniversitesi	1993-1999
Dr. Öğr. Üyesi	İstanbul Teknik Üniversitesi	1992-1993

Ödüller:

1. Teşvik Ödülü (1999)
2. "Development of a fully-dispersive nonlinear wave model and its experimental verification" başlıklı ortak yazarı olduğu makaleyi yılın en iyi makalesi seçti ve ödüllendirdi. (1995)

Son iki yılda verdiği lisans ve lisansüstü düzeydeki dersler (Açılmışsa, yaz döneminde verilen dersler de tabloya ilave edilecektir):

Akademik Yıl	Dönem	Dersin Adı	Haftalık Saati		Öğrenci Sayısı
			Teorik	Uygulama	
2026	Güz	Scientific Research Techniques			
2026	Güz	Differential Equations			
2025	Güz	Scientific Research Techniques			
2025	Güz	Diferansiyel Denklemler			
2025	Güz	Differential Equations			
2025	Bahar	Bilimsel Araştırma Teknikleri ve Yayın Etiği			
2025	Bahar	Araştırma Yöntemleri ve Bilimsel Etik			
2025	Bahar	Scientific Research Techniques			

ESERLER

A. Uluslararası hakemli dergilerde yayımlanan makaleler:

A1. Beji S., Kızılkaya Beji N., Mutlu Ü., "Development of a consistent body mass index", *Scientific Reports*, vol. 16, no. 32205, 2026.

A2. Lützen U., Beji S., "Predictive maintenance for offshore wind turbines through deep learning and online clustering of unsupervised subsystems: a real-world implementation", *Journal of Ocean Engineering and Marine Energy*, vol. 10, no. 3, pp. 627-640, 2024.

A3. Beji S., "An Unorthodox Arrangement of Boussinesq-Type Wave Equations for Accurate and Robust Numerical Treatment", *Journal of Marine Science and Engineering*, vol. 11, no. 10, 2023.

A4. Tatlisuluoğlu A., Beji S., "Simulation of Shockwave Effects on a Ship-like Structure due to Underwater Explosions", *Journal of Eta Maritime Science*, vol. 11, no. 2, pp. 79-85, 2023.

A5. Tatlısuluoğlu A., Beji S., "Blast Pressure Measurements of an Underwater Detonation in the Sea", *Journal of Marine Science and Application*, vol. 20, no. 4, pp. 706-713, 2021.

A6. Beji S., "Formulation of wave and current forces acting on a body and resistance of ships", *Ocean Engineering*, vol. 218, 2020.

A7. Budak G., Beji S., "Controlled course-keeping simulations of a ship under external disturbances", *Ocean Engineering*, vol. 218, 2020.

A8. Beji S., "Nonlinear wave transformations and randomness", *Coastal Engineering Journal*, vol. 61, no. 4, pp. 590-598, 2019.

A9. Beji S., "Applications of Morison's equation to circular cylinders of varying cross-sections and truncated forms", *Ocean Engineering*, vol. 187, 2019.

A10. Beji S., "Kadomtsev-Petviashvili type equation for uneven water depths", *Ocean Engineering*, vol. 154, pp. 226-233, 2018.

A11. Beji S., "Kadomtsev-Petviashvili type equation for entire range of relative water depths", *Coastal Engineering Journal*, vol. 60, no. 1, pp. 60-68, 2018.

A12. Beji S., "Improved Boussinesq-type equations for spatially and temporally varying bottom", *Coastal Engineering Journal*, vol. 60, no. 3, pp. 318-326, 2018.

A13. Beji S., "Improved Korteweg & de Vries type equation with consistent shoaling characteristics", *Coastal Engineering*, vol. 109, pp. 128-133, 2016.

A14. Barlas B., Beji S., "Rip current fatalities on the Black Sea beaches of Istanbul and effects of cultural aspects in shaping the incidents", *Natural Hazards*, vol. 80, no. 2, pp. 811-821, 2016.

A15. Beji S., "Improved explicit approximation of linear dispersion relationship for gravity waves", *Coastal Engineering*, vol. 73, pp. 11-12, 2013.

A16. Bayraktar Ersan D., Beji S., "Numerical simulation of waves generated by a moving pressure field", *Ocean Engineering*, vol. 59, pp. 231-239, 2013.

A17. Beji S., "A systematic approach to the exact roots of polynomials", *Mediterranean Journal of Mathematics*, vol. 5, no. 2, pp. 163-172, 2008.

A18. Barlas B., Beji S., "Boundary-fitted numerical model for computing linear and nonlinear wave forces on bottom-mounted piles", *Applied Ocean Research*, vol. 28, no. 4, pp. 267-274, 2006.

A19. Beji S., Nadaoka K., "Fully dispersive nonlinear water wave model in curvilinear coordinates", *Journal of Computational Physics*, vol. 198, no. 2, pp. 645-658, 2004.

A20. Beji S., Barlas B., "Boundary-fitted non-linear dispersive wave model for regions of arbitrary geometry", *International Journal for Numerical Methods in Fluids*, vol. 45, no. 6, pp. 643-657, 2004.

A21. Beji S., Nadaoka K., "Solution of Rayleigh's instability equation for arbitrary wind profiles", *Journal of Fluid Mechanics*, vol. 500, pp. 65-73, 2004.

A22. Beji S., Nadaoka K., "A spectral model for unidirectional nonlinear wave propagation over arbitrary depths", *Coastal Engineering*, vol. 36, no. 1, pp. 1-16, 1999.

A23. Beji S., "Authors' reply to Discussion of Schaffer and Madsen on "A formal derivation and numerical modelling of the improved Boussinesq equations for varying depth" (Ocean Engineering, 25 (1998) 497-500)", *OCEAN ENGINEERING*, vol. 25, no. 7, pp. 615-618, 1998.

A24. Beji S., "Author's closure to J.T. Kirby's discussion 'Note on a nonlinearity parameter of surface waves'", *Coastal Engineering*, vol. 34, pp. 169-171, 1998.

A25. Nadaoka K., Beji S., Nakagawa Y., "A fully dispersive weakly nonlinear model for water waves", *Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences*, vol. 453, no. 1957, pp. 303-318, 1997.

A26. Beji S., Nadaoka K., "A time-dependent nonlinear mild-slope equation for water waves", *Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences*, vol. 453, no. 1957, pp. 319-332, 1997.

A27. Beji S., Nadaoka K., "A formal derivation and numerical modelling of the improved boussinesq equations for varying depth", *Ocean Engineering*, vol. 23, no. 8, pp. 691-704, 1996.

A28. Beji S., "Note on a nonlinearity parameter of surface waves", *Coastal Engineering*, vol. 25, pp. 81-85, 1995.

A29. Beji S., Battjes J., "Numerical simulation of nonlinear wave propagation over a bar", *Coastal Engineering*, vol. 23, pp. 1-16, 1994.

A30. Beji S., Battjes J., "Experimental investigation of wave propagation over a bar", *Coastal Engineering*, vol. 19, pp. 151-162, 1993.

B. Uluslararası bilimsel toplantılarda sunulan ve bildiri kitaplarında (proceedings) basılan bildiriler:

B1. Beji S., Applications of a generalized Kadomtsev-Petviashvili type equation for varying water depths, In: *Int. Conf. of Numerical Analysis and Applied Mathematics (ICNAAM'17)*, Selanik, Yunanistan, 2018, pp. 32002-32008.

B2. Beji S., Nadaoka K., New approaches for computing wave growth rate due to wind induced shear instabilities, In: *2nd Int. Conf. on Asian and Pacific Coasts: APAC 2003*, Makuhari, Japonya, 2004, pp. 161-172.

B3. Beji S., Barlas B., Nadaoka K., Boundary-fitted nonlinear-dispersive wave model for applications in geometrically complicated regions, In: *2nd Int. Conf. on Asian and Pacific Coasts: APAC 2003*, Makuhari, Japonya, 2004, pp. 151-160.

B4. Beji S., Nadaoka K., Nonlinear refraction-diffraction of surface waves over arbitrary depths, In: *25th Int. Conf. on Coastal Eng. (ICCE'96)*, Orlanda, Amerika Birleşik Devletleri, 1997, pp. 1320-1332.

B5. Beji S., Ohyama T., Battjes J., Nadaoka K., Transformation of nonbreaking waves over a bar, In: *23rd Int. Conf. on Coastal Eng. (ICCE'92)*, Venedik, İtalya, 1993, pp. 51-61.

B6. Battjes J., Beji S., Breaking waves propagating over a shoal, In: *23rd Int. Conf. on Coastal Eng. (ICCE'92)*, Venedik, İtalya, 1993, pp. 42-50.

C. Yazılan ulusal/uluslararası kitaplar veya kitaplardaki bölümler:

C1. Yazılan ulusal/uluslararası kitaplar:

C1.1. Beji S., *Fiziksel Deniz Bilimleri*, Nobel Akademik Yayıncılık, Ankara, 2023.

C2. Yazılan ulusal/uluslararası kitaplardaki bölümler:

C2.1. Beji S., Erdik T., "HYDRODYNAMICS AND MODELLING OF TURKISH STRAITS", *Oil Spill Along the Turkish Straits Area*, Turkish Marine Research Foundation, 2018.

C2.2. Erdik T., Beji S., "WAVE CLIMATE IN THE SEA OF MARMARA", *Oil Spill Along the Turkish Straits Area*, Turkish Marine Research Foundation, 2018.

C2.3. Beji S., Barlas B., "Rip currents across the shores of the black sea", *Black Sea Marine Environment : The Turkish Shelf*, TUDEV Publications, 2017.

D. Ulusal hakemli dergilerde yayımlanan makaleler:

D1. Beji S., "Method of Successive Polynomial Substitutions for Computing Roots of Polynomials", *Advances in Pure Mathematics*, vol. 16, no. 6, 2026.

D2. Beji S., "New numerical integration formulations for ordinary differential equations", *Advances in Pure Mathematics*, vol. 14, no. 8, pp. 650-666, 2024.

D3. Gahramanov R., Beji S., "Site Selection and Capacity Determination of Potential Offshore Wind Farm in Western Black Sea Region of Türkiye", *International Journal of Environment and Geoinformatics*, vol. 10, no. 2, pp. 101-109, 2023.

D4. Beji S., "Estimating Sums of Convergent Series via Rational Polynomials", *Scientific Research Publishing, Inc.*, vol. 13, pp. 187-197, 2023.

D5. Beji S., "A Geometric Formulation and a Series Approach for Estimating π with Remarks on a Sumerian Tablet", *Scientific Research Publishing, Inc.*, vol. 12, pp. 587-599, 2022.

D6. Acar E., Beji S., "A Conceptual Design of an Offshore Wind Farm off the Dikili Shores", *TMMOB Gemi Muhendisleri Odasi*, 2022.

D7. Beji S., "A Variant of Fermat's Diophantine Equation", *Advances in Pure Mathematics*, vol. 11, pp. 929-936, 2021.

D8. Beji S., "Polynomial Functions Composed of Terms with Non-Integer Powers", *Advances in Pure Mathematics*, vol. 11, pp. 791-806, 2021.

D9. Lützen U., Beji S., "Challenges and Expected Improvements in Operation and Maintenance of Offshore Wind Turbines", *Journal of Ocean Technology*, vol. 16, no. 1, 2021.

D10. Beji S., "Evaluation of Exponential Integral by Means of Fast-Converging Power Series", *Advances in Pure Mathematics*, vol. 11, pp. 101-108, 2021.

D11. Beji S., "Resolution of Grandi's Paradox as Extended to Complex Valued Functions", *Advances in Pure Mathematics*, vol. 10, pp. 447-463, 2020.

D12. Beji S., "Resolution of grandi's paradox and investigations on related series", *Applied Mathematics E - Notes*, vol. 20, 2020.

D13. Çokyaşar E., Beji S., "Açık Deniz Rüzgâr Çiftliklerinin Malî Açıdan İncelenmesi", *Gemi ve Deniz Teknolojisi Dergisi*, no. 216, pp. 6-16, 2019.

D14. Beji S., "Sounds Generated by Marine Mammals Impactsof Different Types of Underwater Noise", *The Journal of Ocean Technology*, vol. 14, no. 3, pp. 11-16, 2019.

D15. Beji S., "Sounds generated by marine mammals & impacts of different types of underwater noise", *The Journal of Ocean Technology*, vol. 14, no. 3, 2019.

D16. Beji S., Erdik T., "Statistical Analyses of Wave Height and Wind Velocity Distributions for the Sea of Marmara", *International Journal of Environment and Geoinformatics*, 2018.

D17. Beji S., "A Fundamental Relationship of Polynomials and Its Proof", *Advances in Pure Mathematics*, 2018.

D18. Budak G., Beji S., "Computational resistance analyses of a generic submarine hull form and its geometric variants", *Journal of Ocean Technology*, vol. 11, no. 2, 2016.

D19. Beji S., Nadaoka K., "Variations in nonlinearly evolved nearshore spectra and their significance in the estimation of wave forces", *Proceedings of the Coastal Engineering Conference*, vol. 1, 1998.

D20. Beji S., "Note on conservation equations for nonlinear surface waves", *Ocean Engineering*, vol. 25, no. 7, 1998.

D21. Beji S., "Investigations on cubic polynomials", *International Journal of Mathematical Education in Science and Technology*, 1992.

E. Ulusal bilimsel toplantılarda sunulan ve bildiri kitaplarında basılan bildiriler:

E1. Barlas B., Beji S., Rip current fatalities on the black sea beaches of Istanbul and effects of winds, In: *International Coastal Engineering Conference*, Türkiye, 2016.

E2. Özalp M. K., Beji S., Time domain comparisons of measured and spectrally simulated breaking waves, In: *International Coastal Engineering Conference*, Türkiye, 2016.

E3. Beji S., A generalized kdv type equation for uneven depths, In: *International Coastal Engineering Conference*, Türkiye, 2016.

E4. Bayraktar D., Beji S., A new numerical scheme for improved businnesque equations with surface pressure, In: *IMAM*, Türkiye, 2012.

E5. Ersan D. B., Beji S., Water waves generated by moving pressure fields, In: *Offshore and Polar Engineering Conference*, Danimarka, 2012.

E6. Beji S., Nadaoka K., Spectral modelling of nonlinear wave shoaling and breaking over arbitrary depths, In: *Coastal Dynamics*, Birleşik Krallık, 1997.

E7. Beji S., Nadaoka K., Spectral modeling of unidirectional nonlinear wave propagation over arbitrary depths, In: *International Offshore and Polar Engineering Conference*, Amerika Birleşik Devletleri, 1997.

E8. Nadaoka K., Beji S., Nakagawa Y., Fully-dispersive nonlinear wave model and its numerical solutions, In: *International Coastal Engineering Conference*, Amerika Birleşik Devletleri, 1995.