# Hayley H Shen

List of Publications by Year
in descending order



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|---|---|---|---|
| 64 papers | 1,807 citations | 236925 25 h-index | 289244 40 g-index |
| 72 all docs | 72 docs citations | 72 times ranked | 829 citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | The stress tensor in granular shear flows of uniform, deformable disks at high solids concentrations. Journal of Fluid Mechanics, 1990, 219, 81. | 3.4 | 101 |
| 2 | Dissipation of wind waves by pancake and frazil ice in the autumn Beaufort Sea. Journal of Geophysical Research: Oceans, 2016, 121, 7991-8007. | 2.6 | 96 |
| 3 | Overview of the Arctic Sea State and Boundary Layer Physics Program. Journal of Geophysical Research: Oceans, 2018, 123, 8674-8687. | 2.6 | 96 |
| 4 | Gravity waves propagating into an iceâ€covered ocean: A viscoelastic model. Journal of Geophysical Research, 2010, 115, . | 3.3 | 85 |
| 5 | Emerging trends in the sea state of the Beaufort and Chukchi seas. Ocean Modelling, 2016, 105, 1-12. | 2.4 | 78 |
| 6 | Calibrating a Viscoelastic Sea Ice Model for Wave Propagation in the Arctic Fall Marginal Ice Zone. Journal of Geophysical Research: Oceans, 2017, 122, 8770-8793. | 2.6 | 73 |
| 7 | The role of floe collisions in sea ice rheology. Journal of Geophysical Research, 1987, 92, 7085-7096. | 3.3 | 72 |
| 8 | On applying granular flow theory to a deforming broken ice field. Acta Mechanica, 1986, 63, 143-160. | 2.1 | 64 |
| 9 | Simulation of pancake ice load on a circular cylinder in a wave and current field. Cold Regions Science and Technology, 2012, 78, 31-39. | 3.5 | 60 |
| 10 | Experimental study on surface wave propagating through a greaseâ€“pancake ice mixture. Cold Regions Science and Technology, 2010, 61, 90-96. | 3.5 | 49 |
| 11 | A Monte Carlo solution for rapidly shearing granular flows based on the kinetic theory of dense gases. Journal of Fluid Mechanics, 1992, 244, 477. | 3.4 | 48 |
| 12 | Dynamic transport of river ice. Journal of Hydraulic Research/De Recherches Hydrauliques, 1990, 28, 659-671. | 1.7 | 47 |
| 13 | Simulation of pancake-ice dynamics in a wave field. Annals of Glaciology, 2001, 33, 355-360. | 1.4 | 44 |
| 14 | Wave Attenuation by Sea Ice Turbulence. Geophysical Research Letters, 2019, 46, 6796-6803. | 4.0 | 42 |
| 15 | Internal parameters and regime map for soft polydispersed granular materials. Journal of Rheology, 2008, 52, 87-103. | 2.6 | 41 |
| 16 | Effect of Contact Force Models on Granular Flow Dynamics. Journal of Engineering Mechanics - ASCE, 2006, 132, 1252-1259. | 2.9 | 37 |
| 17 | Wave rafting and the equilibrium pancake ice cover thickness. Journal of Geophysical Research, 2004, 109, . | 3.3 | 35 |
| 18 | Internal length and time scales in a simple shear granular flow. Physical Review E, 2004, 70, 051308. | 2.1 | 34 |

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|---|---|---|---|
| 19 | Comparison of wave propagation through ice covers in calm and storm conditions. Geophysical Research Letters, 2015, 42, 5935-5941. | 4.0 | 34 |
| 20 | Wave propagation in frazil/pancake, pancake, and fragmented ice covers. Cold Regions Science and Technology, 2015, 113, 71-80. | 3.5 | 32 |
| 21 | Rollover of Apparent Wave Attenuation in Ice Covered Seas. Journal of Geophysical Research: Oceans, 2017, 122, 8557-8566. | 2.6 | 31 |
| 22 | A conceptual model for pancake-ice formation in a wave field. Annals of Glaciology, 2001, 33, 361-367. | 1.4 | 30 |
| 23 | Modeling ocean wave propagation under sea ice covers. Acta Mechanica Sinica/Lixue Xuebao, 2015, 31, 1-15. | 3.4 | 29 |
| 24 | An experimental study on the interactions between surface waves and floating viscoelastic covers. Wave Motion, 2017, 70, 195-208. | 2.0 | 29 |
| 25 | Comparisons of physical experiment and discrete element simulations of sheared granular materials in an annular shear cell. Mechanics of Materials, 2009, 41, 764-776. | 3.2 | 28 |
| 26 | Wind and wave influences on sea ice floe size and leads in the <scp>B</scp>eaufort and <scp>C</scp>hukchi <scp>S</scp>eas during the summerâ€fall transition 2014. Journal of Geophysical Research: Oceans, 2016, 121, 1502-1525. | 2.6 | 27 |
| 27 | Scale dependence of direct shear tests. Science Bulletin, 2009, 54, 4337-4348. | 9.0 | 26 |
| 28 | A one-dimensional model for wave-induced ice-floe collisions. Annals of Glaciology, 1991, 15, 87-95. | 1.4 | 24 |
| 29 | An experimental study on gravity waves through a floating viscoelastic cover. Cold Regions Science and Technology, 2018, 155, 289-299. | 3.5 | 24 |
| 30 | A continuum model for the linear wave propagation in ice-covered oceans: An approximate solution. Ocean Modelling, 2011, 38, 244-250. | 2.4 | 23 |
| 31 | Modelling ocean waves in ice-covered seas. Applied Ocean Research, 2019, 83, 30-36. | 4.1 | 23 |
| 32 | Wave-Ice Interactions in Barents Sea Marginal Ice Zone. Journal of Cold Regions Engineering - ASCE, 2001, 15, 91-102. | 1.1 | 22 |
| 33 | Limiting diameter of pancake ice. Journal of Geophysical Research, 2004, 109, . | 3.3 | 22 |
| 34 | Wave energy attenuation in fields of colliding ice floes â€" Part 2: AÂlaboratory case study. Cryosphere, 2019, 13, 2901-2914. | 3.9 | 22 |
| 35 | Wave energy attenuation in fields of colliding ice floes â€" Part 1: Discrete-element modelling of dissipation due to iceâ€"water drag. Cryosphere, 2019, 13, 2887-2900. | 3.9 | 21 |
| 36 | A one-dimensional model for wave-induced ice-floe collisions. Annals of Glaciology, 1991, 15, 87-95. | 1.4 | 20 |

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|---|---|---|---|
| 37 | Three-layer viscoelastic model with eddy viscosity effect for flexural-gravity wave propagation through ice cover. Ocean Modelling, 2018, 131, 15-23. | 2.4 | 18 |
| 38 | Floe Size Effect on Gravity Wave Propagation Through Ice Covers. Journal of Geophysical Research: Oceans, 2019, 124, 320-334. | 2.6 | 18 |
| 39 | Ocean wave transmission and reflection between two connecting viscoelastic ice covers: An approximate solution. Ocean Modelling, 2013, 71, 102-113. | 2.4 | 17 |
| 40 | STRESSES IN A RAPID FLOW OF SPHERICAL SOLID WITH TWO SIZES. Particulate Science and Technology, 1984, 2, 37-56. | 2.1 | 16 |
| 41 | Nature of Wave Modes in a Coupled Viscoelastic Layer over Water. Journal of Engineering Mechanics - ASCE, 2017, 143, 04017114. | 2.9 | 16 |
| 42 | On the Ocean Wave Attenuation Rate in Greaseâ€Pancake Ice, a Comparison of Viscous Layer Propagation Models With Field Data. Journal of Geophysical Research: Oceans, 2018, 123, 5933-5948. | 2.6 | 16 |
| 43 | A diffusion approximation for ocean wave scatterings by randomly distributed ice floes. Ocean Modelling, 2016, 107, 21-27. | 2.4 | 14 |
| 44 | Effect of rolling friction on binary collisions of spheres. Physics of Fluids, 2010, 22, 033304. | 4.0 | 12 |
| 45 | Effect of particle size and boundary conditions on the shear stress in an annular shear cell. Granular Matter, 2012, 14, 423-431. | 2.2 | 12 |
| 46 | Wave Damping in Compact Pancake Ice Fields Due to Interactions Between Pancakes. Antarctic Research Series, 0, , 325-341. | 0.2 | 11 |
| 47 | Ocean wave transmission and reflection by viscoelastic ice covers. Ocean Modelling, 2015, 92, 1-10. | 2.4 | 11 |
| 48 | Sensitivity analysis of a viscoelastic parameterization for gravity wave dispersion in ice covered seas. Cold Regions Science and Technology, 2015, 120, 63-75. | 3.5 | 11 |
| 49 | Spectral attenuation of ocean waves in pack ice and its application in calibrating viscoelastic wave-in-ice models. Cryosphere, 2020, 14, 2053-2069. | 3.9 | 8 |
| 50 | STRESSES IN A RAPID, SIMPLE SHEAR FLOW OF GRANULAR MATERIALS WITH MULTIPLE GRAIN SIZES. Particulate Science and Technology, 1988, 6, 1-15. | 2.1 | 7 |
| 51 | Workshop on wave-ice interaction. Eos, 1992, 73, 375-375. | 0.1 | 7 |
| 52 | Comparison of ice and wind-wave modules in WAVEWATCH IIIÂ® in the Barents Sea. Cold Regions Science and Technology, 2020, 172, 103008. | 3.5 | 6 |
| 53 | A COMPUTER SIMULATION OF PIPE BEND EROSION IN A DILUTE PNEUMATIC TRANSPORT OF GRANULAR MATERIALS. Particulate Science and Technology, 1996, 14, 59-73. | 2.1 | 5 |
| 54 | An experimental study of gravity waves through segmented floating viscoelastic covers. Applied Ocean Research, 2020, 101, 102233. | 4.1 | 5 |

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| 55 | A COMPUTER SIMULATION OF DILUTE PNEUMATIC CONVEYING OF GRANULAR MATERIALS IN PIPE BRANCHES. Particulate Science and Technology, 1996, 14, 213-219. | 2.1 | 4 |
| 56 | The Balance of Ice, Waves, and Winds in the Arctic Autumn. Eos, 2017, , . | 0.1 | 4 |
| 57 | Using the annular shear cell as a rheometer for rapidly sheared granular materials: a DEM study. Granular Matter, 2013, 15, 183-194. | 2.2 | 3 |
| 58 | On Developing a Continuum Model for Wave Propagation in Ice Covered Seas. , 2013, , . | | 3 |
| 59 | Particle size and boundary geometry effects on the bulk friction coefficient of sheared granular materials in the inertial regime. Comptes Rendus - Mecanique, 2014, 342, 151-155. | 2.1 | 2 |
| 60 | Wave-influenced formation of new ice: Model building and a test case. Ocean Modelling, 2021, 167, 101878. | 2.4 | 2 |
| 61 | EM08 mini-symposium on granular materialsâ€"editorial: interconnecting engineering and physics perspectives. Granular Matter, 2010, 12, 143-144. | 2.2 | 0 |
| 62 | Rolling resistance effect for sheared granular materials in the inertial regime. , 2013, , . | | 0 |
| 63 | Modeling and Observations of Wave Energy Attenuation in Fields of Colliding Ice Floes. IUTAM Symposium on Cellular, Molecular and Tissue Mechanics, 2022, , 167-182. | 0.2 | 0 |
| 64 | Wave-Ice Interaction Models and Experimental Observations. IUTAM Symposium on Cellular, Molecular and Tissue Mechanics, 2022, , 183-200. | 0.2 | 0 |