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## Published theses (Full List)

### Academic paper

#### **No. Title of theses, Author, Name of Journal, Volume, Number, Page, DOI, Date of Publication**

1. A simplified model for flows with eddies in symmetrically expanding channels, Shinya Watanabe, Vakhtang Putkaradze, *Physics Letters A*, 370, 1, 58-63, doi:10.1016/j.physleta.2007.05.025, 2007
2. Integral methods for shallow free-surface flows with separation, Shinya Watanabe, Tomas Bohr, Vakhtang Putkaradze, *Journal of Fluid Mechanics*, 480, , 233-265, , 2003
3. Polygonal hydraulic jumps, Clive Ellegard, Adam E.Hansen, Anders Haning, Kim Hansen, Adam Marcussen, Tomas Bohr, Jonas L.Hansen, Shinya Watanabe, *Nonlinearity*, 12, , 1-7, , 1999
4. Creating corners in kitchen sinks, Clive Ellegard, Adam E.Hansen, Anders Haaning, Kim Hansen, Anders Marcussen, Tomas Bohr, Jonas L.Hansen, Shinya Watanabe, *Nature*, 392, , 767-768, , 1998
5. Row-switched states in two-dimensional underdamped Josephson-junction arrays, Mauricio Barahona, Shinya Watanabe, *Physical Review B*, 57, 17, 10893-10912, , 1998
6. Resonances of dynamical checkerboard states in Josephson arrays with self-inductance, Mauricio Barahona, Enrique Trias, Terry P.Orlando, Amy E. Duwel, Herre S.J. van der Zant, Shinya Watanabe, Steven H. Strogatz, *Physical Review B*, 55, 8, R11989-R11992, , 1997
7. Discreteness-induced resonances and ac voltage amplitudes in long one-dimensional Josephson junctions, Amy E.Duwel, Shinya Watanabe, Enrique Trias, Terry P. Orlando, Herre S.J.van der Zant, Steven H.Strogatz, *Journal of Applied Physics*, 82, 9, 4661-4668, , 1997
8. Stability of periodic solutions in series arrays of Josephson junctions with internal capacitance, Shinya Watanabe, James W. Swift, *Journal of Nonlinear Science*, 7, , 503-536, , 1997
9. Averaging theory for the structure of hydraulic jumps and separation in laminar free surface flows, Tomas Bohr, Vakhtang Putkaradze, Shinya Watanabe, *Physical Review Letters*, 79, 6, 1038-1041, , 1997
10. Resonance splitting in discrete planar arrays of Josephson junctions, Amy E. Duwel, Enrique Trias, Terry P. Orlando, Herre S.J. van der Zant, Shinya Watanabe, Steven H. Strogatz, *Journal of Applied Physics*, 79, 10, 7864-7870, , 1996
11. Dynamics of circular arrays of Josephson junctions and the discrete sine-Gordon equation, Shinya Watanabe, Herre S.J. van der Zant, Steven H. Strogatz, Terry P. Orlando, *Physica D*, 97, 4, 429-470, , 1996
12. Kink propagation in a highly discrete system: observation of phase locking to linear waves, Herre S.J. van der Zant, Terry P. Orlando, Shinya Watanabe, Steven H. Strogatz, *Physical Review Letters*, 74, 1, 174-177, , 1995
13. Whirling modes and parametric instabilities in the discrete sine-Gordon equation: experimental tests in Josephson rings, Shinya Watanabe, Steven H. Strogatz, Herre S.J. van der Zant, Terry P. Orlando, *Physical Review Letters*, 74, 3, 379-382, , 1995
14. Constants of motion for superconducting Josephson arrays, Shinya Watanabe, Steven H. Strogatz, *Physica D*, 74, 3-4, 197-253, , 1994
15. The geometry of nonlinear Schroedinger standing waves: pure power nonlinearities, Paul K.

Newton, Shinya Watanabe, Physica D, 67, , 19-44, , 1993

16. Integrability of a globally coupled oscillator array, Shinya Watanabe, Steven H. Strogatz, Physical Review Letters, 70, 16, 2391-2394, , 1993

### Presentations in Academic Meetings

#### No. Title of theses, Author, Name of Journal, Volume, Number, Page, DOI, Date of Publication

1. Circuit models for arrays of Josephson oscillators with loads, Enrique Trias, Terry P. Orlando, Amy E. Duwel, Shinya Watanabe, IEEE Transactions on Applied Superconductivity, 9, 2 (pt.3), 4316-4319, , 1999
2. Dynamics of kinks and vortices in Josephson-junction arrays, Herre S.J. van der Zant, Shinya Watanabe, in ``Pattern Formation in Continuous and Coupled Systems" (eds. M.Golubitsky, D.Luss, \& S.H.Strogatz, Springer), , , 283-301, , 1999
3. Separation and pattern formation in hydraulic jumps, Tomas Bohr, Clive Ellegaard, Adam E.Hansen, Kim Hansen, Anders Haaning, Vakhtang Putkaradze, Shinya Watanabe, Physica A, 249, 1-4, 111-117, , 1998
4. Dynamics of one-dimensional Josephson-junction arrays, Herre S.J. van der Zant, Mauricio Barahona, Amy E. Duwel, Enrique Trias, Terry P. Orlando, Shinya Watanabe, Steven H. Strogatz, Physica D, 119, 1, 219-226, , 1998
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6. Resonant steps in parallel Josephson junction arrays: parametric instabilities of whirling modes, Shinya Watanabe, Steven H. Strogatz, Herre S.J. van der Zant, Terry P. Orlando, IEEE Transactions on Applied Superconductivity, 5, 2 (pt.3), 2698-2701, , 1995
7. Nonlinear dynamics of discrete Josephson rings, Herre S.J. van der Zant, Terry P. Orlando, Shinya Watanabe, Steven H. Strogatz, in ``Macroscopic Quantum Phenomena and Coherence in Superconducting Networks" (eds. C.Giovannella \& M.Tinkham, World Scientific), , , 241-252, , 1995
8. Vortex Propagation in Discrete Josephson Rings, Herre S.J. van der Zant, Terry P. Orlando, Shinya Watanabe, Steven H. Strogatz, NATO ASI SERIES E APPLIED SCIENCES, 291, , 587-, , 1995
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