

# List of Publications of Richard Jurisits

## Publications in Scientific Journals

R. Jurisits

["Transient numerical solutions of an extended Korteweg-De Vries equation describing solitary waves in open-channel flow"](#);

Periodica Polytechnica Mech. Eng., **61**, (2017), 1, 55 – 59, DOI: 10.3311/Ppme.9334.

R. Jurisits, W. Schneider

["Undular hydraulic jumps arising in non-developed turbulent flows"](#);

Acta Mechanica, **223** (2012), 1723-1738, DOI: 10.1007/s00707-012-0666-4.

W. Schneider, R. Jurisits, Y.S. Bae

["An Asymptotic Iteration Method for the Numerical Analysis of Near-Critical Free-Surface Flows"](#);

International Journal of Heat and Fluid Flow, **31** (2010), 6, 1119 – 1124,

DOI:10.1016/j.ijheatfluidflow.2010.07.004.

W. Schneider, R. Jurisits

["Change of state as a bubble rises in a liquid of constant volume"](#);

Acta Mechanica, **195** (2008), 1-4, 215 – 226, DOI 10.1007/s00707-007-0551-8.

## Presentations and Proceedings

R. Jurisits

["Transient numerical solutions of an extended Korteweg-de Vries equation describing solitary waves in open-channel flow"](#);

Presentation: Conference on Modelling Fluid Flow (CMFF'15), the 16th International Conference on Fluid Flow Technologies, Budapest; 09-01-2015 – 09-04-2015.

R. Jurisits, A. Steindl (invited presentation)

["Dynamical bifurcations of an elastic fluid-conveying tube in case of an \(1:3\) internal resonance"](#);

Presentation: 8th European Nonlinear Dynamics Conference ENOC 2014, Wien; 06.07.2014 -

11.07.2014; in: "*ENOC 2014 - Proceedings of 8th European Nonlinear Dynamics Conference*",

Eds.: H. Ecker, A. Steindl, S. Jakubek; ENOC 2014 - Proceedings of 8th European Nonlinear

Dynamics Conference, (2014), ISBN: 978-3-200-03433-4.

R. Jurisits

["Numerical solutions of an extended Korteweg-de Vries equation describing solitary waves in open-channel flow"](#);

Presentation: GAMM 2014, Erlangen; 10-03-2014 – 14-03-2014; in: "85th Annual Meeting of the International Association of Applied Mathematics and Mechanics ", PAMM 14, Wiley-VCH, Weinheim (2014), 701 – 702, DOI: 10.1002/pamm.201410333.

R. Jurisits, A. Steindl

["Degenerate cases of stability loss of an elastic fluid-conveying tube"](#);

Vortrag: GAMM 2012, Darmstadt; 26-03-2012 – 30-03-2012; in: "83rd Annual Meeting of the International Association of Applied Mathematics and Mechanics ", PAMM 12, Wiley-VCH, Weinheim (2014), 257 – 258, DOI: 10.1002/pamm.201210119.

R. Jurisits, A. Steindl

["1:3 Internal resonance of an elastic fluid-conveying tube"](#);

Presentation: 7th Vienna International Conference on Mathematical Modelling (MATHMOD) 2012, Wien; 15-02-2012 – 17-02-2012; in "Preprints MATHMOD 2012 Vienna“, Eds.: I. Troch, F. Breiteneker, 7th Vienna Conference on Mathematical Modelling.

R. Jurisits, A. Steindl

["Mode interactions and resonances of an elastic fluid-conveying tube"](#);

Presentation: GAMM 2011, Graz; 10-04-2011 – 21-04-2011; in: "82nd Annual Meeting of the International Association of Applied Mathematics and Mechanics ", PAMM 11, Wiley-VCH, Weinheim (2011), 323 – 324, DOI 10.1002/pamm.201110153.

W. Schneider, R. Jurisits, Y.S. Bae

["An asymptotic iteration method for the numerical analysis of near-critical free surface flows"](#);

Presentation: Conference on Modelling Fluid Flow (CMFF'09), the 14th International Conference on Fluid Flow Technologies, Budapest; 09-09-2009 - 09-12-2009; in: "Conference on Modelling Fluid Flow CMFF'09", Vol. 1 (2009), 364 – 371, ISBN: 978-963-420-984-3.

R. Jurisits, W. Schneider, Y.S. Bae

["A multiple scales solution to the undular hydraulic jump problem"](#);

Presentation: GAMM 2007, Zürich; 07-16-2007 - 07-20-2007; in: "Sixth International Congress on Industrial Applied Mathematics (ICIAM07) and GAMM Annual Meeting", PAMM 7, Wiley-VCH, Weinheim (2007), 4120007 – 4120008, DOI: 10.1002/pamm.200700755.

R. Jurisits, W. Schneider, Y.S. Bae

["The undular hydraulic jump - analytical and numerical investigations of the free boundary value problem"](#);

Presentation: The 3rd Shanghai International Symposium on Nonlinear Sciences and Applications (Shanghai NSA 07), Shanghai & Hangzhou; 06-06-2007 - 06-10-2007; in: "The 3rd Shanghai International Symposium on Nonlinear Sciences and Applications NSA`07", (2007), 90 - 91.

R. Jurisits et al.

["Modifikation von Übergangsraten in heisser und dichter Materie"](#)

(["Modification of Decay Rates in Hot and Dense Matter"](#));

Presentation: Symposium on Nuclear and Particle Physics, Admont; 09-18-1995 - 09-19-1995; in: "Annual Meeting of the Austrian Physical Society 1995", Austrian Physical Society, (1995), 169.

H. Baier, R. Brunner, N. Fröhlich, G. Hejc, R. Jurisits, C. Matulla, W. Bentz

"*Untersuchung von Kaonproduktionsraten in Schwerion-Kollisionen unter Verwendung der 1/N-Zustandsgleichung für hadronische Materie*"

("Investigation of Kaon Production Rates in Heavy Ion Collisions Utilizing the 1/N Equation of State for Hadronic Matter");

Presentation: Symposium on Nuclear and Particle Physics, Obergurgl; 09-19-1994 - 09-20-1994; in: "Annual Meeting of the Austrian Physical Society 1994", Austrian Physical Society, (1994), 153.

H. Baier, R. Brunner, N. Fröhlich, G. Hejc, R. Jurisits, C. Matulla, P. Pohl, W. Bentz

"*Quantenhadrodynamische Zustandsgleichungen für Supernova-Explosionen und die Neutronensternentstehung*"

("Quantum-Hydrodynamical Equation of State for Supernova Explosions and the Formation of Neutron Stars");

Presentation: Symposium on Nuclear and Particle Physics, Obergurgl; 09-19-1994 - 09-20-1994; in: "Annual Meeting of the Austrian Physical Society 1994", Austrian Physical Society, (1994), 154.

## **Presentations without Proceedings Entry**

R. Jurisits

"Degenerate numerical eigensolutions of an extended Korteweg-De Vries equation describing solitary waves in open-channel flow";

Presentation: European Fluid Mechanics Conference 11 (EFMC'11), Sevilla; 09-12-2016 – 09-16-2016.

R. Jurisits, W. Schneider, Y.S. Bae

"An asymptotic iteration method for the numerical analysis of near-critical free surface flows";

Presentation: Workshop as part of the Advanced Course on Asymptotic Methods in Fluid Mechanics: Survey and Recent Advances, CISM, Udine; 25-09-2009.

## **Doctoral Thesis (supervised)**

P. Eisner

"*Impact and crack initiation of a high-velocity liquid jet on a solid wall*" (working title);

PhD thesis, University of Leoben, funded by "ThermoDrill", a project of the European Union's Horizon 2020, grant agreement no. 641202. Co-supervised with H. Hofstätter and T. Antretter.

## **Doctoral Thesis (own)**

R. Jurisits

*"Wellige Wassersprünge bei nicht voll-ausgebildeter turbulenter Zuströmung"* (in German)

(*"Undular Hydraulic Jumps in Non-Developed Turbulent Flows"*);

Supervisor: W. Schneider; Vienna University of Technology, Institute of Fluid Mechanics and Heat Transfer, 2012.

## **Diploma Thesis (own)**

R. Jurisits

*"Nuclear Matter at Finite Temperature in Real Time Formulation"*;

Supervisor: H. Baier; University of Vienna, Institute for Nuclear Physics, 1996.