

List of Publications of Prof. C. Benocci (2003-2013)

Meeting papers

GIAMMANCO, R.; BENOCCI, C.; BUCHLIN, J.-M.

Large eddy simulation of turbulent flows over a cylinder of square cross-section
6th National Congress on Theoretical and Applied Mechanics, Ghent, Belgium,
May 26-27, 2003
VKI RP 2003-26

LOHASZ, M. M.; RAMBAUD, P.; BENOCCI, C.

LES computation of flow in a ribbed square duct using Fluent and comparison to PIV
Environmental and industrial CFD simulations, Prague, Czech Republic, February 23-27,
2004
VKI RP 2004-11

LOHÁSZ, M. M.; RAMBAUD, P.; BENOCCI, C.

MILES flow inside a square section ribbed duct
RTO Meeting, AVT-120, 1st Workshop on "Urban Dispersion Modelling", April 1-2,
2004, Rhode-St-Genèse, Belgium
VKI RP 2004-58

LOHÁSZ, M. M.; RAMBAUD, P.; BENOCCI, C.

LES flow inside a square section ribbed duct channel
Benelux Fluent User Group Meeting, October 2-3, 2003, Limelette, Belgium
VKI RP 2004-65

ARTS, T.; BENOCCI, C.; RAMBAUD, P.

Experimental and numerical investigation of flow and heat transfer in a ribbed square
duct
3rd International Symposium on Integrating CFD and Experiments in Aerodynamics,
U.S. Air Force Academy, CO, USA, June 20-21 2007
VKI RP 2007-36

Contribution to books

LOHÁSZ, M.; RAMBAUD, P.; BENOCCI, C.

LES simulation of ribbed square duct flow with Fluent and comparison with PIV data
Conference on Modelling Fluid Flow (CMFF'03), 12th International Conference on Fluid
Flow Technologies, Budapest, Hungary, September 3-6, 2003, ISBN 978-9-634-20779-5
VKI RP 2003-31

BENOCCI, C. & MANNA, M.

Perspectives for large eddy simulation of bluff-body turbulent flows and environmental flows

In "Environmental Sciences and Environmental Computing", Zannetti, P.; ed;
EnvironComp, Usa, Vol. II, 2004, Electronic book
VKI RP 2004-57

LOHÁSZ, M. M.; RAMBAUD, P.; BENOCCI, C.

Flow features in a fully developed ribbed duct flow as a result of LES
ERCOFTAC International Symposium on Engineering Turbulence Modelling and
Measurements -ETMM6-, May 23-25, 2005, Sardinia, Italy, ISBN 978-0-080-44544-1
VKI RP 2005-08

LOHÁSZ, M.; RAMBAUD, P.; BENOCCI, C.

Conditional averaging of the fully developed stationary ribbed duct flow using Q criteria
ITI Conference on Turbulence, September 25-28, 2005, Bad Zwischenahn, Germany
Progress in Turbulence 2, Proceedings of the iTi Conference in Turbulence 2005,
Springer Proceedings in Physics, Oberlack, M.; Guenther, S.; Weller, T.; Khujadze, G.;
Osman, A.; Frewer, M.; Peinke, J. (Eds.), Vol. 109, 2007, Approx. 400 p., Hardcover,
ISBN-10: 3-540-32602-2, ISBN-13: 978-3-540-32602-1
VKI RP 2005-78

BODART, J.; GIAMMANCO, R.; RAMBAUD, P.; BENOCCI, C.

Use of immersed boundary technique in a Cartesian LES solver to study wake flows
4th International Conference on CFD, July 10-14, 2006, Ghent, Belgium, ISBN 978-3-
540-92779-2
VKI RP 2006-46

VASS, P.; RAMBAUD, P.; ARTS, T.; BENOCCI, C.

Numerical investigation of flow and heat transfer in a ribbed square duct applying LES
7th European Conference on Turbomachinery Fluid Dynamics and Thermodynamics,
Athens, Greece, March 5-9, 2007
VKI RP 2007-29

LOHÁSZ, M.M.RAMBAUD, P.BENOCCI, C.

Large-eddy simulation of heat transfer in high blockage ribbed duct
LES in Science and Technology, Poznan, Poland, April 21-22, 2008
VKI RP 2008-33

PARENTE, A.; GORLÉ, C.; BENOCCI, C.; VAN BEECK, J.P.A.J.

RANS simulation of ABL flows: implementation of advanced boundary conditions for
mixed rough and smooth surfaces
Fifth International Symposium on Computational Wind Engineering (CWE2010),
May 23-27, 2010, Chapel Hill, North Carolina, USA
VKI RP 2010-19

PARENTE, A. & BENOCCI, C.

On the RANS simulation of neutral ABL flows
Fifth International Symposium on Computational Wind Engineering (CWE2010), May
23-27, 2010, Chapel Hill, North Carolina, USA
VKI RP 2010-20

PARENTE, A. & BENOCCI, C.
On the RANS simulation of neutral ABL flows
Fifth International Symposium on Computational Wind Engineering (CWE2010), May
23-27, 2010, Chapel Hill, North Carolina, USA
VKI RP 2010-52

BALOGH, M.; PARENTE, A.; BENOCCI, C.
RANS simulation of ABL flow over complex terrains applying an enhanced k- ϵ model
and wall function formulation
13th International Conference on Wind Engineering, ICWE 13, Amsterdam, the
Netherlands, July 10-15, 2011
VKI RP2011-35

LIGNAROLO, L.; GORLÉ, C.; PARENTE, A.; BENOCCI, C.
Large eddy simulation of the atmospheric boundary layer using OpenFOAM
13th International Conference on Wind Engineering, ICWE 13, Amsterdam, the
Netherlands, July 10-15, 2011
VKI RP 2011-38

PARENTE, A.; LE CLAINCHE MARTINEZ, S.; BENOCCI, C.
Application of principal component analysis to the investigation of conjugate heat
transfer in ribbed ducts
10th International Symposium on Experimental Computational Aerothermodynamics of
Internal Flows, ISAIF10, Brussels, Belgium, July 4-7, 2011
VKI RP 2011-99

NAKHLE, D.; RAMBAUD, P.; BENOCCI, C.; ARTS, T.
Numerical investigation of flow and heat transfer in ribbed square duct applying LES
10th International Symposium on Experimental Computational Aerothermodynamics of
Internal Flows, ISAIF10, Brussels, Belgium, July 4-7, 2011
VKI RP 2011-100

Archival Journals

PARENTE, A.; GORLÉ, C.; VAN BEECK, J.P.A.J.; BENOCCI, C.
A comprehensive modelling approach for the neutral atmospheric boundary layer:
consistent inflow conditions, wall function and turbulence model
Boundary Layer Meteorology, 2011, Volume 140, Number 3, 411-428
(JCR Impact Factor 1,737)

PARENTE, A.; GORLÉ, C.; VAN BEECK, J.P.0A.J.; BENOCCI, C.
Improved k- ϵ model and wall function formulation for the RANS simulation of ABL flows

Journal of Wind Engineering and Industrial Aerodynamics, 2011, Vol. 99, Issue 4, pp 267-278

(JCR Impact Factor 1,119)

BALOGH, M.; PARENTE, A.; BENOCCI, C.

RANS simulation of ABL flow over complex terrains applying an enhanced k- ϵ model and wall function formulation: implementation and comparison for fluent and OpenFOAM

Journal of Wind Engineering and Industrial Aerodynamics, 2012, Vols 104-106, pp 360-368

(JCR Impact Factor 1,119)

LOHÁSZ M. M., RAMBAUD P., BENOCCI C.

Flow features in a fully developed ribbed duct flow as a result of MILES

Flow, Turbulence and Combustion, Vol. 77, Issue 1-4, November 2006, pp. 59-76

(JCR Impact Factor 1,108)

BENOCCI C., GIAMMANCO R., MANNA M., SIMONS E.

Large eddy simulation of turbulent flows via domain decomposition techniques. Part 2: applications

International Journal for Numerical Methods in Fluids, Vol. 48, Issue 4, June 2005, pp. 397-422

(JCR Impact Factor 1,176)

MANNA M., BENOCCI C., SIMONS E.

Large eddy simulation of turbulent flows via domain decomposition techniques. Part 1: Large eddy simulation of turbulent flows theory

International Journal for Numerical Methods in Fluids, Vol. 48, Issue 4, June 2005, pp. 367-395

(JCR Impact Factor 1,176)

LOUDA P., GIAMMANCO R., BENOCCI C.

Application of defiltering techniques to the large-eddy simulation of wall-bounded turbulent flow Journal of Engineering Mechanics, Vol. 11, Issue 3, May-June 2004, pp. 161-176

(JCR Impact Factor 0,99)

Course notes

OLIVARI, D. & BENOCCI, C.

An introduction to mechanics of turbulence.

September 2010
VKI CN157

BENOCCI, C. & OLIVARI, D.
Introduction to the modelling of turbulence
September 2009
VKI CN 158

BENOCCI, C. &
VAN BEECK, J.P.A.J.
Introduction to mechanics of turbulence: Spectral analysis of turbulent flows
October 2003
VKI CN 168

BENOCCI, C.
EA Seminar Notes: Numerical simulation of industrial flows
November 2003
VKI CN 170

BENOCCI, C.
Numerical simulation of industrial flows – slides
VKI CN 181

Lecture Series

- 2004-06 INTRODUCTION TO TURBULENCE MODELING
March 22-26, 2004; J.P.A.J. van Beeck & C. Benocci
- 2006-04 LES AND RELATED TECHNIQUES: THEORY AND APPLICATIONS
March 13-16, 2006. C. Benocci, J.P.A.J. van Beeck, U. Piomelli
- 2008-04 LARGE EDDY SIMULATION AND RELATED TECHNIQUES:
THEORY AND APPLICATIONS
March 10-14, 2008, edited by C. Benocci, J.P.A.J. van Beeck, U. Piomelli
- 2010-04 LARGE EDDY SIMULATION AND RELATED TECHNIQUES
Edited by U. Piomelli, C. Benocci, J.P.A.J. van Beeck
February 22-26, 2010
- 2012-01 LARGE EDDY SIMULATION AND RELATED TECHNIQUES:
THEORY AND APPLICATIONS
Edited by U. Piomelli, C. Benocci, J.P.A.J. van Beeck
February 6 – 10, 2012

List of Publications: C. Benocci

2013-02 CFD FOR ATMOSPHERIC FLOWS AND WIND ENGINEERING
Edited by J.P.A.J. van Beeck & C. Benocci
March 11-13, 2013