

## Submitted and in press

**H. E. Fossum, A. N. Osnes and T. E. Kristiansen:**

Evaluation of safety distances for storage of explosive materials using a combination of thermochemical calculations and CFD,

To appear in *Tenth national conference on Computational Mechanics (MekIT'19)*, editors: B. Skallerud and H. I. Andersson.

**A. N. Osnes, M. Vartdal, M. G. Omang and B. A. P. Reif:**

Numerical investigation of shock wave particle cloud interaction in cylindrical geometries,

To appear in *Tenth national conference on Computational Mechanics (MekIT'19)*, editors: B. Skallerud and H. I. Andersson.

**A. N. Osnes, M. Vartdal, M. G. Omang and B. A. P. Reif:**

Particle-resolved simulations of shock-induced flow through particle clouds at different Reynolds numbers,

Submitted to *Physical Review Fluids*.

**J. Aa Tørnes, T. Vik and T. T. Kjellstrøm:**

Leakage rate of the nerve agent tabun from sea-dumped munition,

Submitted to *Marine Environmental Research*.

**C. E. Wasberg, Ø. Andreassen, T. Gjesdal, P. M. Greni, A. Helgeland and M. Vartdal:**

Modelling of flow noise in towed antennas,

Submitted to *Ocean Engineering*.

**J. Yuan, A. Mishra, G. Brereton, G. Iaccarino and M. Vartdal:**

Single-point structure tensors in turbulent channel flows with smooth and wavy walls,

Submitted to *Physics of Fluids*.

**E. Åkervik and M. Vartdal:**

The role of wave kinematics in turbulent flow over waves,

To appear in *Journal of Fluid Mechanics*.

## 2019

**A. N. Osnes, M. Vartdal, M. G. Omang and B. A. P. Reif:**

[Computational analysis of shock-induced flow through stationary particle clouds](#),

*International Journal of Multiphase Flow* (114), 268-286 (2019).

**M. Vartdal and A. N. Osnes:**

[Linear motion of multiple superposed viscous fluids](#),

*Physical Review E* (99), 043104 (2019).

## 2018

**A. N. Osnes, M. Vartdal and B. A. Pettersson Reif:**

[Numerical simulation of particle jet formation induced by shock wave acceleration in a Hele-Shaw cell](#),

*Shock Waves* (28) 3, 451-461 (2018).

**M. Vartdal and A. N. Osnes:**

[Using particle-resolved LES to improve Eulerian-Lagrangian modeling of shock wave particle cloud interaction,](#)

In *Proceedings of the 2018 Summer Program*, 25-34, Center for Turbulence Research, Stanford University. (2018)

**J. Yuan, G. Brereton, G. Iaccarino, A. A. Mishra and M. Vartdal:**

[Single-point structure tensors in rough-wall turbulent channel flow,](#)

In *Proceedings of the 2018 Summer Program*, 267-276, Center for Turbulence Research, Stanford University (2018).

## 2017

**E. M. M. Wingstedt, A. N. Osnes, E. Åkervik, D. Eriksson and B. A. Pettersson Reif:**

[Large-eddy simulation of dense gas dispersion over a simplified urban area,](#)

*Atmospheric Environment* (152), 605-616 (2017).

**E. M. M. Wingstedt, M. Vartdal and B. A. Pettersson Reif:**

[Large-eddy simulations of dense-gas dispersion within a high-Reynolds number turbulent boundary layer,](#)

*Physics of Fluids* (29) 9, 095103 (2017).

## 2016

**A. Brambilla, P. Angelelli, Ø. Andreassen and H. Hauser:**

[Comparative visualization of multiple time surfaces by planar surface reformation,](#)

*2016 IEEE Pacific Visualization Symposium (PacificVis)*, 88-95 (2016).

**M. Vartdal:**

[Computing turbulence structure tensors in plane channel flow,](#)

*Computers & Fluids* 136, 207-211 (2016).

## 2015

**D. Eriksson, A. N. Osnes and E. Åkervik:**

Neutrally Buoyant Gas Dispersion Within an Urban Street Canyon,

in *Eighth national conference on Computational Mechanics (MekIT'15)*, editors: B. H. Skallerud and H. I. Andersson, International Center for Numerical Methods in Engineering (CIMNE) (2015).

**E. M. M. Wingstedt, H. E. Fossum, B. A. P. Reif and J. Werne:**

[Anisotropy and shear-layer edge dynamics of statistically unsteady, stratified turbulence,](#)

*Physics of Fluids* 27 (6), 065106 (2015).

## 2014

**N. Abdul-Karim, C. S. Blackman, P. P. Gill, E. M. M. Wingstedt, B. A. P. Reif:**

[Post-blast explosive residue – A review of formation and dispersion theories and experimental](#)

[research](#),

*Royal Society of Chemistry Advances*, 4 (97), 54354 – 54371 (2014).

**A. Bøckmann, M. Vartdal:**

[A gradient augmented level set method for unstructured grids](#),

*Journal of Computational Physics*, 258, 47–72 (2014).

**A. Helgeland, K. A. Mardal, V. Haughton and B. A. P. Reif:**

[Numerical simulations of the pulsating flow of cerebrospinal fluid flow in the cervical spinal canal of a Chiari patient](#),

*Journal of Biomechanics*, 47(5), 1082-1090 (2014).

## 2013

**A. Brambilla, Ø. Andreassen and H. Hauser:**

[Integrated Multi-aspect Visualization of 3D Fluid Flows](#),

in *Vision, Modeling & Visualization*, editors M. Bronstein, J. Favre and K. Hormann, The Eurographics Association (2013).

**H. E. Fossum, E. M. M. Wingstedt, B. A. P. Reif:**

[A model for the viscous dissipation rate in stably stratified, sheared turbulence](#),

*Geophysical Research Letters* 40 (14), 3744–3749 (2013).

**S. O. Linge, K.-A. Mardal, V. Haughton and A. Helgeland:**

[Simulating CSF Flow Dynamics in the Normal and the Chiari I Subarachnoid Space during Rest and Exertion](#),

*American Journal of Neuroradiology*, 34, 41-45 (2013).

**M. Vartdal and A. Bøckmann:**

[An oriented particle level set method based on surface coordinates](#),

*Journal of Computational Physics*, 251, 237–250 (2013).

## 2012

**G. Antonioni, S. Burkhart, J. Burman, A. Dejoan, A. Fusco, R. Gaasbeek, T. Gjesdal, A.**

**Jäppinen, K. Riikonen, P. Morra, O. Parmhed and J. L. Santiago:**

[Comparison of CFD and operational dispersion models in an urban-like environment](#),

*Atmospheric Environment*, 47, 365-372 (2012).

**T. Elboth, B. A. Pettersson Reif, Ø. Andreassen, and M. Martell:**

[Flow noise reduction from superhydrophobic surfaces](#),

*Geophysics* 77 (1), P1-P10 (2012).

**H. Fossum, B. A. Pettersson Reif, M. Tutkun and T. Gjesdal:**

[On the Use of Computational Fluid Dynamics to Investigate Aerosol Dispersion in an Industrial Environment: A Case Study](#),

*Boundary-Layer Meteorology*, 144 (1), pp. 21-40 (2012).

## 2011

**J. M. Blatny, H. Fossum, J. Ho, M. Tutkun, G. Skogan, Ø. Andreassen, E. M. Fykse, V. Waagen and B. A. Pettersson Reif:**

[Dispersion of Legionella-containing aerosols from a biological treatment plant, Norway, \*Frontiers in Bioscience\*, E3, 1300-1309 \(2011\).](#)

**J. M. Blatny, J. S. Olsen, Ø. Andreassen, V. Waagen and B. A. P. Reif:**

[Tracking Legionella in air generated from a biological treatment plant - A case study of the outbreak of legionellosis in Norway,](#)

Proceedings of SPIE, the International Society for Optical Engineering. ISSN 0277-786X, 8018 (2011).

**S. Coudert, J. Kostas, J. M. Foucaut, M. Stanislas, P. Braud, C. Fourment, J. Delville, M. Tutkun, F. Mehdi, P. B. V. Johansson and W. K. George:**

[Double Large Field Stereoscopic PIV in a High Reynolds Number Turbulent Boundary Layer, \*Experiments in Fluids\*, 50 \(1\), 1-12 \(2011\).](#)

**J. Delville, P. Braud, S. Coudert, J.-M. Foucaut, C. Fourment, W. K. George, P. B.V. Johansson, J. Kostas, F. Mehdi, A. Royer, M. Stanislas and M. Tutkun:**

[The WALLTURB joined experiment to assess the large scale structures in a high Reynolds number turbulent boundary layer,](#)

in *Progress in Wall Turbulence: Understanding and Modeling of Wall Turbulence*, ERCOFTAC Series, Vol. 14, Editors: M. Stanislas, J. Jimenez and I. Marusic, 65-74 (2011).

**P. A. Durbin and B. A. Pettersson Reif:**

[\*Statistical Theory and Modeling for Turbulent Flows,\*](#)

2nd Edition, Wiley & Sons, Wichester, 344 pages. ISBN 978-0-470-68931-8 (2011).

**T. Elboth, B. A. P. Reif, Ø. Andreassen and M. B. Martell:**

[Reducing high Reynolds number hydroacoustic noise using superhydrophobic coating,](#)

*Journal of Physics: Conference Series*, **318** (9) (2011).

**H. E. Fossum, B. A. Pettersson Reif and G. Skogan:**

Flow Patterns and Aerosol Dispersion inside an Aerosol Test Chamber,

in *Sixth national conference on Computational Mechanics (MekIT'11)*, editors: B. Skallerud and H. I. Andersson, 73-88, Tapir Academic Press (2011).

**H. E. Fossum, M. Tutkun, B. A. Pettersson Reif and Ø. Andreassen:**

Modeling the dispersion and transport of aerosols emitted from industrial facility during 2005 and 2008 outbreaks of Legionnaire's disease in Norway,

in *Sixth national conference on Computational Mechanics (MekIT'11)*, editors: B. Skallerud and H. I. Andersson, 59-72, Tapir Academic Press (2011).

**J.-M. Foucaut, S. Coudert, M. Stanislas, J. Delville, M. Tutkun and W. K. George:**

[Spatial Correlation from the SPIV database of the WALLTURB Experiment,](#)

in *Progress in Wall Turbulence: Understanding and Modeling of Wall Turbulence*, ERCOFTAC Series, Vol. 14, Editors: M. Stanislas, J. Jimenez and I. Marusic, 85-94 (2011).

**M. Fredbo and M. Tutkun:**

Verification of Markovian Properties of Turbulent Boundary Layer at High Reynolds Number,

in *Sixth national conference on Computational Mechanics (MekIT'11)*, editors: B. Skallerud and H. I. Andersson, 89-98, Tapir Academic Press (2011).

**W. K. George and M. Tutkun:**

[The Mesolayer and Reynolds Number Dependencies of Boundary Layer Turbulence](#),  
in *Progress in Wall Turbulence: Understanding and Modeling of Wall Turbulence*, ERCOFTAC  
Series, Vol. 14, Editors: M. Stanislas, J. Jimenez and I. Marusic, 181-188 (2011).

**S. Grafsrønningen, A. Jensen and B. A. Pettersson Reif:**

[PIV investigation of buoyant plume from natural convection heat transfer above a horizontal heated cylinder](#),  
*Int. J. Heat Mass Transfer*, 54, 4975-4987 (2011)

**A. Helgeland:**

VoluViz: a multi-field volume visualization framework for three-dimensional data analysis,  
in *Sixth national conference on Computational Mechanics (MekIT'11)*, editors: B. Skallerud and H.  
I. Andersson, 127-138, Tapir Academic Press (2011).

**S. Linge, V. Haughton, A. E. Løvgren, K.-A. Mardal, A. Helgeland and H. P. Langtangen:**

[Effect of Tonsillar Herniation on Cyclic CSF Flow Studied with Computational Flow Analysis](#),  
*American Journal of Neuroradiology* 32, 1474-1481 (2011).

**M. Mortensen, H. P. Langtangen and J. Myre:**

CBC.RANS - a new flexible, programmable software framework for computational fluid dynamics,  
in *Sixth national conference on Computational Mechanics (MekIT'11)*, editors: B. Skallerud and H.  
I. Andersson, 223-238, Tapir Academic Press (2011).

**M. Mortensen, H. P. Langtangen and G. N. Wells:**

[A FEniCS-based programming framework for modeling turbulent flow by the Reynolds-averaged Navier-Stokes equations](#),  
*Advances in Water Resources* 34 (9), 1082-1101 (2011).

**M. Mortensen, K. A. Mardal and H. P. Langtangen:**

[Simulations of transitional flows](#),  
in *Automated Solution of Differential Equations by the Finite Element Method: The FEniCS Book*,  
editors: A. Logg, K.-A. Mardal and G. N. Wells, Lecture Notes in Computational Science and  
Engineering, vol. 84, 397-414, Springer-Verlag (2011).

**A. Pöbitzer, M. Tutkun, Ø. Andreassen, R. Fuchs, R. Peikert and H. Hauser:**

[Energy-scale Aware Feature Extraction for Flow Visualization](#),  
*Computer Graphics Forum*, 30 (3), 771-780 (2011).

**M. Stanislas, J.-M. Foucaut, S. Coudert, M. Tutkun, W. K. George and J. Delville:**

[Calibration of the WALLTURB Experiment Hot-Wire Rake Using PIV](#),  
in *Progress in Wall Turbulence: Understanding and Modeling of Wall Turbulence*, ERCOFTAC  
Series, Vol. 14, Editors: M. Stanislas, J. Jimenez and I. Marusic, 75-84 (2011).

**M. Tutkun, W. K. George, M. Stanislas, J. Delville, J.-M. Foucaut and S. Coudert:**

[Two-Point Correlations and POD Analysis of the WALLTURB Experiment using the Hot-Wire Rake Database](#),  
in *Progress in Wall Turbulence: Understanding and Modeling of Wall Turbulence*, ERCOFTAC  
Series, Vol. 14, Editors: M. Stanislas, J. Jimenez and I. Marusic, 95-104 (2011).

**K. Valen-Sendstad, A. Logg, K.-A. Mardal, H. Narayanan and M. Mortensen:**

[A comparison of some common finite element schemes for the incompressible Navier-Stokes equations,](#)

in *Automated Solution of Differential Equations by the Finite Element Method: The FEniCS Book*, editors: A. Logg, K.-A. Mardal and G. N. Wells, Lecture Notes in Computational Science and Engineering, vol. 84, 377-398, Springer-Verlag (2011).

**K. Valen-Sendstad, K.-A. Mardal, M. Mortensen, B. A. Pettersson Reif and H. P. Langtangen:**  
[Direct numerical simulation of transitional flow in a patient specific intracranial aneurysm,](#)  
*Journal of Biomechanics*, 44 (16), pp. 2826 – 2832 (2011).

**K. Valen-Sendstad, K.-A. Mardal, M. Mortensen, B. A. Pettersson Reif and H. P. Langtangen:**  
On The Complexity of Stationary Flow in Patient-Specific Aneurysms,  
in *Sixth national conference on Computational Mechanics (MekIT'11)*, editors: B. Skallerud and H. I. Andersson, 379-392, Tapir Academic Press (2011).

**K. Valen-Sendstad, M. Mortensen, K.-A. Mardal, B. A. Pettersson Reif, and H. P. Langtangen:**  
Investigations of transitional flows using image based hemodynamics,  
in *Proceedings of the 8th International Conference on CFD in Oil & Gas, Metallurgical and Process Industries*, editors S. T. Johansen and J. E. Olsen, Tapir Academic Press (2011).

**T. Vik and B. A. Pettersson Reif:**

Large Eddy Simulations of the release of liquified Chlorine from a pressurized tank into the atmosphere,

in *Sixth national conference on Computational Mechanics (MekIT'11)*, editors: B. Skallerud and H. I. Andersson, 425-438, Tapir Academic Press (2011).

**T. Vik and B. A. Pettersson Reif:**

[Modeling the evaporation from a thin liquid surface beneath a turbulent boundary layer,](#)  
*International Journal of Thermal Sciences*, 50 (12), 2311-2317 (2011).

**C. N. Vooren and C. E. Wasberg:**

A numerical study of transverse curvature effects and anisotropy in wall-bounded turbulence,  
in *Sixth national conference on Computational Mechanics (MekIT'11)*, editors: B. Skallerud and H. I. Andersson, 439-451, Tapir Academic Press (2011).

**C. E. Wasberg:**

[Post-processing of marginally resolved spectral element data,](#)  
in *Spectral and High Order Methods for Partial Differential Equations*, editors: Jan S. Hesthaven and Einar M. Rønquist, Springer (2011).

**E. M. M. Wingstedt, T. Vik and B. A. Pettersson Reif:**

Numerical simulation of non-neutral gas dispersion in a complex urban area,

in *Sixth national conference on Computational Mechanics (MekIT'11)*, editors: B. Skallerud and H. I. Andersson, 463-471, Tapir Academic Press (2011).

**2010**

**T. Elboth, D. Lilja, B. A. Pettersson Reif and Ø. Andreassen:**

[Investigation of flow and flow noise around a seismic streamer cable,](#)  
*Geophysics*, 75 (1), Q1-Q9 (2010).

**T. Elboth, I. V. Presterud and D. Hermansen:**  
[Time-frequency seismic data de-noising](#),  
*Geophysical Prospecting* 58 (3), 441-453 (2010).

**M. Endregard, B.A.P. Reif, T. Vik and O. Busmundrud:**  
[Consequence assessment of indoor dispersion of sarin - A hypothetical scenario](#),  
*J. Hazard. Mater.*, **176**, 381-388 (2009).

**M. Mortensen, B. A. Pettersson Reif and C. E. Wasberg:**  
[Assessment of the finite volume method applied to the  \$v^2\$ -f model](#),  
*Int. J. Numer. Meth. Fluids*, 63(4), 495-516 (2010).

**R. Stresing, M. Tutkun and J. Peinke:**  
[Spatial Multipoint Correlations in Inhomogeneous Turbulence](#),  
in *Progress in Turbulence III*, Springer Proceedings in Physics Vol. 131, Editors: J. Peinke, M. Oberlack and A. Talamelli, 33-36 (2010).

**M. Tutkun, W. K. George and M. Stanislas:**  
[Structure of High Reynolds Number Adverse Pressure Gradient Turbulent Boundary Layer](#),  
in *Proceedings of the 27th Congress of the International Council of the Aeronautical Sciences (ICAS)*, Editor: I. Grant, Paper no: ICAS2010-3.9.2 (2010).

## 2009

**T. Elboth, B. A. Pettersson Reif and Ø. Andreassen:**  
[Flow and swell noise in marine seismic data](#),  
*Geophysics* **74** (2), Q17-Q25 (2009).

**T. Elboth, D. Hermansen and Ø. Andreassen:**  
[Some unusual types of noise](#),  
*EAGE Technical Program Expanded Abstracts* (2009).

**T. Elboth and D. Hermansen:**  
[Attenuation of noise in marine seismic data](#),  
*SEG Technical Program Expanded Abstracts*, 28 (2009).

**T. Elboth, C. E. Wasberg, A. Helgeland, Ø. Andreassen and B. A. Pettersson Reif:**  
Flow noise simulations around a cylinder,  
*Fifth national conference on Computational Mechanics (MekIT'09)* (2009).

**H. Fossum and B. A. Pettersson Reif:**  
Predicting particle deposition in the human airways with RANS turbulence modeling,  
*Fifth national conference on Computational Mechanics (MekIT'09)* (2009).

**W. K. George and M. Tutkun:**  
[Mind the Gap: A Guideline for Large Eddy Simulation](#),  
*Philosophical Transaction of Royal Society A*, **367** (1899), 2839-2847 (2009).

**M. Mortensen and R. W. Bilger:**  
[Derivation of the conditional moment closure for spray combustion](#),  
*Combustion and Flame*, **156** (1), 62-72 (2009).

**B. A. Pettersson Reif, M. Mortensen and C. Langer:**

[Towards sensitizing the nonlinear  \$v^2\$ -f-model to turbulence structures](#),  
*Flow, Turbulence and Combustion*, **83** (2), 185-203 (2009).

**M. Tutkun, W. K. George, J. Delville, M. Stanislas, P. B. V. Johansson, J. M. Foucaut and S. Coudert:**

[Two-Point Correlations in High Reynolds Number Flat Plate Turbulent Boundary Layers](#),  
*Journal of Turbulence*, **10** (21), 1-23 (2009).

**M. Tutkun, W. K. George, J. M. Foucaut, S. Coudert, M. Stanislas and J. Delville:**

[In Situ Calibration of Hot Wire Probes in Turbulent Flows](#),  
*Experiments in Fluids*, **46** (4), 617-629 (2009).

**M. Tutkun, B. A. Pettersson Reif, P. B. V. Johansson and J. Werne:**

Proper orthogonal decomposition of velocity and scalar fields in shear generated turbulence,  
*Fifth national conference on Computational Mechanics (MekIT'09)* (2009).

**K. Valen-Sendstad, M. Mortensen, H. P. Langtangen, B. A. Pettersson Reif and K.-A. Mardal:**

Implementing a k- $\epsilon$  turbulence model in the FEniCS finite element programming environment,  
*Fifth national conference on Computational Mechanics (MekIT'09)* (2009).

**M. Vartdal and B. A. Pettersson Reif:**

Numerical modeling of aerosol dispersion inside a rotating aerosol chamber,  
*Fifth national conference on Computational Mechanics (MekIT'09)* (2009).

**T. Vik and B. A. Pettersson Reif:**

Large eddy simulations of the evaporation from a liquid pool beneath a turbulent air flow,  
*Fifth national conference on Computational Mechanics (MekIT'09)* (2009).

**T. Vik, B. A. Pettersson Reif, M. Endregard:**

[CFD simulations of the evaporation from a liquid pool in a turbulent flow](#),  
in *7th symposium on CBRN threats (NBC2009)*, *Symposium proceedings*, editors: Paula Maatela, Sirpa Korpela, Defence Forces Technical Research Centre, Publications 18 (2009).

**E. Wingstedt and B. A. Pettersson Reif:**

Unsteady RANS modelling of pollutant dispersion in an idealized urban area,  
*Fifth national conference on Computational Mechanics (MekIT'09)* (2009).

**C. E. Wasberg, T. Gjesdal, B. A. Pettersson Reif and Ø. Andreassen:**

[Variational multiscale turbulence modelling in a high order spectral element method](#),  
*J. Comput. Phys.*, **228**, 7333-7356 (2009).

**2008**

**T. Elboth, H. H. Qaisrani and T. Hertweck:**

[De-noising seismic data in the time-frequency domain](#),  
*SEG Technical Program Expanded Abstracts*, **27**(1) 2622-2626 (2008).

**J. M. Blatny, B. A. Pettersson Reif, G. Skogan, Ø. Andreassen, E. A. Høiby, E. Ask, V. Waagen, D. Aanonsen, I. S. Aaberge and D. A. Caugant:**



[Tracking Airborne Legionella and Legionella pneumophila at a Biological Treatment Plant](#),  
*Environmental Science and Technology*, **42**, 7360-7367 (2008).

**M. Mortensen and S. M. de Bruyn Kops:**

[Conditional velocity statistics in the double scalar mixing layer - a mapping closure approach](#),  
*Combustion Theory and Modeling*, **12** (5), 929-941 (13) (2008).

**B. A. Pettersson Reif, M. Mortensen and C. A. Langer:**

[Towards sensitizing the nonlinear v2f model to turbulence structures](#),  
*Flow, Turbulence and Combustion*. 1573-1987 (2008).

**M. Tutkun, P. B. V. Johansson and W. K. George:**

[Three-Component Vectorial Proper Orthogonal Decomposition of Axisymmetric Wake behind a Disk](#),  
*AIAA Journal*, **46** (5), 1118-1134 (2008).

## 2007

**T. Gjesdal:**

[Implicit-explicit methods based on strong stability preserving multistep time discretizations](#),  
*Appl. Numer. Math.* **57**(8), 911-919 (2007).

**Ø. Andreassen, A. Helgeland, C. E. Wasberg and B. A. Pettersson Reif:**

[Visualization of vorticity and vortices in wall-bounded turbulent flows](#),  
*IEEE T. Vis. Comput. Gr.*, **13**(5), 1055-1066 (2007).

**M. Mortensen, S. M. de Bruyn Kops and C. M. Cha:**

[Direct numerical simulations of the double scalar mixing layer: Part II: Reactive scalars](#),  
*Combust. Flame*, **149**(4), 392-408 (2007).

**M. Tutkun, P. B. V. Johansson and B. A. P. Reif:**

[Visualization and Measurement of Flow over Cylindrical Surface with a Bump](#),  
*AIAA Journal*, **45** (7), 1763-1170 (2007).

## 2006

**C. Cha, S. M. de Bruyn Kops and M. Mortensen:**

[Direct numerical simulations of the double scalar mixing layer. Part I: Passive scalar mixing and dissipation](#),  
*Physics of Fluids*, **18**, 067106 (2006).

**T. Gjesdal, C. E. Wasberg and B. A. Pettersson Reif:**

[Spectral element benchmark simulations of natural convection in two-dimensional cavities](#),  
*Int. J. Numer. Meth. Fluids*, **50**(11), 1297-1319 (2006).

**A. Helgeland and T. Elboth:**

[High-Quality and Interactive Visualization of 3D Time-Varying Vector Fields](#),  
*IEEE T. Vis. Comput. Gr.*, **12**(6), 1535-1546 (2006).

**M. Mortensen and B. Andersson:**

[Presumed mapping functions for Eulerian modeling of turbulent mixing](#),  
*Flow, Turbulence and Combustion*, **76**, 2, 199-219 (2006)

**M. Oberlack, W. Cabot, B. A. Pettersson Reif and T. Weller:**  
[Group analysis, direct numerical simulation and modelling of turbulent channel flow with streamwise rotation](#),  
*Journal of Fluid Mechanics*, **562**, 383-403 (2006).

**B. A. Pettersson Reif, T. B. Gatski and C. L. Rumsey:**  
[On the behaviour of two-equation models in non-equilibrium homogeneous turbulence](#),  
*Physics of Fluids*, **18**, (6) (065108) (2006).

**B. A. Pettersson Reif:**  
[Towards a nonlinear eddy-viscosity model based on elliptic relaxation](#),  
*Flow, Turbulence and Combustion*, **76**, 241-256 (2006).

**C. L. Rumsey, B. A. Pettersson Reif and T. B. Gatski:**  
[Arbitrary Steady-State Solutions with the K-epsilon model](#),  
*AIAA Journal*, **44**, 1586-1592 (2006).

## 2005

**S. M. de Bruyn Kops and M. Mortensen:**  
[Conditional mixing statistics in a self-similar scalar mixing layer](#),  
*Physics of Fluids*, **17**, 095107 (2005).

**T. Gjesdal, C. E. Wasberg and B. A. Pettersson Reif:**  
Application of a variational multiscale turbulence model in a high-order spectral element flow solver,  
In *MekIT'05, Third national conference on Computational Mechanics*, editors: B. Skallerud and H.I. Andersson, 101-116, Tapir Akademisk Forlag, Trondheim (2005).

**M. Mortensen:**  
[Consistent modeling of scalar mixing for presumed multiple parameter probability density functions](#),  
*Physics of Fluids*, **17**, 018106 (2005).

**M. Mortensen:**  
[Implementation of a conditional moment closure for mixing sensitive reactions](#),  
*Chemical Engineering Science*, **59**, 24, 5709-5723 (2005).

## 2004

**A. Helgeland and Ø. Andreassen:**  
[Visualization of Vector Fields Using Seed LIC and Volume Rendering](#),  
*IEEE T. Vis. Comput. Gr.*, **10** (6), 673-682 (2004).

**M. Tutkun and L. Mydlarski:**  
[Markovian Properties of Passive Scalar Increments in Grid Generated Turbulence](#),  
*New Journal of Physics*, **6** (49), 1-24 (2004).

## 2003

**B. A. Pettersson Reif and Ø. Andreassen:**

[On local isotropy in stratified homogeneous turbulence](#),  
*SIAM Journal of Applied Mathematics*, **64**, 309-321 (2003).

**B. A. Pettersson Reif and H. I. Andersson:**

[Turbulent flow in a rotating square duct: a modelling study](#),  
*Journal of Turbulence*, **4**, 012 (2003).

**T. Gjesdal, C. E. Wasberg and Ø. Andreassen:**

Spectral element simulations of buoyancy-driven flow,  
In *MekIT'03, Second national conference on Computational Mechanics*, editors: B. Skallerud and H.I. Andersson, 117-128, Tapir Akademisk Forlag, Trondheim (2003).

**B. A. Pettersson Reif, Ø. Andreassen and J. Werne:**

A single-point description of large scale structures in stratified turbulent shear flows,  
In *MekIT'03, Second national conference on Computational Mechanics*, editors: B. Skallerud and H.I. Andersson, 295-307, Tapir Akademisk Forlag, Trondheim (2003).

**C. E. Wasberg and B. A. Pettersson Reif:**

Large-eddy simulation of flow around a wall-mounted cylinder,  
In *MekIT'03, Second national conference on Computational Mechanics*, editors: B. Skallerud and H.I. Andersson, 391-406, Tapir Akademisk Forlag, Trondheim (2003).

## 2002

**P. A. Durbin and B. A. Pettersson Reif:**

[The elliptic relaxation method](#),  
In: *Closure Strategies for Turbulent and Transitional Flows*, B. E. Launder & N. D. Sandham (eds),  
Cambridge University Press, 127-152 (2002).

**B. A. Pettersson Reif and H. I. Andersson:**

[Prediction of turbulence-generated secondary mean flow in a square duct](#),  
*Flow, Turbulence and Combustion*, **68**, 41-61 (2002).

## 2001

**P. A. Durbin and B. A. Pettersson Reif:**

*Statistical Theory and Modeling for Turbulent Flows*,  
Wiley & Sons, Wichester, 285 pages. ISBN 0-471-49736-3 (2001).

**C. E. Wasberg, Ø. Andreassen and B. A. Pettersson Reif:**

Numerical simulation of turbulence by spectral element methods,  
In *MekIT'01, First national conference on Computational Mechanics*, editors: B. Skallerud and H.I. Andersson, 387-402, Tapir Akademisk Forlag, Trondheim (2001).

## 2000

**B. A. Pettersson Reif and H. I. Andersson:**

[Prediction of longitudinal roll-cells in rotating plane turbulent Couette flow](#),  
*Theoretical and Computational Fluid Dynamics*, **14**, 89-104 (2000).

**G. Dutzler, B. A. Pettersson Reif and H. I. Andersson:**

[Relaminarization of turbulent flow in the entrance region of a rapidly rotating channel](#),  
*International Journal of Heat and Fluid Flow*, **21**, 49-57 (2000).

**C. E. Wasberg and D. Gottlieb:**

[Optimal decomposition of the domain in spectral methods for wave-like phenomena](#),  
*SIAM J. Sci. Comput.*, **22**(2), 617-632 (2000).

**1999**

**P. A. Durbin and B. A. Pettersson Reif:**

[On algebraic second moment models](#),  
*Flow, Turbulence and Combustion*, **63**, 23-37 (1999).

**B. A. Pettersson Reif, P. A. Durbin and A. Ooi:**

[Modeling rotational effects in eddy-viscosity closures](#),  
*International Journal of Heat and Fluid Flow*, **20**, 563-573 (1999).