Date:30 September 2013

R E S U M E

Full name:	René van Hout
Date and Place of Birth:	11 April 1967, Meerlo, The Netherlands
Web site:	http://meeng.technion.ac.il/

ACADEMIC DEGREES

Year	*Degree*	*Department*	*Institution*
2001	PhD	Fluid Mechanics and Heat Transfer	Faculty of Engineering, Department of Fluid Mechanics and Heat Transfer, Tel-Aviv University, Israel
1991	MSc	Mechanical Engineering	Department of Fluid Mechanics and Heat Transfer, Eindhoven University of Technology, The Netherlands.

ACADEMIC APPOINTMENTS

Years	*Position*	*Institution*
2006 -	Assistant Professor	Technion – IIT, Faculty of Mechanical Engineering, Haifa, Israel
2005 - 2006	Lecturer	Afeka, Tel-Aviv Academic College of Engineering, Israel
2002 - 2005	Postdoctoral Fellow	Department of Mechanical Engineering, The Johns Hopkins University, Baltimore, USA

GUEST APPOINTMENTS

Institution	*Period*
École Polytechnique Fédérale de Lausanne, Switzerland	August 2009

PROFESSIONAL EXPERIENCE

Years	*Position*	*Place of employment*
1992 - 1993	Process engineer	NRF – Thermal Engineering, Uden, The Netherlands

RESEARCH INTERESTS

My research interests lie in the broad area of experimental fluid mechanics, heat transfer and environmental multi-phase flows focusing on:

- Canopy boundary layers
- Particle (solids, droplets or bubbles) – turbulence interactions
- Atmospheric particle (pollen) dispersal
- Wind/water erosion problems
- Flow-structure interactions
- Basic heat transfer improvements

TEACHING EXPERIENCE

Tel-Aviv University

Years	*Course*	*Level*
1996 - 2001	Fluid Mechanics and Heat Transfer Laboratories	Undergraduate teaching assistant
1996 - 2001	Heat Transfer	Undergraduate teaching assistant

Afeka Tel-Aviv Academic Engineering College

Years	*Course*	*Level*
2005 -2006	Statics	Undergraduate
2005 - 2006	Mechanics of Materials	Undergraduate
2005 - 2006	Thermodynamics	Undergraduate

Technion - IIT

Years	*Course*	*Level*
2007-2009	Heat Transfer	Undergraduate
2007-2012	Experimental Methods Laboratories	Undergraduate
2008-2010, 2011-2012	Convection Heat Transfer	Graduate
2009-2012	Thermodynamics I	Undergraduate
2010-2013	Turbulent Flows	Undergraduate/Graduate

DEPARTMENTAL ACTIVITIES

- Active at Technion open day for new students.
- Seminar coordinator at the Faculty of Mechanical Engineering: 2007-2011.
- New course development: 'Turbulent flows'

PUBLIC PROFESSIONAL ACTIVITIES

- Reviewer for professional journals, including International Journal of Multiphase Flow, International Journal of Heat & Mass Transfer, Agricultural and Forest Meteorology, Chemical Engineering Science, Proceedings of the National Academy of Sciences (PNAS), Transport in Porous Media, Energy, Physics of Fluids, Experiments in Fluids.
- Steering committee member of COST action FP1005: "Fibre suspension flow modelling", 2011 - present.

MEMBERSHIP IN PROFESSIONAL SOCIETIES

- American Physical Society (2004-2005, 2007 – present)
- IAAR (2008 – present)

GRADUATE STUDENTS

Graduate students
MSc students [7]
Completed theses [6]

2008-2011	Lilach Sabban	Measurements of Pollen Settling in Quiescent Air and in Near Homogeneous Isotropic Turbulence [J18, J20, C1]
2008-2012	Javier Arca	Development of a digital holography system for the investigation of particle-fluid coupling in a turbulent flow
2007-2012	Alexander Krakovich	Nonlinear dynamics, instabilities, and vortex-induced vibration of a tethered sphere in a steady fluid flow [J16, J21]. *Winner of "Aaron and Ovadia Barzani" prize of excellency* Co-advisor: Dr. O. Gottlieb, Faculty of Mechanical Engineering.
2010-2012	Lior Eshbal	Experimental study of vortex-induced vibrations of a tethered sphere exposed to a steady, uniform flow [J21] *"Brakim" program (Prestigious combined BSc/MSc program for talented students)*
2009-2013	Amit Katz	Active flow control of vortex induced vibrations of a tethered sphere in a steady fluid flow [J22] Co-advisor: Dr. D. Greenblatt, Faculty of Mechanical Engineering
2012 - 2013	Boris Rabencov	Experimental investigation of bead dispersal in a turbulent boundary layer using time-resolved digital holography *"Brakim" program (Prestigious combined BSc/MSc program for talented students)*

Theses in progress [1]

2013-present	Assaf Cohen	Temporal and spatial measurements of the distribution and orientation of fibers in a turbulent boundary layer. *"Brakim program" (Prestigious combined BSc/MSc program for talented students)* [J24]

PhD students [3]
Theses in progress [3]

2011 - present	Neta-Lee Jacobson	Pine pollen release and capture mechanisms (PhD). Passed *PhD candidacy exam.* [J20]
2011 - present	Moti Raizner	Investigation of the flow and heat transfer dynamics of a jet with unsteady average mass flux impinging on a heated surface (PhD). Passed *PhD candidacy exam.* Co-advisor: Prof. G. Grossman, Faculty of Mechanical Engineering
2011 - present	Lilach Sabban	Investigation of the effect of particle morphology on aerosol dispersion in turbulence (PhD). [J24] Passed *PhD candidacy exam.*

Undergraduate final projects

2007-2008	Gil Tov – Ly, Leonid Klebanov	Design, construction and setup of experimental facility for the measurement of the interaction between particles (drops or solids) and isotropic, homogeneous turbulence.
2007-2008	David Revivo, Assaf Geva	Design, construction and setup of small blow-down facility (windtunnel).
2008-2009	Yevgenya Pelts, Liat Barhum	High-speed measurements of the characteristics of micro-droplets generated by high-speed valve controlled micro nozzles.
2009-2010	Lior Eshbal	Vortex-induced vibrations of tethered structures, e.g. spheres and cylinders, exposed to a uniform flow. *"Brakim program" (Prestigious combined BSc/MSc program for talented students), continued to MSc studies*
2010-2011	Boris Rabencov	Measurements of particle dispersion in a turbulent boundary layer using digital holographic cinematography. *"Brakim program" (Prestigious combined BSc/MSc program for talented students), continued to MSc studies*
2011-2012	Artiom Zayats	Tomographic measurements of the flow field in the wake of a tethered sphere.
2012-2013	Assaf Cohen	Temporal and spatial measurements of the distribution and orientation of fibers in a turbulent boundary layer. *"Brakim program" (Prestigious combined BSc/MSc program for talented students), continued to MSc studies* [J24]

RESEARCH GRANTS

Years	*Funding agency and project*	*Amount*	*Principal Investigator(s)*
2007	Wolfson Family Charitable Trust Support of young investigators: Equipment grant	£258,366.-	R. van Hout
2007-2011	US-Israel Binational Science Foundation *"Pollen release mechanisms in ragweed (Ambrosia): Evolutionary aspects and implications for long distance pollen dispersal"*	$180,000.-	R. van Hout & G. Brush, The Johns Hopkins University, Baltimore, USA
2010 - 2014	Israel Science Foundation *"Aerodynamics of pine pollen release, dispersal and capture: the influence of morphological adaptations on pollination efficiency"*	$230,000.-	R. van Hout

PUBLICATIONS

Theses

1. R. van Hout, 1991. *Experimental study of hydrodynamic parameters in vertical upward slug flow*. MSc-thesis, Eindhoven University of Technology, Faculty of Mechanical Engineering, Department of Fluid Mechanics and Heat Transfer, The Netherlands.
2. R. van Hout, 2001. *Investigation of the hydrodynamic and statistical parameters in undeveloped gas-liquid slug flow*. PhD-thesis, Tel-Aviv University, Faculty of Engineering, Department of Fluid Mechanics and Heat Transfer, Israel.

Refereed papers in professional journals

Published papers

J1. *van Hout R, Shemer L, Barnea D, 1992: Spatial distribution of void fraction within the liquid slug and some other related slug parameters. *Int. J. Multiphase Flow* **18**, 831-845.

J2. *van Hout R, Barnea D, Shemer L, 2001: Evolution of statistical parameters of gas-liquid slug flow along vertical pipes. *Int. J. Multiphase Flow* **27**, 1579-1602.

J3. *van Hout R, *Gulitski A, Barnea D, Shemer L, 2002: Experimental investigation of the velocity field induced by a Taylor bubble rising in stagnant water. *Int. J. Multiphase Flow* **28**, 579-596.

J4. *van Hout R, Barnea D, Shemer L, 2002: Translational velocities of elongated bubbles in continuous slug flow. *Int. J. Multiphase Flow* **28**, 1333-1350.

J5. *van Hout R, 2002: Unsteady flow phenomena: Implications on the design of experimental facilities. *Int. J. Multiphase Flow* **28**, 1581-1588.

J6. *van Hout, R, Barnea D, Shemer L, 2003: Evolution of hydrodynamic and statistical parameters of gas-liquid slug flow along inclined pipes. *Chem. Eng. Sci.* **58**, 115-133.

J7. van Hout R, Katz J, 2004: A method for measuring the density of irregularly shaped biological aerosols such as pollen. *J. Aeros. Sci.* **35**, 1369-1384.

J8. *Zhu W, van Hout R, *Luznik L, Kang HS, Katz J, Meneveau C, 2006: A Comparison of PIV Measurements of Canopy Turbulence Performed in the Field and in a Wind Tunnel Model. *Exp. Fluids* **41**, 309-318.

J9. *Zhu W, van Hout R, Katz J, 2007: On the Flow Structure and Turbulence during Sweep and Ejection Events in a Windtunnel Model Canopy. *Boundary-Layer Meteorol.* **124**, 205-233.

J10. *Chamecki M, van Hout R, Meneveau C, Parlange MB, 2007: Concentration profiles of particles in the neutral and stratified atmospheric boundary layer. *Boundary-Layer Meteorol*. **125**, 25-38.

J11. *Yue W, Meneveau C, Parlange M, *Zhu W, van Hout R, Katz J, 2007: A comparative quadrant analysis of turbulence in a plant canopy. *Water Resour. Res.* **43**, W05422, DOI 10.1029/2006WR005583.

J12. van Hout R, *Zhu W, *Luznik L, Katz J, *Kleissl J, Parlange M, 2007: PIV measurements in the atmospheric boundary layer within and above a mature corn canopy; Part I: Statistics and energy flux. *J. Atmos. Sci.* **64**, 2805-2824.

J13. *Zhu W, van Hout R, Katz J, 2007: PIV measurements in the atmospheric boundary layer within and above a mature corn canopy; Part II: Quadrant-Hole analysis. *J. Atmos. Sci.* **64**, 2825-2838.

J14. *Yue W, Parlange M, Meneveau C, *Zhu W, van Hout R, Katz J, 2007: Large eddy simulation study of turbulence structures within and above a corn canopy, using field- and plantscale representations. *Boundary-Layer Meteorol.* **124**, 183-203.

J15. van Hout R, *Chamecki M, Brush G, Katz J, Parlange M B, 2008: The influence of local meteorological conditions on the circadian rhythm of corn (*Zea mays L.*) pollen emission. *Agric. For. Meteorol.* **148**, 1078-1092.

J16. van Hout R., *Krakovich A., Gottlieb O., 2010: Time resolved measurements of vortex-induced vibrations of a tethered sphere in uniform flow. *Physics of Fluids **22***, Vol. 8: DOI: 10.1063/1.3466660.

J17. van Hout R., 2010. Time resolved PIV measurements of the interaction of polystyrene beads with near-wall coherent structures in a turbulent channel flow. *Int. J. Multiphase Flow* **37**, 346-357.

J18. *Sabban, L., van Hout, R., 2011. Measurements of pollen grain dispersal in still air and stationary, near homogeneous, isotropic turbulence. *J. Aeros. Sci.* **42**, 867-882.

J19. van Hout, R., Katz, J., 2011. Measurements of mean flow and turbulence characteristics in high-Reynolds number counter-rotating Taylor-Couette flow. *Physics of Fluids* **23**, 105102-1 to 11.

J20. *Sabban, L., *Jacobson, N., van Hout, R., 2012. Measurement of pollen clump release and breakup in the vicinity of ragweed (*A. confertiflora*) staminate flowers. *Ecosphere* **3** (7): 65. http://dx.doi.org/10.1890/ES12-00054.1.

J21. *Eshbal, L., *Krakovich, A., van Hout, R., 2012. Time resolved measurements of vortex-induced vibrations of a positively buoyant tethered sphere in uniform water flow. *Journal of Fluids and Structures* 35, 185-199.

J22. van Hout, R., *Katz, A., Greenblatt, D., 2013. Acoustic control of vortex-induced vibrations of a tethered sphere. *AIAA Journal* 51, 754-757.

J23. van Hout, R., 2013. Spatially and temporally resolved measurements of bead resuspension and saltation in a turbulent channel flow. *Journal of Fluid Mechanics* **715**, 389-423.

J24. van Hout, R, *Sabban, L., *Cohen, A., 2013. The use of high speed PIV and holographic cinematography in the study of fiber suspension flows. Accepted for publication by *Acta Mechanica* Special Issue on "Anisotropic particles in turbulent flows".

J25. van Hout, R., *Katz, A., Greenblatt, D., 2013. Time-resolved PIV measurements of vortex and shear layer dynamics in the near wake of a tethered sphere. *Physics of Fluids* **25**, 077102; doi: 10.1063/1.4812181

Submitted papers

JS1. *Krakovich, A., *Eshbal, L., van Hout, R., 2013. Vortex dynamics and associated fluid forcing in the near wake of a light and heavy tethered sphere in uniform flow. Submitted to *Experiments in Fluids*, after first review

* Graduate students

CONFERENCES

Refereed papers in conference proceedings

C1. Sabban L., van Hout R. 2010. Measurement of pollen settling characteristics in near homogeneous isotropic turbulence. *Proceedings of the 7th International Conference on Multiphase Flow*, ICMF 2010, Tampa, FL USA, May 30-June 4, 2010

C2. van Hout R. 2010. Time-resolved PIV measurements of particle-flow interactions in a turbulent boundary layer. *Proceedings of the 7th International Conference on Multiphase Flow*, ICMF 2010, Tampa, FL USA, May 30-June 4, 2010

C3. van Hout R., Katz, J. 2007. PIV measurements of the velocity field in counter-rotating cylindrical Couette flow. *Proceedings of the 4th Ankara International Aerospace Conference*, September 10-12, METU Ankara, Turkey.

C4. Zhu W, van Hout R, Luznik L, Kang HS, Katz J, Meneveau C, 2005: Applying PIV for Measuring Turbulence just within and above a Corn Canopy. *Proceedings of the 6th International Symposium on Particle Image Velocimetry (PIV'05)*, Pasadena, California, USA, September 21-23.

C5. van Hout R, Barnea D, Shemer L, 2001: Evolution of two-phase slug flow in vertical and inclined pipes. *Proceedings 5th World Conference on Experimental Heat Transfer, Fluid Mechanics and Thermodynamics* Thessaloniki, Greece, September 24-28.

C6. van Hout R, Barnea D, Shemer L, 2001: Evolution of length distributions along the pipe in vertical and inclined upward slug flow. *Proceedings of the 4th International Conference on Multiphase Flow. ICMF-2001*, May 27 to June 1, New Orleans Louisiana, USA.

Conference lecture presentations

CL1. Katz, A., van Hout, R., Greenblatt, D., 2013. VIV of a tethered sphere in a steady flow: Near-wake flow and effect of active flow control on sphere dynamics. *Bifurcations and instabilities in fluid dynamics Fifth International Symposium* Technion - Israel Institute of Technology, Haifa, Israel, 8 - 11 July

CL2. van Hout, R., 2013. Measurements of bead resuspension and saltation in a turbulent channel flow. *Particles in turbulence, International Conference on Fundamentals, Experiments, Numerics and Applications* 1-5 July, Eindhoven University of Technology, The Netherlands.

CL3. Sabban, L., van Hout, R., 2013. TR-PIV measurements of nylon fibers suspended in near homogeneous isotropic turbulence. *Particles in turbulence, International Conference on Fundamentals, Experiments, Numerics and Applications* 1-5 July, Eindhoven University of Technology, The Netherlands.

CL4. Cohen, A., 2013. High speed holographic measurements of fiber trajectories and orientation in near homogeneous, isotropic turbulence. *Particles in turbulence, International Conference on Fundamentals, Experiments, Numerics and Applications* 1-5 July, Eindhoven University of Technology, The Netherlands.

CL5. Cohen, A, Sabban, L., van Hout, R., 2013. High-speed holographic measurements of fiber trajectories and orientation in near homogeneous, isotropic turbulence. *26th Annual Meeting of the Israeli Association for Aerosol Research*, Tel-Aviv, Israel.

CL6. Sabban, L., van Hout, R., 2013. Time resolved measurements of fiber-flow interaction in near homogeneous isotropic turbulence. *26th Annual Meeting of the Israeli Association for Aerosol Research*, Tel-aviv, Israel.

CL7. Katz, A., van Hout, R., Greenblatt, D., 2012. Acoustic control of vortex-induced vibrations of a tethered sphere. *The 32nd Israeli Conference on Mechanical Engineering*, Tel-Aviv University, 17-18 October.

CL8. Rabencov, B., Arca, J., van Hout, R., 2012. Lagrangian tracking of polystyrene beads entrained in a turbulent flow using single view, digital holographic cinematography. *The 32nd Israeli Conference on Mechanical Engineering*, Tel-Aviv University, 17-18 October.

CL9. Krakovich, A., Eshbal, L., van Hout, R., 2012. VIV of a tethered sphere in a uniform flow: simultaneous measurements of sphere and flow dynamics. *9th European Fluid Mechanics Conference*, 9-13 september, Rome, Italy.

CL10. Rabencov, B., Arca, J., van Hout, R., 2012. Investigation of bead dispersal in a turbulent flow using high-speed, digital holographic cinematography. *9th European Fluid Mechanics Conference*, 9-13 september, Rome, Italy.

CL11. van Hout, R., Eshbal, L., Krakovich, A., 2012. Measurements of the non-linear vortex induced vibrations of a light tethered sphere in a uniform flow. *4th International Conference on Localization, Energy Transfer and Nonlinear Normal Modes in Mechanics and Physics*, 1-5 July, Haifa, Israel.

CL12. Sabban, L., Jacobson, N., van Hout, R., 2012. Measurement of pollen clump release and breakup in the vicinity of ragweed (*A. confertiflora*) staminate flowers. *The 25th Annual Meeting of the Israeli Association of Aerosol Research*, 1st March, Weizmann Institute, Rehovot, Israel.

CL13. Van Hout, R., Greenblatt, D., Katz, A., 2011. Active Control of Vortex Induced Vibrations of a Tethered Sphere in a Uniform Air Flow. *64th Annual Meeting of the APS Division of Fluid Dynamics*, 20-22 November, Baltimore, USA.

CL14. van Hout, R., Eshbal, L., Krakovich, A., Gottlieb, O., 2011. Experimental comparison of nonlinear vortex-induced vibration of buoyant and non-buoyant tethered spheres exposed to a uniform flow. *7th European Nonlinear Dynamics Conference*, 24-29 July, Rome, Italy.

CL15. van Hout, R., Sabban, L., 2011. Experimental investigation of non-spherical pollen grain settling in near homogeneous isotropic turbulence. *513th EUROMECH Colloquium on "Dynamics of non-spherical particles in fluid turbulence"*, April 6th to 8th, Udine, Italy

CL16. van Hout, R., 2011. TR-PIV measurements of polystyrene beads entrained in a turbulent water channel flow. *Particles in Turbulence 2011. International Conference on Fundamentals, Experiments, Numerics and Applications*, 16-18 March, Potsdam, Germany.

CL17. Sabban, L., van Hout, R., 2011. Measurements of pollen settling in quiescent air and in near homogeneous isotropic turbulence. *The 24th Annual Meeting of the Israeli Association of Aerosol Research*, 23rd February, Technion – IIT, Israel.

CL18. van Hout, R., Krakovich, A., Gottlieb, O., 2009. Time resolved measurements of vortex-induced-vibration of a tethered sphere. *62nd Annual Meeting of the American Physical Society's Division of Fluid Dynamics* (DFD), November 22nd to 24th, Minneapolis, Minnesota, USA.

CL19. van Hout R., Sabban, L., 2008. Pollen dispersal and capture mechanisms by wind pollinated (anemophilous) plants. *22nd Annual Meeting of the Israeli Association for Aerosol Research*, December 24, Tel-Aviv, Israel

CL20. van Hout R., Katz J., 2007. PIV measurements of the velocity field in counter- rotating cylindrical Couette flow. APS, *60th Annual Meeting of the Division of Fluid Dynamics*, November 18 – 20, Salt Lake City, Utah, USA.

CL21. Yue W., Zhu W., van Hout R., Meneveau C., Parlange M., Katz J., 2005. A comparative quadrant analysis of canopy turbulence based on LES and field-PIV data. *APS Division of Fluid Dynamics 58th Annual Meeting*, November 20-22, Chicago, IL, USA.

CL22. Zhu W., van Hout R., Luznik L., Kang H. S., Katz J., Meneveau C., 2005. Applying PIV for Measuring Turbulence just within and above a Corn Canopy. *6th International Symposium on Particle Image Velocimetry*, September 21-23, Pasadena, California, USA.

CL23. van Hout R., Zhu W., Luznik L., Katz J., 2004. PIV measurements of atmospheric turbulence above and within a corn canopy. *APS Division of Fluid Dynamics 57th Annual Meeting*, November 21-23, Seattle, WA, USA.

CL24. Yue W., Parlange M., Meneveau C., Zhu W., van Hout R., Katz J., 2004. Numerical Investigation of Turbulence Structures Within and Above A Corn Canopy Using Large Eddy Simulation. *AMS, 16th Symposium on Boundary Layers and Turbulence*, August 9-13, Portland, ME, USA.

CL25. Zhu W., Luznik L., van Hout R., Katz J., 2004. PIV measurements of atmospheric turbulence above and within a corn canopy. *AMS, 16th Symposium on Boundary Layers and Turbulence,* August 9-13, Portland, ME, USA.

Invited lecture presentations

CI1. Van Hout, R., Arca, J., 2011. Development of a Digital Holography System for the Investigation of Particle Dispersal in a Turbulent Flow. *49th European Two-Phase Group Meeting*, 29th May – 2nd June, Tel-Aviv, Israel.

CI2. van Hout R., 2007. Experimental study of particle-turbulence interactions. *45th European Two-Phase Flow Group Meeting*, May 22-24, Toulouse, France.

Conference poster presentations

CP1. van Hout, R., Rabencov, B., Arca, J., 2011. Time resolved measurements of particle lift off from the wall in a turbulent water channel flow. *64th Annual Meeting of the APS Division of Fluid Dynamics*, 20-22 November, Baltimore, USA.

CP2. Jacobson, N., Sabban, L., van Hout, R., 2011. Wind tunnel measurements of pollen release and entrainment in the vicinity of ragweed (Ambrosia) flowers. *The 24th Annual Meeting of the Israeli Association of Aerosol Research*, 23rd February, Technion – IIT, Israel.

CP3. Krakovich, A., van Hout, R., Gottlieb O., 2010. Vortex-induced-vibrations of a tethered sphere: simultaneous high-speed measurements of sphere motion and vortex shedding mechanisms. *IUTAM BBVIV6* 22-25 June, Capri Island, Italy.

CP4. van Hout, R., Sabban, L., 2009. Experimental study on pollen settling characteristics in isotropic homogeneous turbulence. 6 – 11 September, *European Aerosol Conference*, Karlsruhe, Germany.

CP5. van Hout R., Smith J., Chamecki M., Higgins C., Katz J., Parlange M., Brush G., 2005. The circadian rhythm of corn (*Zea mays L.*) pollen dispersal into the atmosphere and its relation with local meteorological conditions. *The 2005 BE Investigators Conference, "Understanding and Harnessing Complexity in the Environment"*, March 21-23, Washington, DC, USA.

CP6. van Hout R., Zhu W., Katz J., 2005. Experimental study at increasing scales of the characteristics of corn (*Zea Mays L.*) pollen dispersal into the atmosphere. *The 2005 BE Investigators Conference, "Understanding and Harnessing Complexity in the Environment"*, March 21-23, Washington, DC, USA.

CP7. van Hout R., Katz J., 2003. A method for measuring the density of irregularly shaped particles such as pollen. *AGU 2003 Fall meeting*, December 8-12, Moscone Center West, San Francisco, USA.

CP8. Zhu W., Luznik L., van Hout R., Katz J., 2003. PIV measurements of atmospheric turbulence and pollen dispersal above a corn canopy. *AGU 2003 Fall meeting*, December 8-12, Moscone Center West, San Francisco, USA.

Invited talks

- University of Twente
  Physics of Fluids Group, Department of Applied Physics, Faculty of Science
  "PIV and holography measurements of particle dynamics in turbulent flows" (August 2013)
- Cornell University
  Sibley School of Mechanical and Aerospace Engineering
  "Vortex-induced vibrations of a tethered sphere in uniform flow: Time-resolved measurements of self-excited sphere dynamics and wake characteristics" (May 2012)
- University of California, Berkeley, USA.
  Civil and Environmental Engineering
  "Time resolved measurements of the interaction of polystyrene beads with near-wall coherent structures in a turbulent channel flow" (May 2012)
- Georgia Institute of Technology,
  George W. Woodruff School of Mechanical Engineering, Atlanta, USA.
  "Time resolved measurements of the interaction of polystyrene beads with near-wall coherent structures in a turbulent channel flow" (May 2012)
- Israel Institute for Biological Research, Ness Tziona, Israel
  "The effect of canopy flow structure and meteorological conditions on atmospheric corn pollen emission" (2008)
- The Volcani center, Bet Dagan, Israel
  "The effect of canopy flow structure and meteorological conditions on atmospheric corn pollen emission" (2007)
- École Polytechnique Fédérale de Lausanne, Switzerland
  "Turbulent flow structure in canopies and its implications for atmospheric pollen transfer" (2007)

  "Experimental Investigation of Particle-Turbulence Interactions" (2009)
- Technion – IIT, Faculty of Chemical Engineering, Haifa, Israel
  "Turbulent flow structure in canopies and its implications for atmospheric pollen transfer" (2007)