Curriculum Vitae

Marko Princevac

Department of Mechanical Engineering, Bourns Hall A359, Bourns College of Engineering, University of California, Riverside, CA 92521

Education

2003: Ph.D. in Mechanical Engineering, Arizona State University, U.S.A.
1997: B.Sc. in Mechanical Engineering and Naval Architecture, University of Belgrade, Serbia.

Work Experience in Academia

2020-present: Interim Vice Provost for International Affairs
University of California, Riverside

2017-present: Associate Dean for Student Academic Affairs, Marlan and Rosemary Bourns College of Engineering, University of California, Riverside

2016-2017: Interim Associate Dean for Student Academic Affairs, Bourns College of Engineering, University of California, Riverside

2016-present: Professor. University of California, Riverside, Bourns College of Engineering, Department of Mechanical Engineering

2010-2016: Associate Professor. University of California, Riverside, Bourns College of Engineering, Department of Mechanical Engineering

2004-2010: Assistant Professor. University of California, Riverside, Bourns College of Engineering, Department of Mechanical Engineering

2003-2004: Post Doctoral Research Associate. Arizona State University, Mechanical and Aerospace Engineering.

1999-2003: Research Assistant, Arizona State University.
Research consisted of laboratory experiments, field measurements and theoretical analysis, with the main goal being better understanding of nature and structure of thermally driven flows in complex terrain.

2000: Teaching Assistant, Arizona State University.
Served as a Teaching Assistant for two undergraduate courses (under the auspices of the GAANN program).

1997-1999: Assistant Lecturer and Research Assistant, University of Belgrade.
Served as an Assistant Lecturer for three upper level undergraduate courses and doing research on ship resistance and propulsion of semi-displacement hull forms.

Industrial Work Experience

2013-: "Solar Turbines", San Diego, CA, U.S.A. Swirling cooling of the first turbine stage – in charge of a test cell.

2012-2013: "World Kitchen"/"Snapware", Mira Loma, CA. Consulting on fire polishing.

1995: "Premez Clados Del Norte", Matamoros, Tamaulipas, Mexico. Working as a laboratory and field supervisor.

1994: "Roller-Bearing Industry Belgrade", Serbia. Working on problems of final polishing of the inner and outer bearing rings.

Professional Affiliations

The American Society of Mechanical Engineers (ASME)
The American Meteorological Society (AMS)

The Society of Naval Architects and Marine Engineers (SNAME)

Projects

A validated second hand smoking exposure model for Electronic Nicotine Delivery Systems (ENDS), TRDRP, co-PI, 2019-2022

Clean Stacking Options and Regional IAP Scenarios for Rural Mexico, NIH, co-PI, 2019-2020

Systematic Exploration of the Ignition of Ladder Fuels by a Wildland Flame, USDA, PI, 2019-2021

Training from Undergraduate through Navy Engagement (TUNE), ONR, PI, 2018-2021

Understanding the Role of Fluidic Microenvironment in Stem Cell Suspension Culture toward Scalable Biomanufacturing, NSF, co-PI, 2018-2021

Wildfire Ignition by Mechanized Equipment, Phase 2 - Experiments, USDA FS San Dimas, PI, 2016-2017.

Fundamental Measurements and Modeling of Prescribed Fire Behavior in the Naturally Heterogeneous Fuel Beds of Southern Pine Forests, DoD SERDP, co-PI, 2016-2020

Front- and Aft- Disc Cavity Ingestion, Solar Turbines, PI, 2016-2017

Wildfire Ignition by Mechanized Equipment, USDA FS San Dimas, PI, 2015-2016.

A Global Map of Feasible Residential Solutions, Emphasizing Stoves with Space Heating Uses, US EPA, Co-PI, 2014-2017.

Impact of Air-Lubrication on Propulsion Efficiency, UCR COR Grant, PI, 2014-2015.

Interception of Smoke by a Forest Canopy, PSW FS, Co-PI, 2014.

Measurements of thermal load on fire engines, FS SDTDC, PI, 2013.

Chaparral Fire – Passive or Active Crown Fire, PSW FS, PI, 2013-2015.

Cooling of the first turbine stage, Solar Turbines, PI, 2013-2016.

Ecosystem Ozone (O3) Flux and Stomatal Uptake: Assessment of Environmental Controls and Functional Responses of Mixed Conifer Sites Along Two Pollution Gradients. USDA PSW, Co-PI, 2012-2013.

Systematical physical modeling of sound walls, tree-lines, sunken and raised roadways. SCAQMD, PI, 2011-2012.

Model for Air Quality forecast for Santiago, Chile. Mario Molina Center, Santiago, Chile, 2011-2012.

Measurements of thermal load on bulldozers, FS SDTDC, PI, 2010.

Impact of hydrogen injection in marine diesel engine, CARB, PI, 2010.

Improving understanding of regional and near-source air quality impacts of DG sources, CEC, Co-PI, 2009-2013.

Superfog formation: laboratory experiments and model development, USDA JFSP, PI, 2009-2012.

Success Partnership for Increasing Recruitment into Technology (SPIRIT), NSF, Co-PI, 2008-2009.

Near Source Modeling of Transportation Emissions in Built Environ. Surrounding Major Arterials, UCTC, PI, 2007-2009.

Investigation of Fluxes along Urban/Rural Transect, UC Regents, PI, 2007-2008.

Near Field Impact of Distributed Generation through Tracer Studies and Water Channel Testing, CEC, Co-PI, 2007-2009.

New Tools for Estimating and managing Local/Regional Air Quality Impacts of Prescribed Burns, SERDP, Co-PI, 2008-2010.

Exploratory field study on the relationships between meteorology and air quality, EPA, Co-PI, 2006-2007.

Flume experiments: high resolution velocity measurements around multi-building arrays, LANL, PI, 2006-2007.

Laboratory Investigation of Flow and Dispersion through Urban Canopies, UC Regents, PI, 2005-2006.

Environmental Monitoring and Highway Noise, ADOT, Co-PI, 2004-2005.

Air Flow and Dispersion Over an Urban Downtown Area, ARO, Co-PI, 2003-2006.

Field Experiments

2019- Exposure from wood burning cooking stoves, Morelia, Mexico
2013: Dozer Burn Study, part 2. Sponsored by San Dimas Technology Development Center.

2013: Ozone Flux measurements, UCR Orchard, Sponsored by FS.
2012-
2013: Sap flux measurements, James Reserve, Sponsored by FS.
2011: Fire Truck Burn Study, Ione, CA, Sponsored by SERDP.
2011: Nocturnal Urban Boundary Layer Development, Riverside, CA. Sponsored by CEC.
2010: Hybrid Tugboat Emission Testing in Long Beach, CA.
2010: Dozer Burn Study. Sponsored by Forest Service San Dimas Technology Development Center.
2010: Plume rise study – Palm Springs, CA. Sponsored by CEC.
2009-
2010: Emissions from prescribed burns. Sponsored by DoD SERDP.

2008: Transportation Emissions in Built Environments Surrounding Major Arterials in Los Angeles, Long Beach, Huntington Beach, Anaheim and Pasadena. Sponsored by UC Transportation Center

2008: Dispersion Study of distributed power generators in Lancaster, CA and Palm Springs, CA sponsored by the California Energy Commission

2007: Prescribed Burn measurements at Three Hills, Murrieta, CA.

2007: Urban-rural fluxes, Riverside-Moreno Valley, CA

2006: Riverside Energy Balance Experiment. Pune, India - International USEPA air quality program.

2005: Wilmington Dispersion Study. California Air Resources Board sponsored program

2004: Environmental monitoring of the highway noise. Arizona Department of Transportation sponsored program.

2003: Joint Urban 2003 Experiment, Oklahoma City. US Department of Defense, Army Research Office and Defense Treat Reduction Agency sponsored program. Deployment of meteorological towers and operation of the CTI's Doppler LIDAR.

2002: Douglas Aerosol Experiment. Southwest Center for Environmental Research and Policy sponsored program. Organization of the experiment, coordinating team members, setting up of the instrumentation, data gathering and data managing.

2001: Mock Urban Settings Test Experiment. US Department of Defense sponsored program. Organization of ASU team and equipment, setting up of the instrumentation, data gathering and data managing.

2001: Phoenix Ozone Experiment. US Department of Energy sponsored program. Supervising ASU team (5-6 people). Took care of experiment organization and preparation, setting up of the instrumentation, data gathering and data managing.

2000: Vertical Transport and Mixing Experiment. US Department of Energy sponsored program. In charge of instrument preparation, field planning, data gathering, data managing and exchange of data with DOE.

2000: Wall Study field experiment. US Department of Education sponsored through the GAANN program. In charge of vertical profiling.

Graduated Doctoral and Master Students

Ghasemian, Masoud, Ph.D., *The Development of Numerical Models to Predict Complex Fluid Flows: The Influence of Roadside Vegetative Barriers on Near-Road Air Quality, Hot Gas ingestion into Gas Turbines Cavities and Stem Cell Cultures*, 2019, Currently at ANSYS.

Aminfar, AmirHessam, Ph.D., *Application of Computer Vision to Transport Phenomena*, 2019, Currently at Amgen.

Cobian- Iñiguez, Jeanette, Ph.D., *Studies of Chaparral Wildfire Behavior: from Laboratory to Regional Scale*, 2019, Currently Assistant Professor at UC Merced.

Redenius, Joseph, M.Sc., *Design and Construction of an Open Circulating Water Channel*, 2019, Currently at Clark Pacific.

Antunez, Salvador, M.Sc. Thesis: *Ignition Capability of Mechanically Generated Sparks Landing in Fuel Beds*, 2018, Currently at Boeing.

Dinsmore, Campbell, Ph.D. Dissertation: *Bubble Dynamics in Shear Flows: Impact on Energy Dissipation and Thrust Production*, 2015. Currently Assistant Professor at Cal Poly Pomona, Pomona, CA.

Bartolome, Christian, Ph.D. Dissertation: *Laboratory and Numerical Modeling of the Formation of Superfog from Wildland Fires*, 2014. Currently at the California Air Resources Board, El Monte, CA.

Maynard, Trevor, Ph.D. Dissertation: *Fire Interactions and Pulsation – Theoretical and Physical Modeling*, 2013. Currently at ATF Fire Research Laboratory, Ammendale, MD.

Pournazeri, Sam, Ph.D. Dissertation: *Plume Rise and Dispersion of Emissions from Low Level Buoyant Sources in Urban Areas*, 2012. Currently at the California Air Resources Board, Sacramento, CA.

Pan, Hansheng, Ph.D. Dissertation: *Investigation of Flow, Turbulence, and Dispersion within Built Environments*, 2011. Currently Research Associate at Southern Methodist University, Dallas, TX.

Li, Xiangyi, Ph.D. Dissertation: *Flow, Turbulence, and Dispersion Above and Within the Roughness Sublayer: Field Observations and Laboratory Modeling*, 2009. Currently at the California Air Resources Board, Enforcement Division, Heavy-Duty Diesel Enforcement Section, El Monte, CA.

Pham, Stephanie, M.Sc. Thesis: *Experimental Investigation and Numerical Simulation of Smoke, Fire, and Biological Heat Transfer*, 2016. Currently at the Naval Surface Warfare Center in Corona, CA.

Aminfar, AmirHessam, M.Sc. Thesis: *Computer Vision in Fluid Mechanics*, 2015. Currently Doctoral Student at UCR, Riverside, CA.

Omodan, Sunday, M.Sc. Thesis: *Fire Behavior Modeling - Experiments on Surface Fire Transition to the Elevated Live Fuel*, 2015. Currently teacher at Colton USD, Colton, CA.

Gazzolo, Brandn, M.Sc. Thesis: *Near Field Modeling of the Effects of Sound Barriers on Flow and Dispersion*, 2012. Currently at the Naval Surface Warfare Center in Corona, CA.

Zhang, Yanyan, M.Sc. Thesis: *Model of Flow through Urban-Like Obstacle Arrays and Energy Balance Parameterization*, 2009. Currently at CGG Veritas, Houston, TX.

Chen, Shiyan, M.Sc. Thesis: *Laboratory and Field Investigation of Buoyant Plume Structure and Ground Level Concentration*, 2009. Currently at the California Air Resources Board, El Monte, CA.

Cole, Taylor, M.Sc. Thesis: *Water Channel Design and Street Canyon Flow Modeling*, 2007. Currently at the Naval Surface Warfare Center in Corona, CA.

Diagne, PapaMagatte, M.Sc. Thesis: *Field Investigation of the Environmental Energy Balance*, 2006. Currently at the Simpson Gumpertz & Heger Inc. in Los Angeles, CA.

Student Awards

AmirHessam Aminfar, AAAS Symposium on Advances in Fluid Mechanics and Turbulence, the Best Student Presentation (2016)

Jeanette Cobian, 2018 AAAS Robert I Laurus Award - American Association for the Advancement of Science Pacific Division (AAAS PD), 2018 First Place in Engineering, Technology and Applied Sciences Section - American Association for the Advancement of Science Pacific Division (AAAS PD), 2016AAAS Symposium on Advances in Fluid Mechanics and Turbulence, Honorable Mention

Benjamin Sommerkorn, Carbon Neutrality Initiative Sustainability Fellowship (2016)

Chirawat Sanpakit, Donald A. Strauss Foundation Fellowship (2016)

Jeanette Cobian, FIELDS/JPL Graduate Research Fellowship (2016), AAAS Robert I Laurus Award (2018), First Place in Engineering, Technology and Applied Sciences Section AAAS PD (2018), Honorable Mention Award for Excellence AAAS PD (2016)

Campbell Dinsmore:, AAAS Robert I. Larus Award (2014)

Christian Bartolome, AMS - The Best Overall Paper (2014)

Trevor Maynard: PERISHIP fellowship in disasters and hazards research (2011), AMS best oral presentation (2010, 2012)

Sam Pournazeri: AMS Best Technical Content Paper (2012)

Hansheng Pan: Academic Excellence Award by Women's Resource Center (2010)

Xiangyi Li: Outstanding Graduate Student Volunteer UCR (2007), Best Oral Presentation at 2nd UCR M.E. Graduate Research Symposium (2007), Dissertation Research Grant (2006), College Graduate Fellowship (2006)

Awards

2019: Frank G. and Janice B. Delfino Agricultural Technology Research Initiative, UCR
2016: Global Climate Leadership Council, UC
2015: Outstanding Service Award, Mechanical Engineering Department, UCR
2009: European Meteorological Society, Kipp & Zonen Award for Boundary Layer Meteorology
2007: UC Regents' Fellowship
2005: UC Regents' Faculty Development Award
2003: Arizona State University recognition for an exemplary job of serving students
2003: Air & Waste Management Association scholarship
1999: "Graduate Assistantship in Area of National Need" scholarship, US Department of Education
1997: Best student in department
1995: JAT fellowship as IAESTE nominee
1992: Best student of generation
1986 -1992: Several times winning national and regional competitions organized by the National Association of Young Scientists and Engineers

Teaching

Undergraduate Courses

- Introduction to Mechanical Engineering (ME2)
- Fluid Mechanics (ME113)
- Energy and Environment (ME136)
- Environmental Fluid Mechanics (ME137)
- Ship Theory (ME140)
- Experimental Techniques (ME170B)

Graduate Courses

- Fundamentals of Fluid Mechanics (ME240A)
- Fundamentals of Fluid Mechanics (ME240B)
- Turbulence in Fluids (ME242)
- Apprentice Teaching (ME302)

Service

Department

- Undergraduate Advisor/Undergraduate Cmt. Chair, 2010 -2013
- ABET accreditation coordinator, 2007-2013
- Undergraduate committee, 2004-2013
- Freshman mentor, 2005-2009
- Seminar coordinator, 2006-2007
- ASME Faculty Advisor, 2007-2008, 2014- present
- Graduate Advisor/Graduate Cmt. Chair, 2013-2016

University

- Research Integrated Safety Committee (RISC), 2005-present
- RISC vice-Chair, 2007-2014
- RISC Chair, 2014-present
- Faculty Panel Participant for Enginuity Hall, 2008, 2009
- Senate's Committee on Courses, 2009-2012

- Faculty Advisory Board of Undergraduate Research Journal, 2013-present
- Senate's Committee on Undergraduate Admissions, 2013-present
- Special Review Committee Chair, 2015-present
- Faculty Mentor for Graduate Student Mentorship Program, 2014-present

Public

- College representative of the ASME California Inland section, 2005- 2014
- Vice-Chair of the ASME California Inland section, 2010- present
- Member of the American Meteorological Society Committee on Meteorological Aspects of Air Pollution (AMS CMAAP), 2008-present
- Chair of the AMS CMAAP, 2010-2014
- Organizer of 17th and 18th AMS Conference on Air Pollution
- Guest Editor of the special issue of Environmental Fluid Mechanics, 2012-2014.
- Reviewer for several journals and funding agencies
- Chair and co-Chair at several national and international meetings
- Judge and moderator at local science fairs and undergraduate conferences

Conference Organizations

17th Air Pollution Conference, as a part of 92nd AMS Annual Meeting, New Orleans, LA, 2012.

Symposium on Transport and Dispersion from Fukushima Dai Chi Nuclear Power Plant, as a part of 93rd AMS Annual Meeting, Austin, TX, 2013.

18th Air Pollution Conference, as a part of 94nd AMS Annual Meeting, Atlanta, GA, 2014.

Symposium on Advances in Fluid Mechanics and Turbulence: Analysis and Applications, as a part of annual AAAS meeting, Riverside, CA, 2014.

Symposium on Advances in Fluid Mechanics and Turbulence, as a part of annual AAAS meeting, San Diego, CA, 2016.

Symposium on Recent Advances in Turbulence Research: Experiments, Theory, and Computations, Annual AAAS meeting, Pacific Division section on Engineering, Technology, and Applied Science, Pomona, CA, 2018.

Selected Invited Talks

- Lecture at the Stellar Hydrology Days titled "*Laboratory and Field Measurements of Environmental Stratified Flows*", July 2006.
- Graduate seminar at the Seoul National University titled "*Multi-scale Flow and Transport Processes in Urban Environments*", October 2007.
- Graduate seminar at UC San Diego titled "*Flow pattern through a simple urban array - water channel experiments and modeling*", November 2007.
- Lectures at the workshop organized by US EPA and NEERI in Mumbai, India: Emission Inventory for Air Quality Management, titled *Micrometeorological Measurements* and *Selected Field Measurement Results*, December 2007.
- Graduate seminar at UC Irvine titled "*Field Measurements and Water Channel Modeling of Flow and Dispersion within Simple Arrays and in Southern Californian Cities*", April 2009.
- Lecture at the Korean Institute for Science and Technology (KIST) titled "*Field Measurements and Laboratory Modeling of Environmental Flows from Meso-scale to Street-scale*", June 2009.
- Invited presentation at the "Favela as Urban Experience Workshop" in Rio de Janeiro, Brazil, titled "Multi-scale Flows, Transport Processes and Pollution Sources in Urban Environments", September 2011.
- Graduate seminar at UC San Diego titled "*Scaling of Building Affected Plume Rise and Dispersion in Water Channels and Wind Tunnels - Revisit of an Old Problem*", February 2012.
- Riverside STEM Academy, *A few words about fluids: boating, pollution, fire, birds…,*December 2012
- Invited lecture to the Naval Warfare College, SSG, *Understanding Forces in Fluids*, Newport, RI, November 2013.
- Invited lecture at Cerritos College, *Fluid Dynamics Research - Understanding Forces in Fluids*, Norwalk, CA, May 2014.

- Graduate seminar at the University of Notre Dame, "Laboratory Modeling of Environmental Flows: From Mesoscale to Streetscale", South Bend, IN, September 2014.
- Seminar at UC Santa Barbara, "Laboratory Modeling of Fire and Environmental Flows", Santa Barbara, CA, October 2014.
- Invited talk at annual TOSCA meeting, "Wind, waves and currents along the Baja peninsula in October 2014", January 2015.
- Invited lecture to Riverside Public Utilities-Water Administration and Engineering, "Fluid Mechanics: From Dispersion of Toxic Release and Fire Behavior to Hovering Hummingbirds", Riverside, CA, April 2015.
- Invited presentation to the NAVSEA, *From Hummingbird Vortices to Wingsuits: Engineering Extreme Sports*, Corona, CA, February, 2016.
- Keynote Speaker at Measurement Science Conference, "*Dynamic Forces in Fluids"*, Anaheim, CA, April 2017.
- Keynote Speaker at Law Enforcement and Public Safety LEAPS-STEM Meeting, "Study of Fire: From Laboratory to Field into Computer and Game", Riverside, CA, July 2018.

Book chapters

"Springer Handbook of Experimental Fluid Mechanics", Eds. Tropea, Yarin, and Foss, Springer, Chapter 17.1, 1557pp, 2007.

"Animal Locomotion", Eds. Taylor, Graham; Triantafyllou, Michael S.; Tropea, Cameron, Springer, 350pp, 2010.

"A Project to measure and Model Pyrolisis to Improve Prediction of Prescribed Fire Behavior", Advances in Forest Fire Research, Editor: D.X. Viegas, 2018

"Surface to Crown Transition", Encyclopedia of Wildfires and Wildland-Urban Interface (WUI) Fires, Springer, 2018

Journal Articles[*]

54. Cobian-Iñiguez, J., A.Aminfar, D.R. Weise, Marko Princevac, On the Use of Semi-Empirical Flame Models for Spreading Chaparral Crown Fire, *Frontiers in Mechanical Engineering*, ID: 457696

53. Aminfar, A., J. Cobian-Iñiguez, M. Ghasemian, N. Rosales Espitia, D.R. Weise, M. Princevac, Using Background-Oriented Schlieren to Visualize Convection in a Propagating Wildland Fire, *Combustion Science and Technology*, DOI: 10.1080/00102202.2019.1635122, 2019.

52. Bartolome, C., M. Princevac, D.R. Weise, S. Mahalingam, M. Ghasemian, A. Venkatram., H. Vu, G. Aguilar, Laboratory and numerical modeling of the formation of superfog from wildland fires, *Fire Safety Journal*, 106, 94–104, 2019.

51. Aminfar, A, N. Davoodzadeh, G. Aguilar, M. Princevac, Application of optical flow algorithms to laser speckle imaging, *Microvascular Research* 122 52–59, 2019.

50. Ghasemian M., M. Princevac, YW Kim, HD Hamm, Numerical modeling of hot gas ingestion into the rotor-stator disk cavities of a subscale 1.5-stage axial gas turbine, *International Journal of Heat and Mass Transfe*r 130 1016–1031, 2019.

49. Peck, R.A., Bahena, E., Jahan, R., Aguilar, G., Tsutsui, H., Princevac, M., Wilhelmus, M.M., Rao, M.P. Meso-Scale Particle Image Velocimetry Studies of Neurovascular Flows In Vitro. *J. Vis. Exp*. (142), e58902, doi:10.3791/58902, 2018.

48. Ruiz-Garcia V.M, R.D. Edwards, M. Ghasemian, V.M. Berrueta, M. Princevac, J.C. Vazquez, M. Johnson, O.R. Masera, Fugitive Emissions and Health Implications of Plancha-Type Stoves, *Environmental Science and Technology*, DOI: http://dx.doi.org/10.1021/acs.est.8b01704, 2018.

47. Cobian-Iñiguez, J., Aminfar, A., Chong, J., Burke, G., Zuniga, A., Weise, D.R., M. Princevac, Wind Tunnel Experiments to Study Chaparral Crown Fires., *J. Vis. Exp*. (129), e56591, doi:10.3791/56591, 2017.

46. Ghasemian, M., S. Amini, M.Princevac, The influence of roadside solid and vegetation barriers on near-road air quality, *Atmospheric Environment* 170 (2017) 108-117, 2017.

[*] underlined authors are students advised by M. Princevac

45. Edwards, R, M. Princevac, R. Weltman, M. Ghasemian, N.K. Arora, and T. Bond, Modeling emission rates and exposures from outdoor cooking, *Atmospheric Environment* 164 (2017) 50-60, 2017.

44. Dinsmore, C., A. Aminfar, and M. Princevac, Dissipative Effects of Bubbles and Particles in Shear Flows, *Journal of Fluids Engineering*, DOI: 10.1115/1.4035946, 139, 061302-1-12, 2017.

43 Maynard, T., M. Princevac, D.R. Weise, A Study of the Flow Field Surrounding Interacting Line Fires, *Journal of Combustion*, 6927482, 12, 2016.

42. Pournazeri, S. and M. Princevac, Sound Wall Barriers: Near Roadway Dispersion under Neutrally Stratified Boundary Layer, *International Journal of Transportation Research Part* D, 41, 386-400, 2015.

41. Di Sabatino, S, M. Princevac, Recent advancements in urban flow research Preface, *Environ. Fluid Mech.*, 15(2), 231-233, 2015.

40. Sanpakit, C., S. Omodan, D. Weise, M. Princevac, Laboratory Fire Behavior Measurements of Chaparral Crown Fire, *UCR UGRJ*, 9, 123-129, 2015.

39. Pan, H., S. Pournazeri, M. Princevac, W. Miller, S. Mahalingam, M. Khan, V. Jayaram, W. Welch, Effect of Hydrogen Addition on Criteria and Greenhouse Gas Emissions for Marine Diesel Engine, *International Journal of Hydrogen Energy*, 39:11336-11345, 2014.

38. Monti P., H.J.S. Fernando, and M., Princevac, Waves and turbulence in katabatic winds, *Environ. Fluid Mech.*, 14:431–45036, 2014.

37. Long A., J. Weiss, M. Princevac and C. Bartolome, Superfog: State of the Science, *Southern Fire Exchange Fact Sheets*, 2, 2014.

36. Pournazeri S., Schulte N., Tan S., Princevac M., Venkatram A., Dispersion of buoyant emissions from low level sources in urban areas: water channel modelling, *Int. J. Environment and Pollution*, Vol. 52, Nos. 3/4, 119-140, 2013.

35. Pournazeri, S., Gazzolo, B., Princevac, M., Development of an Air Dispersion Model to Study Near-Road Exposure. Environmental Management. July 2013.

34. Pournazeri, S., P. Segre, M. Princevac, D. Altshuler, Hummingbirds generate bilateral vortex loops during hovering: evidence from flow visualization, *Experiments in Fluids,* 54:1439, 2012.

33. Pan, H., C. Bartolome, E. Gutierrez, M. Princevac, R. Edwards, M.G. Boarnet, D. Houston, Investigation of Roadside Fine Particulate Matter Concentration Surrounding Major Arterials in Five Southern Californian Cities, *Journal of Air and Waste Management Association*, Vol. 63: 4 p.482-498, 2013.

32. Bartolome, C., H. Gonzalez, M. Princevac, A. Venkatram, D.R. Weise, G. Achtemeier, G. Aguilar, S. Mahalingam, Numerical and Physical Investigation of the Properties of Superfog, Bulletin of the American Meteorological Society, 93(6), 780-781, 2012.

31. Pournazeri, S., Venkatram, A., Princevac, M., Tan, S.. Schulte, N., Estimating the height of the nocturnal urban boundary layer for dispersion applications, *Atmospheric Environment*, 54, 611-623, 2012.

30. Pournazeri, S., M. Princevac, A. Venkatram, Rise of Buoyant Emissions from Low-Level Sources in the Presence of Upstream and Downstream Obstacles, *Boundary Layer Meteorology*, 144, 287-308, 2012.

29. Pournazeri, S., M. Princevac, and A. Venkatram, Scaling of Urban Plume Rise and Dispersion in Water Channels and Wind Tunnels - Revisit of an Old Problem, *Journal of Wind Engineering and Industrial Aerodynamics*, 103, 16-30, 2012.

28. Maynard, T. and M. Princevac, The application of a simple free convection model to the pool fire pulsation problem, *Combustion Science and Technology*, 184(4), 505-516, 2012.

27. Boarnet, M., D. Houston, R. Edwards, M. Princevac, G. Ferguson, H. Pan, C. Bartolome, Fine particulate concentrations on sidewalks in five Southern California cities, *Atmospheric Environment*, 45, 4025-4033, 2011.

26. Zajic D., H.J.S. Fernando, R. Calhoun, M. Princevac, M.J. Brown, E.R. Pardyjak, "Flow and Turbulence in an Urban Canyon", *Journal of Applied Meteorology*, 50, 1, 203-223, 2011.

25. Hosseini S., Q. Li, D. Cocker, D. Weise, A. Miller, M. Shrivastava, J. W. Miller, S. Mahalingam, M. Princevac, and H. Jung, *Particle size distributions from laboratory-scale biomass fires using fast response instruments*, Atmos. Chem. Phys., 10, 8065-8076, 2010.

24. Princevac, M., J. Bühler, A. Schleiss, Alternative depth-averaged models for gravity currents and free shear flows, *Environmental Fluid Mechanics*, 10, 369-386, 2010.

23. Qian W., M. Princevac, A. Venkatram, 'Using Temperature Fluctuation Measurements to Estimate Meteorological Inputs for Modeling Dispersion during Convective Conditions in Urban Areas, *Boundary Layer Meteorology*, 135, 269-289, 2010.

22. Lozano J., W. Tachajapong, D. Weise, S. Mahalingam, M. Princevac, Fluid Dynamic Structures in a Fire Environment Observed in Laboratory Scale Experiments, April, *Combustion Science and Technology*, 35, 2009.

21. Princevac, M., J.-J. Baik, X. Li, S.-B. Park and H. Pan, Lateral channeling within rectangular arrays of cubical obstacles, *Journal of Wind Engineering and Industrial Aerodynamic*, 98, 377-385, 2010.

20. Noroozi Z., H. Kido, M. Micic, H. Pan, C. Bartolome, M. Princevac, J. Zoval, and M. Madou: Reciprocating flow-based centrifugal microfluidic mixer, *Review of Scientific Instruments*, 80, 075102, 2009.

19. Altshuler D., M. Princevac, H. Pan, and J. Lozano, 'Wake patterns of the wings and tail of hovering hummingbirds*, Experiments in Fluids,* 46, 835-846, 2009.

18. Princevac, M, J. Buhler and A. Schleiss: Mass-based depth and velocity scales for gravity currents and related flows, *Environmental Fluid Mechanics*, 9, 369-387, 2009.

17. Lee, S., M. Princevac, S. Mitsutomi, and J. Cassmassi: MM5 Simulations for Air Quality Modeling: An Application to a Coastal Area with Complex Terrain, *Atmospheric Environment*, 43, 447-457, 2009.

16. Li X., N. Zimmerman, M. Princevac: Local Imbalance of Turbulent Kinetic Energy in the Surface Layer, *Boundary-Layer Meteorology*, 129:115–136, 2008.

15. Venkatram, A. and M. Princevac, Using measurements in urban areas to estimate turbulent velocities for modeling dispersion, *Atmos. Environ.*, 42(16), 3833-3841, 2008.

14. Princevac, M. and H.J.S. Fernando: Morning breakup of cold pools in complex terrain, *Journal of Fluid Mechanics,* 616, 99–109, 2008.

13. Princevac, M., J.C.R. Hunt, and H.J.S. Fernando, "Quasi-Steady Katabatic Winds on Long Slopes and In Wide Valleys: Hydraulic Theory and Observations", *Journal of the Atmospheric Sciences,* 65*,* 627-643, 2008.

12. Princevac, M. and A. Venkatram, "Estimating Micrometeorological Inputs for Modeling Dispersion in Urban Areas during Stable Conditions", *Atmospheric Environment,* 41(26), 5345-5356, 2007.

11. Princevac, M. and H.J.S. Fernando, "A Criterion for the Generation of Anabatic Flow", *Physics of Fluids*, 19(10), 105102, 2007.

10. Calhoun R, Heap R, Princevac M, Newsom R, Fernando H, and Ligon D: Virtual towers using coherent Doppler lidar during the Joint Urban 2003 dispersion experiment, *Journal Of Applied Meteorology And Climatology* 45(8): 1116-1126, 2006.

9. Lee, S.M., W. Giori, M. Princevac, and H.J.S. Fernando, "'Implementation of a Stable PBL Turbulence Parameterization for the Mesoscale Model MM5: Nocturnal Flow in Complex Terrain", *Boundary Layer Meteo.,* 119(1): 109-134. APR 2006.

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