STATHIS (EFSTATHIOS E.) MICHAELIDES
Professor and W. A. Tex Moncrief Chair of Engineering
Department of Engineering
Texas Christian University
Fort Worth TX 76129, USA
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CURRICULUM VITAE

ADVANCED EDUCATION:

Ph.D., Engineering Science, Brown University, 1980.
M.S., Engineering Science, Brown University, 1979.
B.A.(honors) Engineering Science and Economics, Oxford University, England, 1977.
MBA (unfinished, 27 credits) University of Delaware, 1982-86.

PERSONAL INFORMATION:

Born on February 13, 1955, health excellent, married to Maria Laura (nee Garcia Silva) three children (ages 30, 26 and 21). Other activities and hobbies: master stained-glass maker, sailing, medieval and classical history.

PROFESSIONAL EXPERIENCE:

A. Permanent positions

2011-present Professor and W. A. Tex Moncrief Chair of Engineering, Texas Christian University, Fort Worth.
2007- 2011 Professor and Chair, Mechanical Engineering. Also Robert F. McDermott Chair in

Engineering, University of Texas at San Antonio (UTSA).
2009-2011 Founding director of the NSF Center for Simulation, Visualization and Real-Time Computing (SiViRT) UTSA.
2006-2007 Professor and Founding Chair, Department of Mechanical and Energy Engineering, University of North Texas.
2002-2007, Director, Southcentral Research Center (SCRC) of the National Institute for Global Environmental Change (NIGEC) at Tulane University.
1992-2003 Associate Dean for Graduate Studies and Research, School of Engineering, Tulane University.
1990-1992, Professor and Head, Department of Mechanical Engineering, Tulane University.
1990-2006 Professor, Mechanical Engineering, Tulane University.[1]
1985-1990 Associate Professor, Mechanical Engineering, Univ. of Delaware.
November 1985- January 1987, Acting Chairman, Mechanical Engineering, Univ. of Delaware.
1980-1985 Assistant Professor, Mechanical and Aerospace Engineering, Univ. of Delaware.
1977 - 1980 Research Assistant, Brown University.
1978 - 1980 Supplementary Teaching Assistant, Brown University.

B. Short-term and sabbatical appointments:

September-December 2005, Courtesy professorial appointment, University of Louisville, KY.
June 2003, Lecturer, von Karman Institute for Fluid Dynamics, Brussels, Belgium.
July-August 2002, Visiting Professor at the Ecole Superior de Physique et Chimie Industrieles, Paris, France.
September-December 1997, Visiting Professor, Aristoteleion University, Thessaloniki, Greece.
July-August 1997, Visiting Professor, Université Claude Bernard de Lyon, France.
June 1991 and August 1998, Visiting Researcher at the European Atomic Energy Center, Ispra, Italy.
July-August 1995, Chercheur du Centre National de la Recherche Scientifique (CNRS), Paris, France.
June-July 1994, Chercheur du Centre National de la Recherche Scientifique (CNRS), Paris, France.
September 1989 - January 1990, Visiting Professor at the Escuela Tecnica Superior de los Ingenieros Industriales, Madrid, Spain.
September 1989 - January 1990, Visiting Professor at the Department of Applied Mathematics, Complutenses University, Madrid, Spain.
September 1989 - December 1989, Director – "Semester Program Abroad, Madrid", University of Delaware.
July-August 1989, Chercheur Associé du Centre National de la Recherche Scientifique (CNRS), Paris, France.
January 1987 - July 1987, Chercheur Associé du Centre National de la Recherche Scientifique (CNRS), Paris, France.
Summers 1975, 1976 Esso Petroleum Co., (Exxon) Thessaloniki, Greece.

HONORS AND AWARDS:

American Society of Mechanical Engineers (ASME) Edwin F. Church Medal, 2021, "…for

[1] The Department of Mechanical Engineering at Tulane was eliminated following the hurricane Katrina and the reorganization of the University.

eminent service in increasing the value, importance and attractiveness of mechanical engineering education."

American Society of Mechanical Engineers (ASME) 90th Anniversary of the Fluids Engineering Division Medal, 2016.

American Society of Mechanical Engineers (ASME) Fluids Engineering Award, 2014.

Fellow of the Heat Transfer Division, ASME, 2011.

W. A. (Tex) Moncrief Chair of Engineering, Texas Christian University, 2011.

Robert F. McDermott Distinguished Chair in Engineering, UTSA, 2009-2011.

ASME Distinguished Service Award, 2007.

ASME Distinguished Service Award as FED chair, 2006.

ASME Fellow, 2004.

ASME/pi-tau-sigma, Excellence in Teaching Award, Tulane University, 2004.

Lecturer at the von Karman Institute for Fluid Dynamics, Brussels, Belgium, 2003.

ASME Distinguished Lecturer, 2003

Outstanding Researcher Award, Tulane University, 2003.

Fellowship of the French Ministry of Research and Technology (July-August 2002) "…for outstanding researchers of international recognition."

Freeman Scholar Award, ASME, 2002.

ASME/pi-tau-sigma, Excellence in Teaching Award, Tulane University, 2001.

Leo S. Weil Endowed Professorship, Tulane University, 1998-2007.

Senior Fulbright Fellow, Fall 1997.

Lee H. Johnson, Excellence in Teaching Award," Society of Tulane Engineers, 1995.

Fellowship of the French Ministry of Research and Technology (June-July 1995) "…for outstanding researchers of international recognition."

American Society for Engineering Education (ASEE), Centennial Award for Exceptional Contributions to the Society and the Profession of Engineering, 1993.

ASME, Certificate of Appreciation for Services to the Society, 1993.

ASEE Centennial Award, 1993.

ASME/pi-tau-sigma, Excellence in Teaching Award, Tulane University, 1991.

Fellowship of the French Ministry of Research and Technology (July-August 1989) "…for outstanding researchers of international recognition."

Fellowship of the French Ministry of Research and Technology (January-June 1987) "…for outstanding researchers of international recognition."

M.A. Degree (honoris causa) Oxford University, England 1983.

Casberg Scholar, St. John's College, Oxford University, England, 1975-77

Schillizzi Scholar, St. John's College Oxford, 1973-77.

Listed in Who's Who in the world, Who's Who in America, Who's Who in American Men and Women in Science, Who's Who's in Engineering, Who's Who among Greek-Americans.

EDITORIAL ACTIVITIES:

Series Editor, CRC Press, Series in Mechanical and Aerospace Engineering, 2016- present.

Senior Editor, *Multiphase Flow Handbook*, 2017.

Editor: *Journal of Non-Equilibrium Thermodynamics*, 2009 –present.

Member of the Editorial Board: *Energies* 2018-present.

Member of the Editorial Board: *Journal of Non-Equilibrium Thermodynamics*, 1997-2008.

Associate Editor: *International Journal of Exergy*, 2003-2013.

Member of the Honorary Editorial Board: *Archives of Thermodynamics*, 1997-present.

Associate Editor*: Far East Journal of Applied Mathematics*, 2004-2012.

Guest editor *Journal of Fluids Engineering, Special Issue: In Memoriam of Professor Clayton T. Crowe,* volume 138, Issue 4, 2016.

Guest editor: *Powder Technology-An International Journal,* two special issues on selected papers from the 4th International Conference of Multiphase Flows, volume 125, issues 2-3 pp. 103-317.

Guest editor (with N. Thomas and Y. Matsumoto): *Experimental Fluid and Thermal Science,* special issue on selected papers from the 4th International Conference of Multiphase Flows, volume 26, pp. 593-869.

Guest editor: *Intern. Journal of Multiphase Flow,* papers from the 4th International Conference of Multiphase Flows published in two special issues, vol. 28 pp. 1823-2016.

Associate Technical Editor: ASME, *Journal of Fluids Engineering* (1988-94).

Associate Editor: *International Journal of Energy Systems* (1985-93).

OTHER PROFESSIONAL ACTIVITIES:

ASTFE, Honors and Awards Committee, 2018-2023.

ASTFE, Fellow Review Council, 2018-2023.

Chair, ASEE-GSW section, 2016-2017.

Program Chair, ASEE-GSW section, Annual Conference, 2016.

Vice-Chair, ASEE-GSW section, 2015-2016.

Member of the International Scientific Committee, International Conference on Multiphase Flow, ICMF-2016 (Florence, Italy).

ASME Freeman Scholar Awards Committee, ASME, (term 2013-2019, chair 2015-2017).

Chair of the Organizing Committee, 11th, 12th, 13th, 14th, 15th and 16th Intern. Gas-Solids Symposium, which takes place biennially within the ASME-FED annual meeting, 2005-2017.

Member of the International Scientific Committee, International Conference on Multiphase Flow, ICMF-2013 (Jeju, Korea).

Member of the International Organizing Committee, International Conference on Multiphase Flow, ICMF-2010 (Tampa, Florida).

Chair, Freeman Scholar Awards Committee, ASME, (2009-2011).

Member of the Organizing Committee, APS-DFD Annual Meeting – 2008 (in charge of the "Gallery of Fluids Motion").

Chair of the Faculty Organizing Committee, *North American Energy Summit,* San Antonio, 2008.

Senior Advisory Board, American Society of Mechanical Engineers-Fluids Engineering Division, 2008-2018.

Past Chair of the Executive Committee, American Society of Mechanical Engineers-Fluids Engineering Division, 2006-2007.

ASME Freeman Scholar Awards Committee, ASME, (term 2007-2013, chair 2009-2011).

Chair of the Executive Committee, American Society of Mechanical Engineers-Fluids Engineering Division, (term: April 2005-November 2006).

Member of the Executive Committee, American Society of Mechanical Engineers-Fluids Engineering Division, (term 2002-2007).

Vice-Chair (elected) of the International Organizing Committee of the 5th International Conference of Multiphase Flows, Yokohama, Japan-2004.

Chair of the International Organizing Committee and General Conference Chair, 4th International Conference of Multiphase Flows – New Orleans, LA, 2001.

Corresponding Member of the International Information Center for Multiphase Flow (one of four USA members), 1999-present.

Elected to the Board of Governors for the International Conference of Multiphase Flow in June 1998 (1988-2004 as one of four delegates from North and South America)
Newcomb Fellow, Tulane University 1998-2006.
Founder and Director, Program of International Student Exchanges with University Claude Bernard of Lyon, 1994-present.
Vice Chairman (1994-96) and Chairman (1996-98) of the ASME Multiphase Flow Technical Committee.
Member of ASME-FED Honors Committee (1999-2002).
Member of Louisiana Committee on Rapid Modes of Transportation, 1999-2001 (appointed by the Governor of the State).
Co-Chairman, 32nd Society of Engineering Science Technical Meeting, November 1995.
Chairman, 1992, ASEE Southern Region, annual meeting.
Vice-President (1991-92) and President (1992-93), ASEE, Southern Region.
Registered Professional Engineering in Louisiana since 1991 and Texas since 2008.
One Patent, U.S. # 5,030,390
Chair or member of organizing committee of forty five ASME Symposia, four APS meetings, and six A.I.Ch.E. Symposia in the area of Multiphase Flow. Of these, the ASME Symposium on Gas-Particle Flows has been organized biennially since 1986 and attracts more than 200 attendees.
Participated in several NSF, DOE and DOD proposal review panels.

LANGUAGES:

Fluent English and Greek; conversational and reading knowledge of Spanish and French; reading knowledge of German, Italian and ancient Greek.

RESEARCH INTERESTS:

Multiphase Flow, Particular and Bubbly Flows, Geothermal Energy, Advanced Energy Systems, Energy Conversion and Conservation, Environmental Fluid Dynamics, Sediment Flow, Separation Processes, Nuclear Waste Materials Handling.

PROFESSIONAL ASSOCIATIONS:

- American Society of Mechanical Engineers (ASME).
- American Society of Thermal and Fluids Engineers (ASTFE).
- American Physical Society (APS).
- American Society of Heat Refrigeration and Air-conditioning Engineers (ASHRAE).
- American Society of Engineering Education (ASEE).
- Society of Hispanic Professional Engineers (SHPE; founding advisor of the UNT student chapter; chapter advisor at UTSA).
- Greek Technical Chamber.
- Oxford Union Society.
- Louisiana Society of Professional Engineers.
- Texas Society of Professional Engineers.
- Sigma Xi.
- Tau Beta Pi.
- Beta Gamma Sigma.

UNIVERSITY SERVICE (only major committee assignments listed):

A. At TCU

Ad hoc Committee for the enhancement of graduate programs 2012.
University Senator 2011-2017.
College of Science and Engineering Advisory Committee, 2012-2017 (chair 2013, 2015 and 2017).
University Senate: Chair Elect, 2014, Chair 2015, Past Chair, 2016.
University Budget Advisory Committee, chair, 2014-2015.
Ad-hoc MD School Management Committee, 2015-16.
Ad-hoc MD School Budget Committee, 2015-16.
Ad-hoc Committee on MD-School Personnel, chair 2015-16.
University Compensation Advisory Committee 2014-2018 (co-chair 2017).
Committee on Sustainability, 2016-present.
University Budget Advisory Committee, chair, 2020-present.

B. At the University of Texas at San Antonio:

University Leadership Council (2009-2010 and 2010-2011).
College of Engineering Executive Committee (2007-2011).
Chairs Council (2007-2011).
Chairs compensation ad hoc committee (2008-2009).
Chair, Faculty Organizing Committee, *North American Energy Summit*, 2007-08.
College of Engineering Committee on Faculty Work-Load Management (2007-2008).

B. At the University of North Texas:

College of Engineering Executive Committee (2006-2007).
Chairs Council (as the engineering representative, 2006-2007).
Chairs compensation committee (2006-2007).
Provosts' ad hoc committee on graduate student recruitment and retention (2006-2007).
Search committee for Associate Dean for External Affairs (2006).
Search Committee for chair of ETEC Department (2006).

C. At Tulane University

School of Engineering Promotion and Tenure Committee (chair 2004-2006).
School of Engineering, Executive Committee, 1990-2003.
School of Engineering, Research and Graduate Studies Committee, (chair) 1992-2003.
Engineering-Business Liaison Committee (co-chair) 2000-2005.
Search Committee for the Dean of the School of Public Health and Tropical Medicine (2002).
School of Engineering Research Council (chair) 1998-2000.
School of Engineering, Grievance Committee, 1990-2003.
Tulane-Xavier Center for Bioenvironmental Research (member of faculty advisory board) 1998-2006.
School of Engineering, International Studies Committee, (chair) 1996-2001.
University Committee on Research (member) 1997-2000.
University Committee on Short-term Overseas Programs (chair) 1992-96.
University Provost Search Committee 1996 and 200.
University ad hoc Committee on the re-training of Military Personnel (chair) 1993-94.
University ad hoc Committee on Materials Science and Engineering (chair) 1992-94.
University Subcommittee on Athletics Admissions 1994-95.

University Committee on Educational Policy, 1990-1993.

D. At the University of Delaware

Committee on Committees 1983-1985 (chair 1984-1985).
Chair, search committee for the faculty searches in 1983, 1986, 1988 and 1989.
Dean's Advisory Committee, 1985-87.
Committee on Programs Abroad, 1987-1989.

PUBLICATIONS

A. Books

1. Michaelides, E. E., *Particles, Bubbles and Drops – Their Motion, Heat and Mass Transfer*, World Scientific Publishers, New Jersey, 2006.

2. Michaelides, E. E., *Alternative Energy Sources,* Springer-Verlag, Heidelberg, 2012.

3. Michaelides, E. E., *Heat and Mass Transfer in Particulate Suspensions,* Springer, New York, 2013.

4. Michaelides, E. E., *Nanofluidics: Thermodynamic and Transport Properties,* Springer, New York, 2014.

5. Michaelides, E. E., Crowe, C. T., and Schwarzkopf, J. D. (editors), *Multiphase Flow Handbook, 2nd Edition,* CRC Press, Boca Raton, 2017.

6. Michaelides, E. E., *Energy, the Environment and Sustainability,* CRC Press, Boca Raton, 2018.

7. Michaelides, E. E. *Exergy and the Conversion of Energy,* Cambridge University Press, Cambridge, 2021 (online ISBN 9781108635684, in print April 8, 2021)

B. Articles in Refereed Journals or Books

1. Michaelides, E. E., "Non-Conventional Energy Sources for Greece", *Economicos* (In Greek), May 1977 (special edition on the energy problems).

2. Michaelides, E. E., "Priorities in Energy Conservation", *Economicos* (In Greek), January 1979.

3. Michaelides, E. E., "Separation of Non-condensables in Geothermal Installations by Means of Primary Flashing", *Trans. Geothermal Resources Council*, 4, p. 515, 1980.

4. Michaelides, E. E., "The Energy Crisis", *Economicos* (In Greek), January 1981.

5. Michaelides, E. E., "Thermodynamic Properties of Geothermal Fluids", *Trans. Geoth. Resources Council*, 5, p. 361, 1981.

6. Michaelides, E. E., "The Effect of Magnus Force on the Deposition of the Geothermal Wells", *J. of Energy Resources Technology*, 103, p. 352, 1981.

7. Michaelides, E. E., "Some Remarks on the Energy Problem", in *"Energy Alternatives for Greece*", (ed. K. Stefanakos), p. 239, Krikos, N.Y., 1981.

8. Michaelides, E. E., "The Rejection of Waste Heat in Geothermal Power Plants", *Geothermal Energy*, 10, 2, p. 14, 1982.

9. Michaelides, E. E., and F. Fakhre-Shafaie,"A New Binary-Flashing Plant for the Production of Electricity," *Trans. Geothermal Res. Council*, 5, p. 369, 1982.

10. Michaelides, E. E., "The Influence of Noncondensable Gases on the Net Work Produced by the Geothermal Steam Power Plants", *Geothermics*, 11, 3, p. 163, 1982.

11. Michaelides, E. E., "A Novel Approach for the Determination of Critical Two- Phase Flow", in "*The Advances in Two-Phase Flows and Heat Transfer"*, (ed. S. Kakac and M. Ishii) Martinus, Nijhoff, Boston, p. 465, 1983.

12. Michaelides, E. E., "Entropy Production in Geothermal Power Plants", in "*Alternative Energy Sources III"*, ed. T.N. Veziroglu, vol. 4, p. 487, Hemisphere, 1983.

13. Michaelides, E. E., and Parikh, S., "The Prediction of Critical Mass Flux by the Use of Fanno Lines", *Nuclear Engin. and Design*, 75, p. 117, 1983.

14. Zissis, K. L. and Michaelides, E. E., "The Velocity of Sound in Two-Phase Mixtures," *Int. J. of Heat and Fluid Flow*, 4, p. 79, 1983.

15. Michaelides, E. E., "The Utilization Potential of Geothermal Energy in Developing Countries", *Renewable Sources of Energy*, 1, #3, p. 181, 1983.

16. Michaelides, E. E., "A Model for the Flow of Solid Particles in Gases," *Int. J. of Multiphase Flow*, p. 61, 10, 1984.

17. Michaelides, E. E., "The Second Law of Thermodynamics As Applied to the Energy Conversion Processes", *Int. J. of Energy Research*, 8, 3 p. 241, 1984.

18. Michaelides, E. E., and L. K. Farmer, "The Application of Geothermal Energy in the Delaware Food Industry" in *Alternative Energy Sources IV*, ed. T.N. Veziroglu, 4, p. 373, Ann Arbor, 1984.

19. Michaelides, E. E., and Martin, J. "A Critical Review of Frictional Pressure Drop Correlation for Gas-Solid Flows" in *Multiphase Flow and Heat Transfer III*, eds Veziroglu and Bergles, Elsevier, Amsterdam, 1984.

20. Scott, G. J. and Michaelides, E. E., "A Binary-Flashing Geothermal Power Plant," *Energy, The International Journal*, 9, p. 323, 1984.

21. Michaelides, E. E., "Exergy and the Conversion of Energy", *Int. J. of Mech. Eng. Educ.*, 12, p. 65, 1984.

22. Farmer, L. K. and Michaelides, E. E., "A Model for Slurry Flows Based on the Equations of Turbulence," J. *of Pipelines*, 4, p. 185, 1984. Also in "Liquid- Solid Flows and Erosion Wear in Industrial Equipment", ed. M. C. Roco, FED-13, ASME, 1984.

23. Michaelides, E. E., "A Model for the Prediction of Time-Average Quantities in Fluid- Solid Mixtures", *Archives of Mechanics*, 36, p. 393, 1984.

24. Michaelides, E. E., and Fakhre-Shafaie, F., "A Numerical Study of Geothermal Well Flow with Salts and Non-Condensables Present," *ASME, J. of Energy Resources Technology*, 108, p. 140, 1986.

25. Chang, Y., Michaelides, E. E., and Bosworth, R. J., "Heat Transfer Coefficients and Friction Factors for Banks of Flexible Vibrating Tubes in Cross-Flow" in *Heat Transfer, 1986* 6, p. 2757, 1986.

26. Michaelides, E. E., "Heat Transfer in Particulate Flows" *Intern. J. of Heat and Mass Transfer*, 29, p. 256, 1986.

27. Michaelides, E. E., and Lai, F. C., "Pressure Loss Through Return Bends in Air-Solid Flows," *Int. Journal of Multiphase Flows*, 13, p. 269, 1987.

28. Michaelides, E. E.and Roy, I., "An Evaluation of Several Correlations Used For the Prediction of Pressure Drop in Particulate Flows," *Int. Journal of Multiphase Flows*, 13, p. 433, 1987.

29. Michaelides, E. E., "Motion of Particles in Gases: Average Velocity and Pressure Loss", *J. Fluids Engineering*, 109, p. 172, 1987.

30. Westman, M.A., Michaelides, E. E., and Thompson, F.A.,"Pressure Losses Due to Bends in Pneumatic Conveying," *J. of Pipelines*, 7, p. 15, 1987.

31. Michaelides, E. E., and Lasek, A. "Fluid-Solids Flow with Thermal and Hydrodynamic Non-Equilibrium," *Int. J. Heat and Mass Transfer*, 30, p. 2263, 1987.

32. Michaelides, E. E., "On the Drag Coefficient and the Correct Integration of the Equation of Motion of Particles in Gases", *J. Fluids Engin.* 110, p. 339, 1988.

33. Schwartz, L.W. and Michaelides, E. E., "Gravity Flow of a Viscous Liquid down a Slope with Injection," *Physics of Fluids*, vol. 31, p. 2739, 1988.

34. Michaelides, E. E. and Roy, I., "An Evaluation of Several Correlations used for the Prediction of Pressure Drop in Particulate Flows", *J. of Powder and Bulk Solids Techn.*, 12, pp. 15-20, 1988.

35. Arefmanesh, A. and Michaelides, E. E., "Pressure Changes at a Sudden Expansion in Gas-

Solid Flows," *Particulate Science and Technology,* 6, pp. 333-341, 1988.

36. Michaelides, E. E., and Hearn, J.R.,"Particle Flow Simulation and Efficiency of Electrostatic Precipitators," *Int. J. of Energy Systems,* 9, p. 162, 1989.

37. Michaelides, E. E., "The Role of Vapor in Volcanic Activity" *Int. J. of Volcanology and Geothermal Research*, vol. 37, p. 251, 1989.

38. Kumar, S, Nikitopoulos, D. E. and Michaelides, E. E., "The Effect of Bubbles on the Turbulence of a Bubbly Jet," *Experiments in Fluids*, vol. 7, p. 487, 1989.

39. Michaelides, E. E., "Entropy, Order and Disorder" *Int. J. of Mech. Eng. Education*, vol. 17, p. 157, 1989.

40. Chang, Y., Beris, A. N. and Michaelides, E. E., "A Numerical Study of Heat and Momentum Transfer for Tube Bundles in Cross-Flow," *Int. J. for Numerical Methods in Fluids*, 7, p. 543, 1989.

41. Chang, Y., Beris, A. N. and Michaelides, E. E., "A Numerical Study of Heat and Momentum Transfer for Flexible Tube Bundles in Cross Flow," *Int. J. of Heat and Mass Transfer*, 32, p. 2027, 1989.

42. Arefmanesh, A., Advani S.G. and Michaelides, E. E., "A Numerical Study of Bubble Growth during Low Pressure Structural Foam Molding Process, *Polymer and Engineering Science,* 30, pp. 1330, 1990.

43. Michaelides, E. E., and Lasek, A.," Particulate Flow with Sublimation or Evaporation and with Thermal and Hydrodynamic Non-Equilibrium," *Int. J. of Heat and Mass Transfer,* 34, p. 601, 1991.

44. Scrivens, B. G., Thompson, F.M. and Michaelides, E. E., "Study of a Port Design for Silo Blenders," *J. of Engineering for Industry*, 113, p. 343, 1991.

45. Michaelides, E. E., Liang, L., and Lasek, A., "The Effect of Turbulence on the Phase Change of Droplets and Particles under Non-equilibrium Conditions" *Int. J. of Heat and Mass Transfer*, 34, pp. 601-609, 1992.

46. Arefmanesh, A., Advani S.G. and Michaelides, E. E., "An Accurate Numerical Solution for Mass Diffusion Induced Bubble Growth in Viscous Liquids Containing Limited Dissolved Gas", *Int. J. of Heat and Mass Transfer*, 35, p. 1711, 1992.

47. Michaelides, E. E., "A Novel Way of computing the Basset Term in Unsteady Multiphase Flow Computations", *Phys. of Fluids*, A4, p. 1579, 1992.

48. Cassidy, D. N, Scrivens, B.G, and Michaelides, E. E., "An Experimental Study on the Blending of Granular Materials", *Powder Technology*, 72, 1992.

49. Yuan, Y. and Michaelides, E. E., "Turbulence Modulation in Particulate Flows - A

Theoretical Approach", *Int. J. Of Multiphase Flows,* 18, p. 779, 1992.

50. Li. L. and Michaelides, E. E., "The Magnitude of Basset Forces in unsteady Multiphase Flow Computations," *J. Fluids Engineering,* 114, p. 352, 1992.

51. Ryder, J. K. and Michaelides, E. E., "The Influence of Seasonal and Daily Temperature Fluctuations on the Work Produced by Geothermal Power Plants," *Int. J. of Energy Systems,* 12, pp. 68-73, 1992.

52. Yuan, Z. and Michaelides, E. E., "Binary-Flashing Geothermal Power Plants," *J. of Energy Resources Techn.*, vol. 115, pp. 232-237, 1993.

53. Michaelides, E. E., "Measurement of the Latent Heat of Vaporization of a Liquid," in *Experiments in Heat Transfer and Thermodynamics,* ed. R.A. Granger, Cambridge Univ. Press, 1994.

54. Vojir D. J. and Michaelides, E. E., "Effect of the History Term on the Motion of Rigid Spheres in a Viscous Fluid," *Int. J. Multiphase Flows,* vol. 20, pp. 547-556, 1994.

55. Michaelides, E. E., and Feng, Z.G., "Heat Transfer from a Sphere in a Non-Uniform Flow and Temperature Field," *Int. J. Heat and Mass Transfer*, vol. 37, p. 2069, 1994.

56. Nikitopoulos, D.E. and Michaelides, E. E., "A Phenomenological Model for dispersed Bubbly Flow in Pipes," *A.I.Ch.E. Journal*, vol. 41, p. 12, 1995.

57. Michaelides, E. E., and Feng, Z.G. "The Equation of Motion of a Small Viscous Sphere in an Unsteady Flow with Interface Slip," *Int. J. Multiphase Flows*, vol. 21, p. 315, 1995.

58. Feng, Z.G and Michaelides, E. E., "The Symbolic Operator Representation applied to the Derivation of Solutions of Unsteady Heat Diffusion Problems," *Intern. Communications in Heat and Mass Transfer,* vol. 22, p. 859, 1995.

59. Michaelides, E. E. and Feng, Z.G., "Unsteady Heat Transfer from a Sphere at Small Peclet Numbers," *J. of Fluids Engin.*, vol. 118, p. 96, 1996.

60. Xu, Q. and Michaelides, E. E., "A Numerical study of the Flow over Ellipsoidal Objects inside a cylindrical Tube," *Int. J. of Numerical Methods in Fluids*, vol. 22, p. 1075, 1996.

61. Feng, Z.G. Michaelides, E. E., and Scibilia, M.-F."The Energy Equation of a Sphere in an Unsteady and Non-Uniform Temperature Field," *Revue Generale de Thermique*, vol. 35, p. 5, 1996.

62. Seffal, R. and Michaelides, E. E., "Similarity Solutions for a Turbulent Round Jet," *J. Fluids Engineering*, vol. 118, p. 618, 1996.

63. Michaelides, E. E. and Feng, Z.-G., "Analogies between the Transient Momentum and Energy Equations of Particles," *Progr. in Energy and Combustion Science,* vol. 22, p. 147, 1996.

64. Feng, Z.G. and Michaelides, E. E., "The Use of Modified Green's Functions in Unsteady Heat Transfer," Int. *J. Heat Mass Transfer*, vol., 40, p. 2997, 1997.

65. Feng, Z.G. and Michaelides, E. E., "Unsteady Heat and Mass Transfer from a Spheroid," *A.I.Ch.E. Journal*, vol. 43, p.609, 1997.

66. Bilicki, Z. and Michaelides, E. E., "Thermodynamic Non-equilibrium in Liquid-Vapor Flows," *J. of Non-Equilibrium Thermodynamics*, vol. 22, p. 99, 1997.

67. Din X.Z. and Michaelides, E. E., "Calculation Of Long-Range Interactions In Molecular Dynamics And Monte Carlo Simulations," *J. Physical Chemistry A*, vol. 101, p. 4322,1997.

68. Michaelides, E. E., "Review-The transient Equation of Motion for Particles, Bubbles and Droplets," *J. Fluids Engin.*, vol. 119, p. 233, 1997.

69. Din X.Z. and Michaelides, E. E., "Kinetic Theory and Molecular Dynamics Simulations of Microscopic Flows," *Physics of Fluids*, vol. 9, p. 3015, 1997.

70. Kwidzinski, R., Bilicki, Z. and Michaelides, E. E., "Effect of Mechanical Non-Equilibrium on Dissipation in condensing Bubbly Flow," *Archives of Thermodynamics*, vol. 17, p. 25, 1997.

71. Din X.Z. and Michaelides, E. E., "Transport Processes of Water and Protons through Micro-Pores," *A.I.Ch.E. Journal*, vol. 44, p. 35, 1998.

72. Feng, Z.G. and Michaelides, E. E., "Motion of a Permeable Sphere at Finite but Small Reynolds Numbers," *Phys. of Fluids*, vol. 10, p.1375, 1998.

73. Feng, Z.-G. and Michaelides, E. E. "Transient Heat Transfer from a Particle with Arbitrary Shape and Motion," *J. Heat Transfer*, vol. 120, p. 674, 1998.

74. Bilicki, Z., Kardas, D. and Michaelides, E. E., "Relaxation Models for Wave Phenomena in Liquid-Vapor Bubble flow in Channels," *J. Fluids Engineering*, vol. 120, p. 369, 1999.

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47. Michaelides, E. E., and Feng, Z.G., "History Terms in the Momentum and Energy Equations of Particles," Proc. 2nd Intern. Conf. Multiphase Flows, Kyoto, Japan, pp. PD2-13 to PD2-28, 1995.

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57. Michaelides, E. E., Melkozerova, O. A., Steinberg, L. J., Shiryayeva, N., Sharovarov, G.A., Zhukova, O. G. and Brenkert A. L., "Flow of Radioactive Sediment in Water-The Case of Rivers near Chernobyl," in Solid-Liquid Flows, ed. Roco et al., ASME, FEDSM97-3201, 1997.

58. Seffal, R., Nikitopoulos, D. E. and Michaelides, E. E., "Effect of Large-Scale Structures on Particle Motion in a Turbulent Axisymmetric Jet ," 3rd International Conference on Multiphase Flows, Lyon, 1998.

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61. Michaelides, E. E. "The transient Equations for the motion and Heat transfer fromViscous and Conducting Spheres," 2nd IMuST workshop, Santa Barbara, March 1999.

62. Michaelides, E. E., "On the transport Coefficients of a Viscous Sphere in Unsteady Flows," Intern. Symposium on Two-Phase Flow Modeling and Experimentation," Pisa, Italy, May 1999.

63. (Keynote lecture) Michaelides, E. E. "Analogies between the transient Equations of motion and energy/mass Transfer from Spheres," Intern. Conference on Recent Advances in Multiphase Flows, Gdansk, Poland, June 1999.

64. Michaelides, E. E. "Industry-University Collaborative Research-The point of view of a University administrator," IMECE-1999, Nashville, November 1999.

65. Xu, Z., Michaelides, E. E. and Nikitopoulos, D.E. "The influence of Large Scale Structures of an Axisymmetric Jet in the Evaporation of Droplets," APS-DFD annual meeting, New Orleans, November 1999.

66. Michaelides, E. E. “Heat and momentum transport coefficients of a sphere in unsteady processes” AIChE Meeting, Dallas, TX, November 1999.

67. Feng, Z.-G. and Michaelides, E. E. “Viscous droplets in gaseous streams,” Symposium on the 100th anniversary of the NY Polytechnic Institute, New York, NY, November 1999.

68. J. R. Martin, Jr., L. J. Steinberg, and E. E. Michaelides “Determination of Bed Shear Stress by Digital Particle Image Velocimetry in Turbulent Open Channel Flow,” Joint Conference in Water Resources Engineering and Water Resources Planning & Management, Minneapolis, MN August 2000.

69. Z.-G. Feng, L. J. Steinberg, E. E. Michaelides, “Transport of dissolved contaminants within a stream bed with bedforms” Joint Conference in Water Resources Engineering and Water Resources Planning & Management, Minneapolis, MN August 2000.

70. (Keynote Lecture) Feng, Z.-G. and Michaelides, E. E., “Drag coefficients of viscous drops,” Proc. Of the ASME-FED-2000, pp. 709-719, November 2000.

71. Tranc-Cong, S., Feng, Z.-G. and Michaelides, E. E. “A novel method for sediment transport based on the equations of turbulence,” APS-DFD annual meeting, Washington DC, November 2000.

72. Farish, R., Michaelides, E. E. and Nikitopoulos, D.E., “The effect of large-scale structures on the Condensation of bubbles in an axisymmetric jet,” 4th International Conference on Multiphase Flow, New Orleans, LA, May 2001.

73. Feng, Z-G. and Michaelides, E. E., “Fluid dynamics of a sphere in an arbitrary electric field,” 4th International Conference on Multiphase Flow, New Orleans, LA, May 2001.

74. Tsega, Y., Michaelides, E. E. and Eschenazi, E., “Particle dynamics and mixing in the frequency driven 'Kelvin cat eyes' flow,” 4th International Conference on Multiphase Flow, New Orleans, LA, May 2001.

75. Nolen, J. D. L., Gaver, D. P. and Michaelides, E. E., A continuum model of platelet aggregation in blood,” 4th International Conference on Multiphase Flow, New Orleans, LA, May 2001.

76. Feng, Z.-G. and Michaelides, E. E. “Fundamental studies on the resuspension of particles,” APS-DFD annual meeting, San Diego CA November 2001.

77. Kartushinski, A. and Michaelides, E. E. “Inter-particle collisions-Two-fluid model for closure,” 10-th Workshop on Two-Phase Flow Predictions, Erlangen, Germany, April 2002.

78. Michaelides E. E., Zhi-Gang Feng and Tran-Cong, S., “Sediment transport models with coupled momentum and solids mass transport, 5th Int. Conf. On Hydro-science and Engineering, Warsaw, Poland, July 2002.

79. Michaelides E. E. and Feng Z.-G., "History terms in the heat and mass transfer equations of particles," Proc. Of the 12th Intern. Heat Transfer Conf., Grenoble, France, August 2002.

80. (Keynote Lecture) Xu Z.-J. and Michaelides E. E., "Lattice Boltzmann simulation of the sedimentation process with non-cohesive particles," Particle Fluids Interactions-VI, Barga, Italy, August 2002.

81. Feng Z.-G. and Michaelides E. E., "Fluidization and resuspension of particles in simple shear flow," Particle Fluids Interactions-VI, Barga, Italy, August 2002.

82. (Plenary Lecture-The Freeman Scholar Lecture) Michaelides, E. E., "Hydrodynamic force and heat/mass transfer from particles, bubbles and drops," ASME, Int. Mechanical Engineering Conference and Exhibition, New Orleans, LA, November, 2002.

83. Michaelides, E. E. and Xu, Z.-J. "Particle interactions during sedimentation," APS-DFD Annual meeting, Dallas TX, November 2002.

84. Kartushinski, A. Rudi, U. and Michaelides, E. E. "Gas-Solid particle flow in a horizontal channel- flow decomposition and particle collisions," EUROMECH-447, Tallin, Estonia, June 2003.

85. (Keynote Lecture) Michaelides, E. E., "The development of the equation of motion and energy equation for particles," ASME-JSME Fluids Engineering Meeting, Honolulu, HI, July 2003.

86. Kartushinski, A. and Michaelides, E. E., "Inter-particle collisions. Analytical approach for closure of driving equations of dispersed phase in gas-solid particle flows." ASME-JSME Fluids Engineering Meeting, Honolulu, HI, July 2003.

87. (Plenary lecture) Michaelides, E. E. "Transient equations of motion and heat transfer for bubbles, drops and particles," 5th International conference on Multiphase Flow, Yokohama, Japan, 2004.

88. Feng, Z.-G., and Michaelides, E. E., *Proteus*, a novel computational technique for solving fluid-particle interaction problems, 5th International Conference on Multiphase Flow, ICMF'04, Yokohama, Japan, 2004.

89. Kartushinski, A. Rudi, U. and Michaelides, E. E., "Gas-Solid Particle Flow in Horizontal Channels at High Mass Loadings," 5th International Conference on Multiphase Flow, ICMF'04, Yokohama, Japan, 2004.

90. (Invited lecture) Feng, Z.-G., and Michaelides, E. E., *Proteus*-a new computational scheme for deformable particles and particle interaction problems, IUTAM Symposium, Argonne, IL, 2004.

91. Kartushinsky, A. and Michaelides, E.E., "RANS Modeling in Gas-Solid Particle Flow in Vertical Channels," ASME-FED annual meeting, Houston, 2005.

92. Kartushinsky, A. Michaelides, E.E., and Pihlak, U., "Gas-solid particle mixture in vertical duct by RANS approach," 10th jubilee Polish seminar on mixing and international workshop, Poznań, Poland, 2005.

93. Feng, Z.-G., and Michaelides, E. E., "*Proteus*: – An efficient computational scheme for the simulation of dense particulate flows," 5th World Congress on Particle Technology, Orlando, 2006.

94. Mao, S.-L., Patton, E. and Michaelides, E. E. "Large-Eddy simulation of the net ecosystem-atmosphere exchange of CO2 in a canopy," American Geophysical Union meeting, San Diego, 2006.

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96. Michaelides, E. E., and Mirshams, R., "An Innovative Mechanical and Energy Engineering Curriculum," ASEE Annual Conference, Hawaii, 2007.

97. Michaelides, E. E., and Mirshams, R., "Mechanical and Energy Engineering Department at UNT – An innovation to Engineering Education," ASEE Gulf-Southwest section annual meeting, Padre Island, 2007.

98. (Plenary lecture) Feng Z. G. and Michaelides, E. E., "Inclusion of Heat/Mass Transfer Computations in DNS Studies for Particle Laden Flows," IUTAM, Symposium, Istanbul, Turkey, June, 2007.

99. (Invited lecture) Michaelides, E. E., "Analogies in the transient equation of motion and energy equation for particles, bubbles and drops," Colloquium Jean Bataille, Lyons France, June 2007.

100. Feng, Z.-G. and Michaelides, E. E., "A Direct Numerical Simulation Method for the Study of Heat/Mass and Momentum Interactions in Particulate Flows," 6th Int. Conf. on Multiphase Flow, Leipzig, Germany, July 2007.

101. Kartushinski, A., Michaelides, E. E., and Zaichick, L., Comparison of the Simulations of Turbulent Particulate Flow in Pipes Using the TBL, RANS and PDF Methods," 6th Int. Conf. on Multiphase Flow, Leipzig, Germany, July 2007.

102. (Invited lecture) Hussainov, M., Kartushuinski, A. Rudi, U., Shceglov, I., and Michaelides, E. E., Deposition of Fine Solid Particles in Laminar, Flat-Plate boundary Layers, Joint ASME-JSME Fluids Engineering Meeting, San Diego CA, July 2007.

103. Michaelides, E. E., "The Chernobyl accident and the transport of radionuclides released," ASME meeting, San Antonio, November, 2007.

104. Michaelides, E. E., "The accident in the Chernobyl power plant," SACCESS meeting, San Antonio, March 2008.

105. Michaelides, E. E. “Renewable energy sources and hydrogen as a solution to the energy challenge of the future,” *Joint meeting of Canary Islands and San Antonio*, February 2008.

106. Michaelides, E. E. “Energy storage – The Hydrogen Economy” *North American Energy Summit*, San Antonio, May 2008.

107. Michaelides, E. E. and Davis, A.P. “Geothermal power extraction from abandoned oil wells in Texas,” TREIA annual meeting, Austin TX, Nov. 2008.

108. Michaelides, E. E. and Davis, A.P., “Geothermal Power From Dry Wells” Clean Technology Conference and Exposition, Houston, TX, May 2009.

109. (Keynote lecture) Michaelides and Feng, Z.-G. “Application of the Immersed Boundary Method and Direct Numerical Simulation for the Heat Transfer from Particles,” 12th international Symposium on Gas-Particle Flows,” Veil CO, Aug. 2009.

110. Michaelides, E. E. “The future of geothermal energy – power plants and resources.” Symposium on Geothermal Energy, San Antonio, TX, Sept. 2009.

111. (Invited lecture) Michaelides, E. E. “The next generation of geothermal power plants,” TREIA annual Conference, Austin TX, Nov. 2009.

112. Michaelides, E. E. "The DNS-IB method for particulate flow and heat transfer simulation," DOE contractors annual meeting, June 2009, Morgantown, West Virginia.

113. (Invited lecture) Michaelides, E. E., “New Directions for Geothermal Energy,” UT-System Workshop on Alternative Energy, Dallas, May 2010.

114. Roig, A. and Michaelides, E.E., “A re-interpretation of the Odar and Hamilton data on the history terms of the equation of motion,” ICMF-2010, May 2010, Tampa, FL.

115. Davis, A., Michaelides, E. E., and Feng, Z.-G., “Particle Velocity near Vertical Boundaries – A Source of Uncertainty in Two-Fluid Models, ” ICMF-2010, May 2010, Tampa, FL.

116. Kartushinsky, A and Michaelides, E.E., “RANS Modeling of a Particulate Turbulent Downward Jet,” ICMF-2010, May 2010, Tampa, FL.

117. (Keynote lecture) Michaelides, E. E. and Feng, Z.-G., “Direct Numerical Simulations of Particulate Flows that Include Momentum, Heat and Mass Exchanges” ICMF-2010, May 2010, Tampa, FL.

118. Feng, Z.-G. and Michaelides, E. E., 2010, "Simulation Of The Particle-Wall Collisions In A Viscous Fluid Using A Resolved Discrete Particle Method," Proceedings of the ASME 3rd Joint US-European Fluids Engineering Summer Meeting, FEDSM-ICNMM 2010, August 1-5, 2010, Montreal, Canada.

119. Michaelides, E. E., Geothermal Energy from Abandoned Oil and Gas Wells," International Workshop on Alternative Energy Sources, College Station, TX, January 2011.

120. Kartushinsky, A.I. , E.E. Michaelides, Y.A. Rudi, S.V. Tisler, I.N. Shcheglov, and A. Shablinskya, Two-Phase Boundary Layers, Euromech Colloquium on Dynamics of Non-spherical Particles in Fluid Turbulence, Udine, Italy, March 2011.

121. Feng, Z-G, Michaelides, E. E., and Mao, Shaolin, 2011,"A multilevel simulation approach to derive the slip boundary condition of the solid phase in two-fluid models," 64th Annual Meeting of the APS Division of Fluid Dynamics, Baltimore, Maryland.

122. Feng, Z-G. Musong, S.G., and Michaelides, E. E., "Effect of Model Parameters of Soft-Sphere Collision Scheme to the Particle-Particle Collision in a Viscous Fluid," NETL 2012 Multiphase Flow Conference, Morgantown, WV, USA, May 2012.

123. Tisler; S., Rudi, Y. Michaelides, E.E. and Kartushinsky, A. Turbulent Particulate Pipe Flow at Constant Reynolds Numbers," 23rd International Congress of Theoretical and Applied Mechanics, ICTAM-2012, Beijing, China.

124. Michaelides, E. E. and Feng, Z-G., "A DNS method for particle motion to establish boundary conditions in coal gasifiers," ECOS-2012, Perugia, Italy, June 2012.

125. Michaelides, E.E. "Cooling of electronic components with nanofluids – particle motion, enhanced heat transfer and uncertainties" San Antonio Simulation and Visualization Symposium, (SVS) November 2012.

126. (Keynote Lecture) Michaelides, E.E., "Particle, bubble and drop dynamics and heat transfer," 8th International Conference on Multiphase Flow, ICMF 2013, May 2013, Jeju, Korea.

127. Michaelides, E.E., Lingo, S.K., Esparza H.E., Dubinski C., Millwater, H.R., Heat transfer from particles in nanofluids – an uncertainty analysis," 8th International Conference on Multiphase Flow, ICMF 2013, May 2013, Jeju, Korea.

128. (Plenary Lecture) Michaelides, E. E., "The Immersed Boundary Method applied to the Motion and Heat Transfer of Particles in Fluids," Int. Symposium on Turbulent Particle-Laden Flow and Coal Combustion, June 2013, Wuhan, China.

129. (Invited lecture) Michaelides, E.E. and Feng Z-G., "Heat Transfer in Particulate Flows," Int. Symposium on Turbulent Particle-Laden Flow and Coal Combustion, June 2013, Wuhan, China.

130. (Plenary Lecture) Michaelides, E. E., "Current Practice and Future Directions of Geothermal Energy," *IEEE MetroCon* 2013, October 2013, Arlington TX.

131. (Invited Lecture) Michaelides, E.E. "Direct Numerical Simulations (DNS) and heat transfer particulate processes" Chemnitz University, Germany, June 2014.

132. (Invited Lecture) Michaelides, E.E. "Direct Numerical Simulations (DNS) with particles bubbles and drops" Technical University of Tallinn, Estonia, June 2014.

133. Michaelides, E.E., Power Production from Geothermal Energy– Future Directions and Cycles," ECOS-2014, Turku, Finland.

134. (Plenary Lecture) Michaelides, E.E., Feng, Z-G., and Musong, S., "Particulate DNS with Heat and Mass Transfer" 2nd Int. Conference on Numerical Methods in Multiphase Flow, Darmstadt, Germany, July 2014.

135. (Invited Lecture) Michaelides, E.E. "Nanofluidics – Properties and Myths" Aristotle University of Thessalonica, Greece, July 2014.

136. (Plenary Lecture – the lecture of the 2014 ASME Fluids Engineering Award) Michaelides, E.E., "Heat and Mass Transfer with Nanofluids - Fundamentals and Applications," ASME-FED Summer Annual Meeting, Chicago, August 2014.

137. Michaelides, E.E., Feng, Z-G., and Musong, S. "A Three Dimensional Immersed Boundary Method for Free Convection from Single Spheres and Aggregates," ASME-FED Summer Annual Meeting, Chicago, August 2014.

138. (Invited Lecture) Michaelides, E.E. "Do not Waste the Good Experimentalist!" in the Symposium on EFD/CFD Choice – A dilemma for Industry, ASME Intern. Mechanical Engineering Conference and Exhibition, Houston, TX, November 2015.

139. Michaelides, E.E., Mass transfer with nanofluids – the role of microconvection, 9th Int. Conf. on Multiphase Flow, Florence, Italy, May 2016.

140. Feng Z.G., Gatewood J., Duan Y., Michaelides E.E, Wall effects on the dynamics of particle motion in a laminar flow, 9th Int. Conf. on Multiphase Flow, Florence, Italy, May 2016.

141. Michaelides, E.E., A Critical Assessment of Nanofluid Mass Transfer, ASME HT-FE-ICNMM Conference 2016, Washington DC, July 2016.

142. Michaelides, E.E., Duan,Y., Feng, Z.G., Mao, S. Modifications to the Kinetic Theory as Applied to Dense and Granular Particulate Flows, ICNMMF-2017, Tokyo, June 2017.

143. Leonard, M.D., and Michaelides, E.E. Energy Storage Requirements of a Grid Independent Building with Significant Air-Conditioning Need, ECOS-2017, San Diego, July 2017.

144. (Keynote Lecture) Michaelides, E.E., Particulate/Multiphase Flows – What Has Been Done, What Is Needed, ASTFE annual meeting, Fort Lauderdale, March 2018.

145. (Plenary Lecture) Michaelides, E.E., Transition to Renewable Energy – The Need for Energy Storage, ECOS annual meeting, Guimaraes, Portugal, June 2018.

146. Michaelides, E.E., Duan ,Y., Feng, Z.G., Modified Kinetic Theory for the Flow of Dense Particulate Mixtures and Granular Materials, DOE annual workshop on Multiphase Flow, Houston, TX, August 2018.

147. (Plenary Lecture) Michaelides, E.E., Energy Storage Needs for a Transition to Renewables, 8th Intern. Conf. on Clean Energy, Montreal, Canada, August 2019.

148. (Keynote Lecture) Michaelides, E. E., Substitution of fossil fuels with renewables for the production of electric power – difficulties and resolutions, 4th Intern. Conference on Renewable Energy, Houston, TX, February 2020.

149. (Keynote Lecture, online) Michaelides, E.E., Technical Problems and Resolutions for the Substitution of Fossil Fuels with Renewables, 5th International Conference on Energy Engineering and Environmental Protection (EEEP2020), Xianmen, China, November 2020.

150. (Plenary Lecture, online) Michaelides, E.E., "Myths and Reality for Electric Vehicles," 1st Inter. Conference on Thermal Management in Electric Vehicles," Chennai, India, January 2021.

D. Conference Books and Proceedings Edited

1. "Fundamental Aspects of Gas-Liquid Flows", ASME December 1985.

2. "Fundamentals of Gas-Liquid Flows" (with M. P. Sharma), ASME, November 1988.

3. "Turbulence Modulation in Dispersed Multiphase Flows" (with D. E. Stock) ASME, 1989.

4. "Turbulence Modification in Two-Phase Flows" (with T. Fukano and A. Serizawa) ASME, 1991.

5. "Measurement and Modeling of Environmental Flows" (with Sherif, Davis, Stock and Khalighi, Celik and Kumar) ASME, November 1992.

6. "Gas-Solid Flows 1993" (with Stock, Reeks, Tsuji, Gautam and Jurewicz) ASME, June 1993.

7. "Liquid-Solid Flows-1994" (with Roco, Joseph and Khalighi) ASME, June 1994.

8. "Gas-Particle Flows," (with Stock, Reeks, Tsuji and Gautam) ASME-FED 228, August 1995.

9. "Heat Mass and Momentum Transfer in Environmental Flows" (with Sherif, Stock, Davis, Meroney, Peterson and Celik), ASME HTD-321, 1995.

10. "Proceedings of the Annual Meeting of the Society of Engineering Science," (with D. Hui) New Orleans, 1995.

11. "Gas-Particle Flows-1997" (with Stock, Reeks, and Tsuji) ASME-FED 145, June 1997.

12. “Liquid-Solid Flows-1997" (with Roco, Joseph and Khalighi) ASME, FED 148, June 1997.

13. “Gas-Particle Flows-1999” (with Stock and Tsuji) Published in CD_ROM ASME-FED, June 1999.

14. “Dispersed flows in combustion, incineration and propulsion systems,” (with Nikitopoulos, Acharya and O’Hern) Proceedings of the ASME-FED, November 2000.

15. “Proceedings of the ICMF-2001” a collection of 539 papers from the 4th Int. Conference on Multiphase Flow, New Orleans, 2001 (in CD-ROM).

16. “Gas-Particle Flows-1999” (with Stock, Reeks and Tsuji) Published in CD_ROM ASME-FED, June 2001.

17. “Gas-Particle Flows-1999” (with Stock, Reeks and Tsuji) Published in CD_ROM ASME-FED, June 2003.

18. “Proceedings of the ASME – Fluids Engineering Division Summer Meeting (editor), CD_ROM ASME-FED, June 2005.

19. “Proceedings of the ASEE-GSW Annual Conference” March 2016, published in USB drive.

RESEARCH CONTRACTS AND GRANTS (P.I., unless listed otherwise; funds rounded to the nearest thousand)

1. University of Delaware Research Foundation, "New models for Critical Two-Phase Flow", 1-81 to 6-82, $8,000.

2. DOE, “Studies on alternative Cycles for Geothermal Power Plants,” 5-81 to 5-84, $96,500.

3. University of Delaware Research Foundation "Studies on Particulate Flows", 1-82 to 6-83, $9,000.

4. DuPont "Research Studies on Pipe Fittings for Pneumatic Conveying" 9-81 to 3-88, (a series of five smaller grants with a total of $160,000).

5. DuPont "Experimental Studies on Teflon Heat Exchangers" 1-84 to 6-87, $170,000.

6. UNI-DEL Foundation "Research Equipment for Fluid Dynamics" (co-P.I. with Professor F.A. Kulacki as P.I. in 1984-85, then P.I. in 1985-88) 1-84 to -88 $340,000.

7. University of Delaware Research Foundation "Particulate Transport in Electric Fields" 1-85 to 6-86 (Co-PI with Professor J. H. Davidson) $11,500.

8. DuPont "Analytical and Numerical Studies on Teflon Heat Exchangers" 7-85 to 6-88, $69,000.

9. State of Delaware/DOE "Applications of Teflon Heat Exchangers" 1-86 to 12-87 $104,000.

10. DuPont "Mixing of Particulates in Silo-Blenders-Effect of Valves and Gates", 7-88 to 3-90, $40,000.

11. Delaware Office for International Development, "Study in France, Travel Grant" 1988-1989, $2,500.

12. NASA, “Particulate Flows related to Coastal Erosion Processes,” 1991-1994, $69,000.

13. NASA, “Establishment of Louisiana Space Consortium-LaSPACE”, (co-P.I. in a team of eight Louisiana Scientists, P.I . Dr. Wefel), 1991-1995, total funding $408,000 per year for four years.

14. Shell Foundation “Support for the Mechanical Engineering Department at Tulane,” $48,000 (16k per year for three years) 1990-1993.

15. NSF “Hydrodynamics of Particulate Flows through Membranes and Interphases” (Co- P.I. in a team of researchers from Tulane, UNO and LSU with P.I. Dr. Papadopoulos) 1992-1997, EEM’s expenditures total $134,000.

16. LEQSF “Hydrodynamics of Particulate Flows through Membranes and Interphases” (Co- P.I. in a team of researchers from Tulane, UNO and LSU with P.I. Dr. Papadopoulos) 1992-1997, EEM’s expenditures total $178,000.

17. LASPACE “Turbulence Modulation by Embedded Particles”, 1993-1994, $5,000.

18. TRW “Support for Studies in Energy and the Environment”, 1993-1998, (a series of three smaller grants with a total of $165,000).

19. NASA “Particulate Flows in Propulsion Systems” (Co-P.I. in a group from LSU, Xavier and Southern Universities with P.I. Dr. Acharya of LSU), 1994-2000, EEM’s expenditures total $122,000.

20. LEQSF “Particulate Flows in Propulsion Systems” (Co-P.I. in a group from LSU, Xavier and Southern Universities with P.I. Dr. Acharya of LSU), 1994-2000, EEM’s expenditures total $107,000.

21. DOD-ONR “Graduate Fellowships to Support Minority Students – the 3-2 year Xavier-Tulane Program,” a series of three grants 1995-2001, total funding $420,000 (co-PI, with P.I. Dr. Eschenazi).

22. LASPACE “Spurious Solutions in Two-Phase Codes,” 1995-1996, $5,200.

23. NSF (Infrastructure Program) “Renovations of Engineering Facilities” (co-PI in a team of five Tulane School of Engineering faculty) total funding, $667,000.

24. DOE (Environmental Management) “Collaborative Research with IREP and CREM in Belarus on the Transport and Fate of Radionuclides following the Chernobyl Accident” (a

series of three grants) 1994-1997, $232,000.

25. DOE (through the Center for Bioenvironmental Research) “Transport and Fate of Radionuclides and Pollutants in Aquatic Environments,” (a series of two grants, with co-P.I.’s Drs. Luna, Ramer and Steinberg) 1996-1998, $365,000.

26. Louisiana Education Quality Support Fund “Graduate Fellowships to Support future Leaders in Engineering,” 1996-2000, $272,000.

27. Louisiana Education Quality Support Fund “Graduate Fellowships to Support future Leaders in Engineering,” 1997-2001, $408,000.

28. TRW “Research Evaluation of Nuclear Waste Storage Facilities,” 1996-1998, total funding $200,000 EEM’s expenditures total $40,000.

29. Louisiana Education Quality Support Fund “Graduate Fellowships to Support future Leaders in Engineering,” 1998-2002, $340,000.

30. DOD “Experimental and Analytical Studies on the Transport of Cohesive Sediment,” 1998-2001, total funding $468,000.

31. Louisiana Education Quality Support Fund “Graduate Fellowships to Support future Leaders in Engineering,” 1999-2003, $408,000.

32. DOD-DTRA (through the Center for Bioenvironmental Research) “Extension of Studies on the Transport of Pollutants and Sediments,” 1999-2000, $61,000.

33. Louisiana Board of Regents “Graduate Fellowships to Support the new Generation of Leaders in Engineering,” 2000-2004, $340,000.

34. DOD-ONR “Sedimentation and Resuspension Studies for the Mississippi River and the Louisiana Environment,” 1999-2001 (co-P.I.’s Drs. Eschenazi and Steinberg), $399, 000.

35. DOD-ONR “A five-year B.S./M.S. program between Xavier and Tulane Universities of Louisiana,” 1999-2002 (co-P.I. Dr. Eschenazi), $124, 000.

36. DOD-ONR “Support for the 4th International Conference on Multiphase Flow,” 2001-2002, $10,000.

37. Louisiana Board of Regents “Graduate Fellowships to Support the new Generation of Leaders in Engineering,” 2001-2005, $350,000.

38. NSF “Support for the 4th International Conference on Multiphase Flow,” 2001-2002, $35,000.

39. Louisiana Board of Regents “Graduate Fellowships to Support the new Leaders in Engineering,” 2002-2006, $280,000.

40. DOE "Fundamental studies on the sediment transport in rivers," 2002-2003, 96,000.

41. USGS "Modeling of the sedimentation processes and Sediment Transport," 2002-2003, $38,500.

42. DOE "Support for the Tulane-Xavier BS/MSE 5-year program," 2002-2003, $72,000.

43. Louisiana Board of Regents "Graduate Fellowships to Support the new Leaders in Engineering," 2003-2007, $216,000.

44. Entergy Inc. "Preliminary work to establish the Tulane Energy Institute," 2002-2003, $70,000 (co-P.I. with Dr. James McFarland as P.I.).

45. DOE-NIGEC, "Funding for the Southcentral Regional Center for FY 03-04," 2003-2004, $1,109,000.

46. DOE-NIGEC, "Improvement of the accuracy of carbon flux measurements," 2003-2004, $92,000.

47. DOE-NIGEC, "Funding for the Southcentral Regional Center for FY 04-05," 2004-2005, $1,254,000.

48. DOE-BER, "The use of Computational Fluid Dynamics for the improvement of the accuracy of carbon flux measurements," 2004-2006, $458,000.

49. Entergy Inc. "The Tulane-Entergy, Energy Institute," endowment of $5,000,000, 2004-2008 (co-P.I. with Dr. McFarland as P.I.).

50. DOE-NIGEC, "Funding for the Southcentral Regional Center of NIGEC for FY 05-06," 2005-2006, $1,453,000.

51. DOE-NIGEC, "Pilot project- the governing equations for Eddy-Covariance Method (ECM)," 2004-2006, $92,000.

52. DOE-BER "The use of Computational Fluid Dynamics for the improvement of the accuracy of carbon flux measurements," 2006-2007, $107,000.

53. Xinwen Mining Group, "Development of A Low-Pressure Pneumatic Coal Conveying and Separation System" 2008-2010 $565,000 (co-P.I., with Dr. F. F. Chen as P.I.).

54. DOE "Use of an Accurate DNS Particulate Flow Method to Supply and Validate Boundary Conditions for the MFIX Code" 2009-2011, $200,000.

55. NSF "Integrating High Performance Computing in Research and Education for Simulation, Visualization and Real-Time Prediction" 2009-2014, $5,000,000.

56. NSF (through UTSA) "Cooling of electronic components with nanofluids" 2011-2014, 179,000.

GRADUATE STUDENTS SUPERVISED (with thesis or dissertation topic)

1. K. L. Zissis, M.S., 1982, "Velocity of Sound in Two-Phase Mixtures."

2. S. R. Parikh, M.S., 1983, "Critical Two-Phase Flow."

3. M. A. Degliobizzi, M.S., 1983, "Experimental Studies on the Feeding of Solid Particles in a Pneumatic Conveying System."

4. L. K. Farmer, M.S., 1983, "A Model for Slurry Transport Based on the Equations of Turbulence."

5. F. Shafaie, Ph.D., 1984, "Modeling of Geothermal Well Flow."

6. J. Martin, M.S., 1984, "Evaluation of Material Entrance Region Design in Positive Pressure Pneumatic Conveying Systems."

7. C. Lai, M.S., 1985, "Pressure Drop through Return Bends in Pneumatic Conveying Systems."

8. W. K. Harris, M.S., 1986, "Investigation of Heat Transfer Coefficients in Teflon Heat Exchangers."

9. M. A. Westman, M.S. 1986, "Effect of 90^{o} Bends in Pneumatic Conveying."

10. H. Q. Gong, M.S. 1987, "Simulation of Turbulent Bubbly Jets."

11. M. D. Marcozzi, M.S. 1987, "Computation of a Supersonic Axisymmetric Inlet Flow."

12. S. Kumar, M.S., 1988 "Experimental Investigation of Turbulence in Bubbly Jets."

13. A. Arefmanesh, M.S. 1987, "The Flow of Air-Solid Mixtures through Expansions."

14. H. B. Meyer, Ph.D. 1987 "Numerical and Experimental Investigation of a Hypersonic Shaped Charge Jet" (co-advisor with Dr. Danberg).

15. Y. Chang, Ph.D. 1988, "Heat Transfer through Vibrating Flexible Tubes."

16. C. Lai, Ph.D, 1988, "Heat Transfer in Porous Media" (co-advisor with Dr. Kulacki).

17. B. G. Scrivens, M.S. 1988, "Modeling of Air-Solid Mixtures in Hoppers."

18. A. Etzel, M.S. 1989 "Turbulence Measurements over a Plate with embedded Particles."

19. J. Cassidy, M.S. 1990, "Gravity Flow of Granular Materials."

20. Z. Plazaola, M.S. 1990, "Vapor-Liquid Non-Equilibrium in Flow through Convergent

Passages."

21. A. Arefmanesh, Ph.D. 1991, "Manufacturing of Structural Foams" (co-advisor with Dr. Advani).

22. J.-P. Ganty, Thesis Dipl. Ingeneur, 1992, Ecole Superiour de Hydraulique, Grenoble, France, "Effect of Basset Forces on Particle Motion."

23. N. Nayyar, M.S. 1993 "Particulate Jet Flows."

24. B.G. Scrivens, Ph.D. 1992, "Flow Patterns Gravity in Granular Material Flows."

25. Q. Xu, M.S.E., 1993 "Deformation of Droplets in Capillaries."

26. X.-D. Din, M.S.E., 1993 "Molecular Dynamics modeling of Flows in Porous Media."

27. Z.-G. Feng, M.S.E., 1993 "Modeling of Flows in Porous Media."

28. S. F. Wiegand, M.S.E. 1995 "The Drag Coefficient of axisymmetric Dendrites."

29. Q. Xu, Ph.D. 1995 "Flow of Ellipsoids in Cylindrical Tubes."

30. O. Pimenov, M.S.E., 1996 "Fate and Transport of Radionuclides, in Forest Fires."

31. X. D. Din, Ph.D. 1996 "Non-continuous modeling of Flows in Porous Media."

32. Z.-G. Feng, Ph.D. 1996 "Unsteady Heat Transfer from Particles."

33. N. Henn, Thesis Dipl. Ingeneur, 1996, Universite Claude Bernard, Lyon I, France, "Effect of the History Terms on the Dispersion of Particles."

34. S. M. Fitzpatrick, M.S.E. 1997 "Particulate Flows related to Coastal Erosion Processes."

35. O. Melkozerova, M.S.E. 1997, "Transport and Fate of Radionuclides in Sediments following the Chernobyl Accident."

36. Y. Tsega, M.S.E. 1998, "Non-linear aspects and chaos in the motion of particles in fluids."

37. R. Seffal, Ph.D., 1998, "The Effect of Large-Scale Structures on the Motion of Particles in an Axisymmetric Round Jet."

38. G. Atzampos, M.S.E. 1998, "Experimental and Analytical Studies on the Resuspension of Sediments."

39. P. Koukios, M.S.E., 1999, "Sedimentation Problems in Nuclear Waste Storage Facilities."

40. R. Farish M.S.E. 2000 "The Effects of large-scale Structures on bubble Condensation and Phase Transition."

41. J. R. Martin M.S.E. 1999, “Measurements of shear stress with a PIV.”

42. S. R. Niyrenda, MSE 1999, “Studies on the Resuspension of Cohesive Sediments.”

43. J. D. Nolen, Ph.D. 2001 “The Effect of Flow Turbulence on the Coagulation of Platelets in Blood” (co-advisor, Dr. Gaver).

44. M. Gay, MSE, 2002, “Effect of the history terms on the transient energy equation of particles.”

45. Z.-J. Xu, Ph.D, 2003, “Numerical simulations of particulate sedimentation processes”

46. J. R. Martin, Ph.D., 2004 “Gravity currents through bends-the saltwater intrusion.”

47. L. Craig, MSE, 2005 “Lift forces in particles exerted by their proximity to a wall.”

48. R. Farish, Ph.D. 2005 “The effect of surface slip on the drag of fine particles and bubbles.”

49. Steven Duck, M.S. 2006 “An analytical approach for the determination of unsteady drag for nano- and micro-particles.”

50. Adam Baran, part-time student, Ph. D. 2008, “Thermodynamics of the densification of liquid rocket propellants.”

51. Muriele Dugay, 2007, Thesis Dipl. Ingeneur, Universite Claude Bernard, Lyon I, France “The influence of the History terms on the heat transfer from micro- and nano-particles.”

52. Adelina Popruga-Davis, MS 2009, “Geothermal power from abandoned oil wells.”

53. Bradley Denton, MS 2011 “Testing of particulate flow through filters.”

54. Mey Cabrejos-Davy, MS, 2010, “The effect of the history terms on the heat transfer from fine particles at finite Peclet numbers.”

55. Shamsul Al-Tomal, MS 2011 “Entropy production in Geothermal Power Plants and Optimization of the Plants.”

56. Erem Ugras, MS, 2011 “Exergy of Solar Radiation and its Potential in the south Texas Area.”

57. John Zigtema, MS 2011 “Interaction of a geothermal well operation with the surrounding geological strata”

58. Stephanie Koch-Lingo MS 2011 “Heat transfer in microtubes with micro- and nano-particles.”

59. Bakhtosh Edrisi, MS 2012 “Binary-Flashing geothermal power plants.”

60. Jason Brubacker, MS 2013 “Geothermal energy from abandoned oil and gas.”

61. Maria Andersson, MS. 2012, “Power from pairs of abandoned oil and gas wells.”

62. Hector Esparza, MS. 2012 “Quantification of uncertainty in heat transfer with nanofluids.”

63. Adam Roig, MS 2013 “History terms in the double-diffusion processes involving droplets.”

COURSES TAUGHT

A. Undergraduate

1. Thermodynamics I
2. Thermodynamics II
3. Thermal Sciences-I (including laboratory)
4. Fluid Mechanics I
5. Heat Transfer
6. Energy Conversion
7. Two-Phase Flow
8. Mathematical Optimization and its Engineering Uses
9. Engineering Science Laboratory
10. The Chernobyl Catastrophe and its Aftermath
11. Engineering Economics
12. Design of Thermal Power Plants
13. Engineering Ethics.
14. Alternative Energy Sources.
15. Sustainability

B. Graduate

1. Advanced Thermodynamics
2. Two-Phase Flow
3. Experimental Fluid Dynamics
4. Turbulence
5. Statistical Mechanics and Thermodynamics
6. Thermal Power Plants
7. Energy and Ecology
8. Fluid Mechanics
9. Computational Fluid Dynamics (CFD)
10. Alternative Energy Sources.