

CURRICULUM VITAE

Professor Dr.

M. PINAR MENGÜÇ

PERSONAL

- Professor and Founding Head, Mechanical Engineering, Özyegin University, Çekmekoy, Istanbul, Turkey
- Founding Director, Center for Energy, Environment and Economy, Özyegin University, Çekmekoy, Istanbul, Turkey
- Engineering Alumni Association Professor Emeritus, Mechanical Engineering Dept, University of Kentucky, Lexington, KY 40506, USA

OFFICE ADDRESS: Özyegin University
Center for Energy, Environment and Economy (CEEE/EÇEM)
& School of Engineering, Mechanical Engineering
Nisanteppe, Cekmekoy 36794,
Istanbul, Turkiye

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E-MAIL: pinar.menguc@ozyegin.edu.tr; mpmenguc@gmail.com

WEB SITES: www.ozyegin.edu.tr/energy www.thermalradiation.net

EDUCATION

Ph.D.: Purdue University, School of Mechanical Engineering, West Lafayette, IN, 1985.
Dissertation Title: Modeling of Radiative Heat Transfer in Multidimensional Enclosures
Using Spherical Harmonics Approximation. Advisor: Prof. R. Viskanta.

MSME: METU, Department of Mechanical Engineering, Ankara, Turkey, 1980 (with honors).
Thesis Title: Heat Transfer in a Radiating Laminar Flow between Parallel Plates.
Advisor: Prof. Y. Yener.

BSME: METU, Department of Mechanical Engineering, Ankara, Turkey, 1978 (with honors).
Area of Specialization: Heat Transfer.

EXTENDED EDUCATION:

Woods Hole Oceanographic Institute College Faculty Workshop, Woods Hole, MA, June 1992.
Laser Surgery Principles, Harvard University, Cambridge, MA, October 1998.

AREA OF RESEARCH SPECIALIZATION

Radiative heat transfer in multidimensional geometries
Radiative/optical properties of particulates and combustion products
Applied optics - laser diagnostic techniques
Inverse radiation problems
Thermal Transport in Nano-Scale: Electrons, Phonons, and Photons
Near-field Radiative Transfer and Applications
Energy Efficient Buildings and Sustainable Energy Applications

PROFESSIONAL EMPLOYMENT

4/2009-... Founding Director, Center for Energy, Environment and Economy, Ozyegin
University, Istanbul, Turkey

12/2008-...	Founding Coordinator and Head of Mechanical Eng., Ozyegin University, Istanbul, Turkey
12/2008-...	Professor of Mechanical Engineering, Ozyegin University, Istanbul, Turkey
7/2011-...	Engineering Alumni Association Professor Emeritus, UK, Lexington, KY, USA
1/2009- 6/2011	Engineering Alumni Association Professor, UK, Lexington, KY, USA
7/1993 – 6/2011	Professor of Mechanical Engineering, U of Kentucky, Lexington, KY, USA
1/2007 – 12/2008	President of Synergetic Technologies, Inc., USA
7/2006	Honorary Professor, ESPOL, Guayaquil, Ecuador
8/2005 – 12/2008	Honors Program Faculty, University of Kentucky, Lexington, KY, USA
8/2003 – 12/2008	Director of the Nano-Scale Engineering Program at the College of Engineering for Undergraduate Students, U of Kentucky, USA
9/1998 – 7/1999	Senior Research Fellow, Shriners Research Center, Harvard University/ Massachusetts General Hospital, Cambridge, MA, USA
6/1994 – 6/1999	Faculty Associate, Center for Applied Energy Research, University of Kentucky, Lexington, KY, USA
Fall 1991	Visiting Professor, Universita degli Studi "Federico II," Naples, Italy
7/1988 – 6/1993	Associate Professor of Mechanical Engineering, University of Kentucky, Lexington, KY (received tenure in 1988).
6/1988	Summer Research Fellow, IBM-Lexington, KY
7/1985 – 6/1988	Assistant Professor of Mechanical Engineering, University of Kentucky, Lexington, KY
8/1980 - 6/1985	Research Assistant, School of Mechanical Engineering, Purdue University, West Lafayette, IN
6/1978 - 7/1980	Teaching Assistant, Department of Mechanical Engineering, METU - Middle East Tech. Univ., Ankara, Turkey
4/1979 - 7/1980	Consultant, Chamber of Mechanical Engineers, on Heat Exchangers and Boilers, Ankara, Turkey

PROFESSIONAL ACTIVITIES

EDITORIAL RESPONSIBILITIES:

Editor-in-Chief (with M. Mishchenko and L. Rothman)

Journal of Quantitative Spectroscopy and Radiative Transfer, JQSRT, 2006-present.

Associate Technical Editor:

Journal of Quantitative Spectroscopy and Radiative Transfer, 2002-2005.

Associate Technical Editor:

ASME Journal of Heat Transfer, 1997-2000; Special Issue, 2006.

INTERNATIONAL ACTIVITIES:

Turkish Delegate, European Union FP7 & Horizon 2020 Energy Commissions, by TUBITAK, 2010-pres.

Turkish Chair, TUBITAK (TR) – NSF (USA) Collaboration on Sustainable Energy, May 2013 – 2016.

Scientific Council Member and Fellow:

International Center for Heat and Mass Transfer, 1998-2015; (one of the 15 USA members)

Chairman/Co-Chairman of the Organizing Committee:

- First International Symposium on Radiative Transfer, sponsored by the International Center of Heat and Mass Transfer (ICHMT), Kusadasi, Turkey, August 14-18, 1995.
- Second International Symposium on Radiative Transfer, sponsored by the International Center of Heat and Mass Transfer (ICHMT), Kusadasi, Turkey, July 21-25, 1997.
- Third International Symposium on Radiative Transfer, sponsored by the International Center of Heat and Mass Transfer (ICHMT), Antalya, Turkey, June 17-22, 2001.
- Fourth International Symposium on Radiative Transfer, sponsored by the International Center of Heat and Mass Transfer (ICHMT), Istanbul, Turkey, June 20-25, 2004.

- Fifth International Symposium on Radiative Transfer, sponsored by the International Center of Heat and Mass Transfer (ICHMT), Bodrum, Turkey, June 17-23, 2007.
- 10th Electromagnetic Wave/Light Scattering Conference Bodrum, Turkey, June 17-23, 2007.
- The Workshop on Architecture and Engineering of Scientific Buildings, Istanbul, Turkey, May 16-19, 2011. Sponsored by NSF and TUBITAK, co-organized with the University of Illinois.

Co-Advisor and a member of the Organizing Committee for International Workshop on Near Field Radiative Transfer at Nano and Micro Scales,
 Nano-Rad 2012, Sendai, Japan
 Nano-Rad 2014, Shanghai, China
 Nano-Rad 2016, South Korea

Scientific Advisory Committee Member:

Electromagnetic Wave/Light Scattering Conferences (St Petersburg, Russia, 2006; Harverdshire, England, 2008; Helsinki, Finland, 2010; Taormina, Sicily, 2011; Lille, France, 2013).
 International Symposia on Radiative Transfer, sponsored by the International Center of Heat and Mass Transfer (ICHMT), 2010, 2013.
 ASME MicroNano Conference, June 3-6, 2008, Hong Kong

International Conferences on Combustion Technologies for a Clean Environment, Lisbon, Portugal (3rd Conference in July 1995, 4th in 1997; 5th in 1999; 6th in 2001; 7th in 2003)
 First Mediterranean Combustion Meeting, Antalya, Turkey, June 1999.
 International Heat and Mass Transfer Conference, Istanbul, Turkey, July 2000
 Second Mediterranean Combustion Meeting, Sharma-el-Sheikh, Egypt, January 2002.
 Third Mediterranean Combustion Meeting, Marrakech, Morocco, June 2003
 Fourth Mediterranean Combustion Meeting, Lisbon, Portugal, 2005
 First International Forum on Heat Transfer, Kyoto, Japan, November 2004.
 Invited Participant, TASSA-TUBITAK Workshop, Gebze/Istanbul, Turkey, November 2005;
 Eurotherm Conferences on Computational Radiative Transfer (2003-2015)

NATIONAL (USA) ACTIVITIES:

Organizer:

- Nanotechnology for Solar Energy Utilization, ASME Nanotechnology Institute, August 10-14, 2008, Jacksonville, Florida
- ASME IMECE Mini-Symposium on Nano- and Micro-Scale Radiative Transfer (w/ Z. Zhang), November 2006, Chicago, IL.
- ASME IMECE Mini-Symposium on Nano- and Micro-Scale Radiative Transfer (w/ Z. Zhang), November 2005, Orlando, FL.
- ASME Technical Program Representative for the 2002 8th ASME/AIAA Joint Thermophysics-Heat Transfer Conference; St. Louis, MO, June 2002
- Ad-Hoc Organizing Committee Member for ASME Heat Transfer Conferences (1998-2006)
- Symposium on Fires and Combustion Systems, International Mechanical Engineering Congress and Exposition (IMECE), Atlanta, GA, November 1996.

Session Chairman/Co-Organizer:

ASME/AIAA Thermodynamics and Heat Transfer Conference, Boston, MA, June 1986.
 ASME National Heat Transfer Conference, Atlanta, GA, August 1993.
 International Mechanical Engineering Congress and Exhibition, Atlanta, GA, November 1996.
 International Mechanical Engineering Congress and Exhibition, Dallas, TX, November 1997.
 International Mechanical Engineering Congress and Exhibition, Anaheim, CA, November 1998.
 Panel on Heat Transfer at Purdue U. Heat Transfer Celebrations, W. Lafayette, IN, April 2003.
 ASME IMECE, Co-Chair, w/ P. Norris, session on "Nanoscale Education Programs,"
 Chicago, IL, November 2006.

Member/Chair:

ASME K-11 Committee on Heat Transfer in Combustion Systems and Fire. (1985-...)
ASME K-3 Heat Transfer Awards Committee Member (2005-2007)
ASME K-3 Heat Transfer Awards Committee Chair (2007-2008)

Participant:

NSF Workshop to Determine the Emerging Technologies and Critical Phenomena in Thermal Engineering, Chicago, IL, April 19-21, 1991.

NSF Workshop, Joint with Russian-Belorussian Scientists on "Radiative Transfer in Highly Interacting Physical Systems," University of Texas, Austin, TX, October 4-8, 1993.

UNIVERSITY SERVICES:

At the UNIVERSITY OF KENTUCKY:

University Wide:

Honors Program Faculty, 2005-2008
Honors Program Advisory Board Member, 2006-2007
Physical Sciences and Engineering Tenure and Promotion Area Committee, 1996-1998
(Member, 96-97; Chair, 97-98); Reported to the Chancellor.
Academic Facilities Committee, University Senate, 1995-1997
Search Committee, Associate Director of the Office of International Affairs, 1996-1997
University Senate Member, Engineering Representative, 1994 -1997
PEW Round Table Discussion Group, Engineering Representative, 1994
Vice Chancellor's Equipment Maintenance Committee, 1995-1997
Major Research Equipment Proposals Review Committee, 1993, 1994
Biomedical Engineering Director Search Committee, Engineering Representative, 1989-1990
Center for Robotics and Manufacturing Systems, Liaison Committee, 1989-1990

College Wide:

Member, Steering Committee, Calculus in Engineering, 2007-on
Director, Nano-Scale Engineering Certificate Program, 2003-on
Program Faculty for the Joint Mechanical Engineering Program between UK (Lexington) and
WKU (Bowling Green, KY), 2003-2005
Raymond-Shaver Chair-Professor Search Committee, 1994-1995
Robinson Chair-Professor Search Committee, 1993
College of Engineering Computer Advisory Committee, 1988-1991; (Chairman, 1990-1991)
College of Engineering, ME Program Review Committee, 1992

Departmental Wide:

Hardymon Chair Search Committee Chairman, 2000-2002
Thermo-Fluid Sciences Area Chairman, 1999-2002
ME Faculty Development Committee, 1999-2002
Curriculum Development Committee, Chairman, 1996-1997
ME Department Chair Search Committee, Chairman, 1994-1995
Awards Committee, Chairman, 1989-1992
Activities Committee, 1992-1996, 2004-on
William Maxwell Reed Seminars Coordinator, 1988-1990; 2003-2004
ME Faculty Search Committee, 1988-1989, 1995-1996, 1996-1997, 2005-on
Undergraduate Appeals Committee, 1988-1989
Laboratory Planning Committee, 1987-1988
Mechanical Engineering Energy Committee, Chairman, 1985-1987
Graduate Studies Committee, 1985-1987
Undergraduate Studies Committee, 2005-on

At OZYEGIN UNIVERSITY:

Within the University:

University Representative to UAK (Council for Turkish Universities/Üniversiteler Arasi Kurul)
University Administrative Council Member
College of Engineering Administrative Council Member
Mechanical Engineering Program Founding Coordinator and Head
Founding and Current Director, Center for Energy, Environment and Economy (CEEE/ECM)

Executive Council Member

Özyeğin University, University wide (2009-2015)
Özyeğin University, Institute of Arts and Sciences (2009-2015)
Özyeğin University, College of Engineering (2009-2015)
Özyeğin University, College of Architecture and Design (2014-2015)

Outside the University:

Turkish Delegate to US-NSF Engineering for Sustainable Future Program, (Appointed by TUBITAK) (2012-.)
Turkish Delegate to EU FP-7 Programs, Energy Theme (Appointed by TUBITAK) (2010-.)
Turkish Delegate to Climate Change Talks (COP15, Copenhagen), 2009.
Board and Founding Member, Sustainable Transportation Association, 2010-.
Istanbul Climate Group, Coordinator, 2010-.
Istanbul Collaborative (Grass-roots effort for Nanotechnology research; founder)
Honorary Member, GENSED, 2010-.
Associate Board Member, ÇEDBIK (Green Buildings Association of Turkey), 2011-.

SOCIETY MEMBERSHIP:

American Society of Mechanical Engineers, Fellow
The Combustion Institute
Optical Society of America
Society of Engineering Sciences
Tau Beta Pi, Sigma Xi, Pi Tau Sigma

REVIEWER:

National Science Foundation
National Institutes of Health
ASME Journal of Heat Transfer
AIAA Journal of Thermophysics and Heat Transfer
International Journal of Heat and Mass Transfer
Journal of Quantitative Spectroscopy and Radiative Transfer
Nanotechnology Journal
Applied Optics
Applied Physics
Combustion Science and Technology
Combustion and Flame
Energy and Fuels
Experimental Heat Transfer
Fuel
Combustion Symposia
Journal of Thermal Insulation
Journal of Thin Films
Analytical Chemistry
Canadian Journal of Chemical Engineering
Powder Technology
ASME Conferences (since 1984)

American Scientist, McGraw-Hill, Inc, Taylor and Francis
Begell House Publishers
John Wiley Publishers
McGraw Hill, Inc.
Optics Express

ENTREPRENEURSHIP / INDUSTRIAL ACTIVITIES:

One of the three founding members of the Synergetic Technologies, Inc., Lexington, KY; Developer of particle characterization tools. (w/ former PhD. Student, Sivakumar Manickavasagam, and w/ C. Saltiel).
Currently the Vice-President of STI (President: S. Manickavasagam).

AWARDS AND HONORS

The Outstanding Researcher Award, Ozyegin University, 2015.
The Inaugural Knowledge Transfer Award, Ozyegin University, 2014.
Fellow, ASME (American Society of Mechanical Engineers) (1999)
Fellow, ICHMT (International Center for Heat and Mass Transfer) (2002)
Founding Member, Sustainable Transportation Association, Istanbul, Turkey (2012)
Honorary Member, GENSED (Solar Industry Association), Istanbul, Turkey (2010)
Invited Member of ElectroOptics Research Institute, University of Louisville, KY (2006)
Honorary Professor, ESPOL, Guayaquil, Ecuador (2006)
Listed in the Marquee's Who's Who in the World (2000)
Turkish Scientific and Technical Research Council Fellowship (1972-1980)
University of Kentucky Summer Faculty Research Fellowship (1986)
University of Kentucky Special Summer Faculty Research Fellowship (1987)
National Science Foundation Engineering Initiation Award (1987)
University of Kentucky Presidential Special Faculty Incentive Award (1988-1990)
IBM Summer Research Faculty (1988)
Cited in Who's Who in South and Southwest, 22nd Edition (1990 -)
Cited in Who's Who Among Young American Professionals, 2nd Edition (1992 -)
Cited in Who's Who in the World (2000)
Outstanding Research Paper Award, College of Engineering, University of Kentucky (1991) (JA 21)
Outstanding Research Paper Award, College of Engineering, University of Kentucky (1994) (JA 28)
Best Paper Award, ASME Heat Transfer Division (1994) (given in November 1995) (JA 28)

PhD DISSERTATIONS DIRECTED

1. S. Manickavasagam, "Effective Optical and Radiative Properties of Pulverized Coal and Char," Ph.D., 1993.
2. S. Mukerji, "Radiation-Turbulence Interactions," Ph.D. 1997 (Co-Advisor in a Joint DOE Project with Professor J.M. McDonough).
3. S. Swabb, "*Radiation-Turbulence Interactions*," Ph.D. student. (student left for personal reasons).
4. C. Crofcheck, "Identification of Optical/Radiative Properties of Dairy Products," Ph.D. 2001. (w/ Fred Payne).
5. B. Wong, "Thermal Heat Transport at the Nano-Scale Level and its Application to Nano-Machining" Ph.D. 2006.
6. J.N. Swamy; "A Polarized Light Scattering Based Technique to Characterize the Dynamics of Liquid Foams," (w/ C. Crofcheck), Ph.D., 2007
7. M. Kozan, "Characterization of Agglomeration of Nanostructures," Ph.D., 2007.
8. Ellie (Derbyshire) Hawes; "Directed Self-Assembly of Nano-Size Particles," (w/ C. Crofcheck), Ph.D., 2007.
9. Jaime Sanchez; "Electron Field-Emission from Carbon Nanotubes for Nanomachining Applications," Ph.D., 2008.
10. Illay "Victor" Kunadian, "Carbon-nano-tube based energy devices," (w/ R. Andrews), Ph.D. 2008.

11. K.-F. Hii, "Precision Instrumentation for Nanomachining," (w/ R. Vallance), Ph.D. 2008.
12. M. Francoeur, "Nearfield Radiation Transfer and Nanoparticle Characterization," Ph.D. 2010
13. Syed Uddin, "Near Field Radiation for Tip-Based Manufacturing," (student dropped).
14. Benoit Gay, "Polarized Imaging," INSA-Lyon, CETHIL, France (served in the committee after guiding him in Lexington; graduated December 2010).
15. Gazi M. Huda, "AFM Based Nanomanufacturing," at the University of Kentucky Electrical Engineering, Ph.D., 2013, w/ T. Hastings. (Started as a co-advisor; finished as a Committee Member).
16. Erdem Ogut, "Integration of Magnetic Heads with Plasmonic Nanostructures", Sabancı University ((As an ad-hoc co-advisor; served officially as a Committee Member).), PhD 2014.
17. Azadeh Didari, "Near-Field Radiation Transfer via FDTD Method," Ozyegin University, Istanbul, PhD, EE, 2016.
18. Layth Ismael, Özyeğin University, Istanbul, PhD, 2017
19. Hayder Mohammed, Özyeğin University, PhD, 2017
20. Mehmet Rifat Öcal, "Risk Assessment of Energy Efficient Retrofits," Özyeğin University, PhD, 2017
21. Roxana Family, "Radiative Cooling with Sustainable Materials," Özyeğin University, PhD, 2017
22. Cem Keskin, "Transys and Building Energy Efficiency Optimization," Özyeğin University, PhD, 2017
23. Reha Denker, "Near Field Radiation Experiments", METU, (As a co-advisor; with Tuba Okutucu). PhD 2017.
24. Elif Begum Elcioglu, "Fabrication of Cells for Near Field Radiation Transfer", METU, (As a co-advisor; with Tuba Okutucu). PhD 2017.

M.S. THESES/PROJECTS DIRECTED

1. S. Chakravarty, "Analytical Inversion Techniques for the Integral Form of the Radiative Transfer Equation," MSME, 1987.
2. R.K. Iyer, "Modeling of Radiative Transfer Using Multiple Spherical Approximations," MSME, 1987.
3. K.R. Varma, "Modeling of Heat Transfer in Pulverized-Coal Fired Furnaces," MSME, 1988.
4. B.M. Agarwal, "An Experimental and Theoretical Study of Single and Multiple Scattering in an Axisymmetric System," MSME, 1989.
5. S. Subramaniam, "Solution of Inverse Radiation Problem with Monte Carlo Technique," MSME, 1989
6. M.B. Bush, "Design of a CO₂-Laser Nephelometer to Determine the Radiative Properties of Pulverized-Coal Particles," MSME, 1989.
7. D.A. Dsa, "Transmission/Scattering of Visible and Infrared Radiation by Pulverized-Coal Particles," MSME, 1990.
8. J. Funk, "A Semi-Analytical Method to Predict Printed Circuit Board Package Temperatures," MSME, 1990. (co-advisor: K. Tagavi)
9. A. Mahadeviah, "Study of Morphology of Soot Particles in a Diffusion Flame using the Discrete Dipole Approximation," MSME, 1991.
10. P. Dutta, "Application of Angular Tomography to Axisymmetric Flames Containing Absorbing and Scattering Particles," MSME, 1991.
11. S. Sitaraman, "Modeling of Forward and Inverse Radiation Transfer in Cylindrical Geometries," MSME, 1992.
12. R. Govindan, "Identification of Characteristics of Soot Agglomerates from Polarization Experiments," MSME, 1996.
13. S. Alstedt, "Optical and Radiative Properties of Phytoplanktons," MSME, 1996.
14. C. Klusek, "Radiative Properties of Agglomerates," MSME, 1999.
15. B. Wong, "Monte Carlo Techniques for the Solution of the Transient and Steady Radiative Transfer Equation," MSME, 2001.
16. D. Barnett, "Design of a Fire-Fighter Helmet," MSME, 2003 (co-Advisor with K. Saito).
17. Phani K. Bolloju; MS in Mechanical Engineering (no Thesis option/project only), 2004.
18. P. G. Venkata, "Characterization of Nano-size Particles Near Metallic Surfaces via Surface Plasmon Scattering," MSME 2006.
19. R. Kumar, "Numerical Investigation and Parallel Computations for Thermal Transport for

- Nanomachining,” MSME 2006.
20. B. Hawes, MS in Mechanical Engineering (no Thesis option/project only), MSME 2008.
 21. Nazli Donmezer, “Dependent Absorption/Scattering by Particles,” ODTU/METU Ankara, in collaboration with Ozyegin University, Istanbul, MSME 2009. (w/ Tuba Okutucu).
 22. Gazi M. Huda, “AFM Based Nanomanufacturing,” at the University of Kentucky Electrical Engineering, MSEE, 2011, w/ T. Hastings (Advisor).
 23. Senthil Kumar, MS in Mechanical Engineering (no Thesis option/project only), MSME 2011.
 24. David Kurt Webb, “Near Field Radiation Measurements,” Ozyegin University, Istanbul, MSME 2012, in Collaboration with Bogazici University (Advisor; co-advisor: Dr. Hakan Erturk, Bogazici U.).
 25. Zafer Artvin, at ODTU/METU Ankara, in collaboration with Ozyegin University, Istanbul, MSME 2012. (co-advised w/ Dr. Tuba Okutucu).
 26. Şahin Çağlayan, Ozyegin University, Istanbul, MSME 2015.
 27. Utku Simitli, Ozyegin University, Istanbul, MSME 2015.
 28. Burak Sefer, Ozyegin University, Istanbul, MSME 2015.
 29. Burak Yasir Kumru, Ozyegin University, Istanbul, MSME 2016.
 30. Güven Fidan, Ozyegin University, Istanbul, MSME 2016.
 31. Zahra Fath, Ozyegin University, Istanbul, MSME 2016.
 32. Ruşen Acet, Ozyegin University, Istanbul, MSME 2015.

POST DOCTORAL FELLOWS/RESEARCH ASSOCIATES

1. Siva Manickavasagam, Ph.D. from University of Kentucky, 1993 – 1995.
2. Sarbajit Ghosal, Ph.D. from Stanford University, 1993 – 1995.
3. De Kui Qing, Ph.D. from Yokohama U. Japan, 2000 – 2001.
4. Mustafa M. Aslan, Ph.D. from Pennsylvania State U., 2001 – 2006.
5. P.D. Kichambare, Ph.D., Japan, 2002-2004. (Dr. R. Vallance was the Principal Mentor).
6. Basil Wong, Ph.D. from University of Kentucky, 2006 - 2009.
7. Ellie Hawes, Ph.D. from University of Kentucky, 2007 - 2008. (w/ Todd Hastings).
8. Vincent Loke, PhD from University of Brisbane, Australia 2009-2010 (at Ozyegin University)
9. Sinan Eren Yalcin, PhD from Old Dominion University, USA 2012-2013, (at Ozyegin University)

VISITING RESEARCHERS/FACULTY

1. Jun Yamada, Yamanashi University, Yamanashi, Japan, 2001-2002.
2. Rodolphe Vaillon, Cethyl, INSA-Lyon, France, Summer 2002 ; Summer 2003.
3. Pablo Albella, Universita de Cantabria, Santander, Spain, 2006 Summer.
4. Rodolphe Vaillon, Cethyl, INSA-Lyon, France, March-April, 2007; June-July 2008.
5. Benoit Gay, INSA-Lyon, France, February-August 2008.
6. Serdar Celik, US Southern Illinois University to Özyegin U, August-December 2014.

DISSERTATION AND THESES COMMITTEES SERVED AS A COMMITTEE MEMBER

1. K.C. Midkiff, Jr., Ph.D. in Mechanical Engineering, 1986.
2. D.W. Mackowski, Ph.D. in Mechanical Engineering, 1987.*
3. J.S. Zaveri, M.S. in Chemical Engineering, 1988.
4. N. Srikantaiah, M.S. in Mechanical Engineering, 1988.
5. M.W. Whitney, M.S. in Civil Engineering, 1988.
6. S. Jolly, M.S. in Mechanical Engineering, 1989.*
7. B. Chen, Ph.D. in Mechanical Engineering, 1990.*
8. W. Godfrey, M.S. in Mechanical Engineering, 1990.*
9. Y. Raja, M.S. in Chemical Engineering, 1992.
10. Z. Ivezic, Ph.D. in Astronomy, 1995.*
11. R.T. Pogue, Ph.D. in Chemistry, 1995.

12. D. Bhanti, Ph.D. in Chemical Engineering, 1996.*
13. A. Thomasson, Ph.D. in Agricultural Engineering, 1997.*
14. D. Weatherly, Ph.D. in Mechanical Engineering, 1997.
15. D. Wang, Ph.D. in Mechanical Engineering (inactive).*
16. V. Devakandra, Ph.D. in Chemical Engineering, 1998.
17. F. Wu, Ph.D. in Electrical Engineering (inactive student).
18. L. Yuan, Ph.D. in Mechanical Engineering, 2001.
19. D. Vinkovich, Ph.D. in Physics and Astronomy, 2003.
20. M. Omar, Ph.D. in Mechanical Engineering, 2005.
21. H. Xu, Ph.D. in Mechanical Engineering, (work in progress).
22. Maoming Fan, Ph.D. in Mining Engr., (work in progress)
23. M.G. Danao, M.S. in Agricultural Engineering and Biosystems, 2001; Ph.D. 2005.*
24. Sriram Venkatesan, M.S. in Mechanical Engineering, 2005.
25. Sarang Kortikar, M.S. in Mechanical Engineering, 2005.
26. Tracy Xu, Ph.D. in Mechanical Engineering, 2006.
27. Belal Gharabieh, Ph.D. in Mechanical Engineering, 2006.
28. Q. Deng, Ph.D. in Mechanical Engineering, 2009.
29. Robert Nikutta, Ph.D. in Physics and Astronomy, 2012.
30. Daniel Busbaher, MS in Mechanical Engineering, 2008.
31. Piao Liu, PhD, in Electrical Engineering, 2009.
32. Carlos Andrés Jarro, PhD., in Electrical Engineering, 2013 (University of Kentucky)
33. Gazi Huda, Ph.D. in Electrical Engineering, 2013. (University of Kentucky)
34. Muhsincan Sesen, MS in Engineering, Sabancı University, 2012.
35. Erdem Ogut, Ph.D. in Engineering, Sabancı University, 2012.
36. Farhad Kazemi Khosroshahi, Ph.D. in Mechanical Engineering, Bogaziçi University, 2013.

*(joint work with these students resulted refereed journal articles.)

INTERNATIONAL/NATIONAL DISSERTATION COMMITTEES; COMMITTEE MEMBER

1. Sylvan Leclair, University of Strasburg, France, 2005.
2. Olivier Merchiers, Department of Physics, Universita de Cantabria, Santander, Spain, 2007.
3. Suresh Gubbala, Ph.D. in Chemical Engineering, University of Louisville, 2008.
4. Nazli Donmezer, Middle East Technical University, Ankara, Turkey, 2007-2008. (MS)
5. Benoit Gay. CETHIL, INSA-Lyon, France, 2010.

DISSERTATION COMMITTEES SERVED AS REPRESENTATIVE OF THE UK GRADUATE SCHOOL

1. Fariba Bigdeli, Ph.D. in Mathematics, 1991.
2. Mitchell Owens, Ph.D. in Chemistry, 1993.
3. James Carl Day, Ph.D. in Physics, 1995.
4. Christopher Rock, Ph.D. in Materials Science, 1997.
5. Oleg Makarov, Ph.D. in Physics, 1998.
6. Charles Thomas Wolfe, Ph.D. in Electrical and Computer Engineering, 2007.
7. Xin Li, Ph.D. in Chemical and Materials Engineering, 2008.

UNDERGRADUATE RESEARCH STUDENTS

1. Chad Buckner, University of Kentucky, 1993.
2. Erin Rapela, Clarion University, PA, 1993.
3. Carrie Miller, University of Kentucky, 1997
4. Randy Williams, University of Kentucky, 1997.
1. Jeff Stephenson, University of Kentucky, 1997.
8. Joe Istre, University of Kentucky, 2000.
9. Jeff Evans, University of Kentucky, 2002.

10. Jessica Beckham, University of Kentucky, 2002.
11. Brian Hawes, University of Kentucky, 2004-2005.
12. Robert Martin, University of Kentucky, 2005-2008.
13. Denis Livchak, University of Kentucky. 2006-2008.
14. Matt Robinson, University of Kentucky, 2006-2007.
15. B. J. Wellman, University of Kentucky, 2007-2008.
16. Burak Sakallioğlu, Ozyegin University, 2009-2011.

HIGH-SCHOOL RESEARCH STUDENTS

1. Kyle Kral, Paul Lawrance Dunbar HS, Lexington, KY, 2003-2005.
2. Zach Kratzer, Paul Lawrance Dunbar HS, Lexington, KY, 2004-2006.
3. Tianming Liu, Paul Lawrance Dunbar HS, Lexington, KY, 2004-2006.
4. Rohit Ray, Paul Lawrence Dunbar HS, Lexington, KY, 2004-2007.

COURSES TAUGHT

UNIVERSITY OF KENTUCKY

Engineering Thermodynamics I, ME 220,
 [Spring'87,90,91,93,00,08; Fall 88,89,92,99,00,02,03, Sum 05,06]
 Engineering Thermodynamics II, ME 321, [Fall'85,93,94,96,97; Spring'95,96,97]
 Heat Transfer, ME 325, [Spring'97,98,02,05; Fall 97,01]
 Independent Study, ME 395: Internal Combustion Engines [Spring/Fall 1997]
 Applications of Heat Transfer, ME 550, (new course), [Spring 1987]
 Engineering Optics, ME 560, (new course), [Fall'86, 87, 88, 89, 90, 93; Spring'92,95,98,00,01,02,05]
 Radiation Heat Transfer, ME 627, [Spring'86,89,94,00,04,06; Fall'87,90,92,95,98,01,07,08]
 Boundary Layer Theory, ME 631, [Spring'88]
 Applications of Radiative Transfer and Optics to Engineering Processes, ME 599, [Spring'96]
 Nano-Scale Thermal Sciences, (new course) ME 599, [Fall'04,05,06]
 Impact of Emerging Technologies on Society, Honors Hon 101b, [Fall'05,06,07] (new course).

OZYEGIN UNIVERSITY

ME 202 Engineering Thermodynamics I, Spring'12, '13, '14, '15.
 CEEE 211 Energy, Environment and Economy for Smarter Istanbul, Spring '11, '12, Fall '14 (new course).
 ME 373 History of Technology, Fall'12, '13, '14, '15 (new course)
 EE 401/402 Capstone Design Course, Fall 2012, Spring 2013. (2 Students)
 ME 566 Coherent Energy Applications for Buildings, Spring '12 (new course)
 ME 527 Radiative Heat Transfer, Spring'13
 ME 599 Nano-Scale Radiative Transfer, Fall 2012 (Special course).

INVITED SEMINARS - SHORT COURSES

1. Brigham Young University, "Determining the Radiative Properties of Coal Particles from Experiments," Provo, UT; December 5, 1990.
2. University of Cincinnati, "Inverse Radiation Problems to Determine the Effective Radiative Properties of Particles from Experiments," Cincinnati, OH; April 5, 1991.
3. Middle East Technical University, "Radiative Heat Transfer in Combustion Systems," Ankara, Turkey; October 11, 1991.
4. Università degli Studi "Federico II," "Radiative Heat Transfer," Napoli, Italy; November, 5, 8, 12, 15, 1991; (eight-lecture short course).
5. Università degli Studi "Federico II," "Discrete Dipole Approximation to Determine the Radiative Properties of Soot Agglomerates," Naples, Italy; November 20, 1991.
6. ENEL - Italian Electricity Board, "Radiative Heat Transfer: Fundamentals and Applications," Pisa, Italy; November 27-28, 1991; (eight-lecture short course).

7. Tulane University, "Inverse Radiation Problems to Determine the Effective Radiative Properties of Particles from Experiments," New Orleans, LA, May 7, 1992.
8. University of Kentucky, "Computational Aspects of Forward and Inverse Radiation Problems," Center for Computational Sciences Seminar Series, Lexington, KY, October 28, 1992.
9. Instituto Superior Tecnico, University of Lisbon, "Radiative Heat Transfer," Lisbon, Portugal; April 13-17, 1993; (four lectures).
10. Texas A & M University, "Effective Radiative and Optical Properties of Coal/Char Particles," College Station, TX, October 8, 1993.
11. Purdue University, "Diagnostics of Size and Structure of Particles using Polarized Light and Scattering Matrix Concept," West Lafayette, IN, October 27, 1995.
12. Chandrasekhar Memorial Symposium, "Radiation Transfer and Polarized Light," Society of Engineering Sciences Meeting, Tempe, AZ, October 20-23, 1996.
13. University of Kentucky, *ibid.*, Center For Computational Sciences Seminar Series, Lexington, KY, November 6, 1996.
14. Sandia National Laboratories, "Identification of the Structure of Particles via Polarized Light Diagnostics," Albuquerque, NM, February 13, 1997.
15. National Technical University of Athens, Athens, Greece, "Particle Characterization Techniques," April 1, 1998.
16. EURO THERM Seminar #56, Delphi, Greece, "Chaotic Radiation-Turbulence Interactions in Flames," April 3, 1998.
17. Universita degli Studi "Federico II," "Radiation Transfer," Napoli, Italy, May 22, 1998.
18. Italian Combustion Section Meeting, "Fundamentals of Scattering-Matrix Based Particle Characterization Techniques," Ravello, Italy, May 28, 1998.
19. Massachusetts General Hospital/Harvard Medical School, Department of Dermatology, Wellman Laboratory, "Characterization of Particles/Cells using Elliptically Polarized Light Scattering," Boston, MA, October 28, 1998.
20. Army Research Laboratory, "Particle Characterization Techniques," Aberdeen Grounds, Maryland, November 12, 1998.
21. International Mechanical Engineering Congress and Exhibition, "Fundamentals of Scattering-Matrix Based Particle Characterization Techniques," FACTS Division, Anaheim, CA, November 16, 1998.
22. Purdue University, School of Mechanical Engineering, "New Directions in Radiation Transfer Research: From Particle Characterization to Applications in Surgery," West Lafayette, IN, January 12, 1999.
23. University of Connecticut, Dept. of Mechanical Engineering "A Particle Characterization Technique based on Elliptically Polarized Light Scattering," Storrs, CT, February 12, 1999.
24. Northeastern University, Dept. of Mechanical Engineering, *ibid.* Boston, MA, March 5, 1999.
25. French Radiative Transfer Conference, Action Concertee en Rayonnement Thermique (ACRT) "Characterization of Size and Structure of Agglomerates and Inhomogeneous Particles with Elliptical Light; Lyon, France, October 1999.
26. National Institute for Laser Enhanced Sciences (NILES), "Light Scattering and Imaging Techniques, Applications to Combustion Systems," Cairo University, Egypt, November 19, 2000.
27. University of Missouri-Rolla, "A Particle Characterization Technique based on Elliptically Polarized Light Scattering," Rolla, MO January 23, 2002.
28. National Institute for Standards and Technology (NIST), *ibid.*, June 03, 2002.
29. Rice University, *ibid.*, September 27, 2002.
30. Vanderbilt University, *ibid.*, February 24, 2003.
31. University of Texas at Austin, "Modeling of Energy Transfer for Carbon-Nanotube based Precision Machining," March 5, 2003.
32. CETHIL, INSA, Lyon, France, *ibid.*, April 11, 2003.
33. KSTC/Kentucky High Schools Science Teachers Association, Lexington, KY, "Nano-Scale Engineering Certificate Program at the University of Kentucky," November 19, 2004.
34. University of Louisville, Louisville, KY, "Nano-Scale Machining and Nano-Engineering Certificate Program at the University of Kentucky," February 4, 2005.
35. Lexmark Inc., Lexington, KY, "Nano-Engineering: A Natural extension Beyond Nanosciences and Nanotechnology," March 17, 2005
36. ASME Lexington Chapter, Lexington, KY, *ibid.*, March 24, 2005,

37. International Workshop on Nanophotonics and Nanobiotechnology, Koc University, Istanbul, Turkey, “Characterization of Fine Particles with Elliptically Polarized Scattered Light: Elastic and Evanescent Waves and Surface Plasmons,” June 28-July 8, 2005.
38. Texas A&M University, Department of Mechanical Engineering, College Station, TX, “Machining and Characterization at the Nanoscale,” March 1, 2006.
39. Drexel University, Department of Mechanical Engineering, Philadelphia, PA, *ibid.*, March 24, 2006
40. Fresnel Institute, Marseille, France, *ibid.*, April 3, 2006.
41. Universidad de Cantabria, Santander, Spain, *ibid.*, April 10, 2006.
42. ESPOL, Guayaquil, Ecuador, *ibid.*, July 31, 2006.
43. ESPOL Downtown Campus, Guayaquil, Ecuador, “Nanoscale Engineering: Impact on Economy via Education,” August 1, 2006.
44. ASME IMECE, Chicago, IL, Panel on Nano/Micro Scale Radiation, “Can we characterize and manipulate nanoscale particles?” November 6, 2006.
45. ASME IMECE, Chicago, IL, Panel on Nanoeducation, “Nanoscale Engineering Education Programs at the University of Kentucky,” Organized by ASME K-21 Committee on Education, November 7, 2006.
46. University of Texas, Austin, TX. “Can we characterize and manipulate nanoscale particles?” December 8, 2006.
47. University of Tennessee, Department of Mechanical Engineering, Knoxville, TN, *ibid.*, January 25, 2007.
48. University of California, Los Angeles, Department of Mechanical Engineering, Los Angeles, CA, *ibid.*, February 9, 2007.
49. University of South Carolina, Department of Mechanical Engineering, Columbia, SC, “Machining and Characterization at the Nanoscale,” April 12, 2007.
50. Villanova University, Philadelphia, PA, *ibid.*, April 23, 2007.
51. Istituto Motori, CNR, Napoli/Universita Federico Secondo, Napoli, Italy, *ibid.*, May 8, 2007.
52. Istanbul Technical University, Chemical Engineering Department, Istanbul, Turkey, *ibid.*, May 29, 2007.
53. TUBITAK Space Institute. Middle East Technical University Campus, Ankara, Turkey, *ibid.*, June 11, 2007.
54. University of Kentucky, Department of Physics and Astronomy, Lexington, KY, “Characterization to Patterning: Engineering at Nanoscales,” October 2, 2007.
55. Clemson University, Department of Physics, “Engineering at Nanoscales,” Clemson, SC, January 31, 2008.
56. The George Washington University, Department of Mechanical and Aerospace Engineering, “Characterization to Patterning: Engineering at Nanoscales,” Washington DC, April 11, 2008.
57. Computational Heat Transfer Conference, Radiation Transfer Panel, “Near-Field Radiative Transfer,” Marrakech, Morocco, May 11-17, 2008.
58. Sabanci University, “Characterization to Patterning: Engineering at Nanoscales,” Istanbul, Turkey, May 23, 2008.
59. Middle East Technical University, Department of Mechanical Engineering, *ibid.*, May 29, 2008.
60. ESPOL, Guayaquil, Ecuador, Engineering, Education, and Evolution, during Nanoforum, October 2008. <http://www.merid.org/NDN/more.php?id=1642>
61. 2009 US-EU-China Thermophysics Conference - Renewable Energy (UECTC-RE-09), “Near-Field Radiative Transfer,” Beijing, China, May 28, 2009.
62. Peking University (PKU), “Design and Engineering at Small Scales: Characterization to Patterning,” Beijing, China, June 3, 2009.
63. Arcelik Research Center, “Radiative Transfer,” Gebze, Turkey, October 15, 2009.
64. The Chamber of Mechanical Engineers, “Nano in Engineering,” Ankara, Turkey, October 19, 2009.
65. ‘Scientific Developments in Energy Efficiency Practices’, Trade Council of Shopping Centers and Retailers Conference on the Energy Efficiency in Shopping Centers, Istanbul, Turkey.
66. ‘Radiation Heat Transfer and Climate Change’, Solar Future 2010, Istanbul, Turkey. February 14, 2010. February 2010,
67. ‘Effect of Near-Field Radiative Transfer on Development of Thermophotovoltaic Power Generators’, Solar Future 2010, Istanbul, Turkey. February 2010,
68. ‘Control of near-field radiative heat transfer via surface phonon-polaritons coupling in thin films.’ International Conference on Metamaterials, Photonic Crystals and Plasmonics (META'10), Cairo, Egypt.

69. March 2010, 'Near Field Radiation Between Two Surfaces' and 'Modeling Near-field Coupling of Particles on a Surface and an AFM probe via discrete dipole approximation,' Workshop on Nano particles, nano structures and near field computation, , Bremen, Germany, March 2010.
70. 'Near Field Radiation Transfer for Thermophotovoltaic Cells,' NANO-TR Conference. Ankara, Turkey. April 2010.
71. 'Zero Istanbul 2050', Talk at the Özyeğin University organized event. May 25, 2010.
72. 'From Steam to Nano,' Dedication Lecture, Sixth International Symposium on Radiative Transfer, ICHMT, Antalya, Turkey. (This event was dedicated to M. P. Mengüç and two others), June 2010.
73. Near-field Radiative Transfer at Nano-Scales: For Manufacturing & Energy Harvesting'; two invited talks at the NATO Advanced Study Institute on Polarimetry, Kiev, Ukraine, (M. P. Mengüç – invited speaker for two lectures). September 2010.
74. TIREC 2010: Renewable Energy Congress of Turkey. (M. P. M. is a judge to select the best companies investing in Turkey on solar energy.) September 2010.
75. Green Buildings and Regions, Green Institutions Conference, 5-6 October, 2010, Istanbul, Turkey, October
76. 'Green Buildings,' TOKI Housing Conference Istanbul 2010, 21 October, 2010, Istanbul, Turkey.
77. 'Near Field Radiation Transfer and Applications,' Koc U. Physics Science Colloquium, Feb 24, 2011.
78. 'Light Scattering and Absorption for Applications to Manufacturing and Energy Conversion at Nanoscales', 26-30 September, 2011, Electro Magnetic and Light Scattering XIII Conference, Taormina, Italy (invited speaker)
79. 'Near-Field Radiation Transfer towards the design of Nano-Thermophotovoltaic Cells', Eurotherm Seminar 91, Microscale Heat Transfer III, Poitiers, France (invited speaker) August 29-31, 2011.
80. Moderator for 'Sustainable Buildings and Air Conditioning,' Panel, at YEM (Yapı Endüstri Merkezi), Nov. 24, 2011.
81. Moderator for the entire 'EcoDesign 2012', a day-long panel, at YEM (Yapı Endüstri Merkezi; (Information Centre of Turkish Building Work), Istanbul, April 12, 2012. Anniversary of diplomatic relations between the Netherlands and Turkey and moderated by Prof. Pınar Mengüç.
82. "Engineering in Sustainable Buildings" Alternative Energy Conference ALENCO'12, organized by İstanbul Technical University, May 8, 2012.
83. The crucial role of sustainable logistics in the development and planning of resilient cities, 3rd Global Forum on Urban Resilience & Adaptation, Bonn-Germany, Panelist in three different panels May 12-15, 2012.
84. 'Engineering and Climate Change.' Sustainable Development and Climate Change Policies, organized by Yıldız Technical University, Faculty of Economics and Administrative Sciences & Economic Development Foundation, Panelist, May 16, 2012.
85. 'Near-Field Radiation Transfer for Energy Harvesting and Manufacturing at Nanoscales', International Workshop on Nano-Micro Thermal Radiation, Miyagi-Japan, (Nano-Rad 2012); Key-Note Lecture, May 23-25, 2012.
86. Moderator for a panel discussion on "Why shall multinationals prefer Turkey for R&D investments?" Round-table Conference, Çırağan Palace Kempinski, Istanbul, June 29, 2012.
87. 'Near-Field Radiation Transfer', Numerical Heat Transfer 2012 International Conference, coordinated by Institute of Thermal Technology, Silesian University of Technology, Wrocław, Poland, Invited Speaker, September 4-6, 2012,
88. "Integrated Engineering and Architecture Principles for Sustainable Buildings", Scientific Research Seminar Series on Architecture and Engineering for Sustainable Buildings, Organized by Kadir Has University Faculty of Engineering and Natural Sciences, Invited Speaker, November 16, 2012,
89. 'Climate Change and Sustainable Energy Seminar,' Yıldız Teknik University, Organized by: YTU Faculty of Architecture, Invited Speaker: Prof. M. Pınar Mengüç. November 15, 2012,
90. 'Near Field Radiative Transfer for Thermophotovoltaic Systems', SOLARTR-2 Electricity Conference & Exhibition, Antalya, Turkey, organized by Turkish Photovoltaic Technology Platform (UFTP), Invited Lecture, November 7-9, 2012,
91. "Near-field Heat-transfer for Energy Harvesting," ,,,
92. Nanoscale Radiative Heat Transfer, Organized by Physics School Les Houches 2013, Switzerland, Invited Speaker; May 15, 2013,

93. 'Engineering for Sustainable Future,' Moderator: Prof. M. Pınar Mengüç, 2nd International Green Building Summit, Swissotel the Bosphorus, İstanbul, Turkey, Organized by Turkish Green Building Council, Event site is: http://www.cedbik.org/icerikdetay_eng.asp?ID=178&IcerikID=344, February 18-19, 2013,
94. 7th Internatioal Symposium on Radiative Transfer, RAD-13, Kuşadası, Turkey, Organized by International Centre for Heat and Mass Transfer (ICMHT), Scientific Committee Member: Prof. M. Pınar Mengüç. The Symposium site is: <http://www.ichmt.org/rad-13/>, June 2-8, 2013,
95. 14th Electromagnetic & Light Scattering Conference, ELS-XIV, Lille, France, Organized by Oleg Dubovik (CNRS) and Laurent Labonnote (Université de Lille 1), Scientific Committee Member: Prof. M. Pınar Mengüç, The Conference site is: <http://www-loa.univ-lille1.fr/ELS-XIV/>, June 17-21, 2013,
96. 'Green Buildings', Moderator: Prof. M. Pınar Mengüç, Green Business 2013, Swissotel the Bosphorus, İstanbul, Turkey, Organized by Sustainability Academy, the Event site is: <http://www.yesiliskonferansi.com/2013/index.php>; September 17-18, 2013,
97. ECOWEEK İstanbul'13 - Crossing the Bridge: Between Tradition and Vision Symposium, Organized by: Mimar Sinan Finan Arts University, Invited Speakers: Prof. M. Pınar Mengüç and Somuncu Y., "Integration of Engineering and Architecture for Sustainable Buildings", Mimar Sinan Fine Arts University Faculty of Architecture, İstanbul <http://ecoweekistanbul.org/>, 18 November, 2013,
98. Energy Conservation and Waste Heat Recovery Workshop, Organized by: UCLA Institute of Pure and Applied Mathematics, Invited Speaker: Prof. M. Pınar Mengüç, "Near Field Radiation Transfer for Energy Harvesting and Characterization", Los angeles, California, http://www.ipam.ucla.edu/programs/msews4/msews4_poster.pdf, <http://www.ipam.ucla.edu/programs/msews4/>, 18-22 November, 2013,
99. 2nd World Intelligent Cities Summit and Exhibition (WICS 2013), Moderator: Prof. M. Pınar Mengüç, Organized by: EurAsia Strategies, Conrad İstanbul Hotel, <http://www.wicssummit.com/>, 27-28 November, 2013,
100. 4th Micro/Nanosclae Heat & Mass Transfer International Conference (MNHMT - 13), Sponsored by: ASME Heat Transfer Division, Organized by: Hong Kong University Department of Mechanical Engineering, Invited Speaker: Prof. M. Pınar Mengüç, Hong Kong, China, 11-14 December, 2013, www.asmeconferences.org/MNHMT2013/CallForPapersDetail.cfm,
101. 33rd Energy Efficiency Week, 5th Energy Efficiency Forum and Fair, Organized by: Ministry of Energy and Natural Resources, Directorate for Renewable Energy, Moderator and Invited Speaker: Prof. M. Pınar Mengüç, "Innovative and Integrated Concepts for New and Renovated Buildings", (9-January, 14:00-16:30), WoW Convention Center, İstanbul, <http://www.evf.gov.tr/index.html>, 8-11 January, 2014,
102. Concentrated Solar Power Workshop, Organized by: Middle East Technical University (METU), The Center for Solar Energy Research and Applications (GUNAM), Invited Speaker: Prof. M. Pınar Mengüç, "Applications and Opportunities in Turkey and Northern Cyprus", (Session 4, 16:15-16:30), METU Culture and Convention Center, Ankara, <http://www.gunam.metu.edu.tr/cspworkshop/index.php/en/>, 10 February 2014,
103. Gaziantep 2nd International Energy Summit, Organized by: Gaziantep Metropolitan Municipality and Sustainability Academy, Invited Speaker and Moderator: Prof. M. Pınar Mengüç, "Industrial Energy Management and Efficient Use of Energy", Şehitkamil Congress and Culture Center, Gaziantep, <http://www.gaziantepenerjizirvesi.org/>, 21 February 2014,
104. US-IL Workshop on Industrial Ecology in Multi-Scale Design and Construction of Sustainable Built Environments, Organized by: Israeli Ministry of Construction and Housing and the Technion - National Building Research Institute (NBRI), Invited Participant: Prof. M. Pınar Mengüç, Dan Panorama Hotel, Tel-Aviv, Israel, <http://sustain2014.net.technion.ac.il/>, 9-11 March 2014,
105. Yıldız Technical University, Electrical and Electronical Engineering, Smart Cities Summit, Moderator/Speaker at Smart Cities session; April 1, 2014.
106. Shanghai University of Electric Power, "Sustainable Energy and Near Field Energy Transfer", Shanghai, China, June 6, 2014.

107. Harbin Institute of Technology, "Radiation Heat Transfer", Harbin, China, June 10, 2014.
108. Georgia Institute of Technology, "Sustainable Energy and Near Field Energy Transfer", Atlanta, USA, September 11, 2014.
109. Middle East Technical University, German-Turkish Research on Energy, "Sustainable Energy and Near Field Radiative Transfer," Ankara, TR, October 15, 2014.
110. SOLAR-TR3, Middle East Technical University, "Optics and Buildings," Ankara, TR, April 27, 2015.
111. CHT-15 / 6th International Symposium on Advances in Computational Heat Transfer, Keynote Speaker: "Directional and Spectral Far-/Near Field Radiative Transfer For Cooling and Energy Harvesting", Rutgers University, Piscataway, USA, 25-29 May 2015
112. Lund University, Faculty of Engineering, Invited Lecturer, "Directional and Spectral Far-/Near Field Radiative Transfer For Cooling and Energy Harvesting", Lund, Sweden, 8-11 June 2015.
113. ELS XV 2015 - 15th Electromagnetic and Light Scattering Conference, Invited Speaker, Optics for sustainable buildings and cities", Leipzig, Germany, 21-26 June 2015
114. NHT 2015 - Numerical Heat Transfer, Keynote Lecturer, "Far-/Near Field Radiative Transfer", Warsaw, Poland, 27-30 September 2015.
115. Invited Talk, Horizon 2020 Smart Cities and Communities (SCC) & Energy Efficient Buildings Public Private Partnership, Özyeğin University, İstanbul, TR, 13 October 2015.
116. MNHMT-16 - 5th ASME Micro/Nanoscale Heat & Mass Transfer International Conference, Invited Plenary Lecturer, Singapore, 3-6 January 2016.

INVITED LECTURES FOR UNDERGRADUATE STUDENTS

1. Optics and Nanotechnology, Universidad de Cantabria, Santander, Spain, "Nano-Scale Characterization and Machining," April 11, 2006.
2. Faculty Without Class, University of Kentucky Honors Program; informal discussion on "Nanoscale Radiative Exchange," Tuesday, March 20, 2007.
3. Family Weekend Mini-Colloquia for Honors Students, "Impact of Emerging Technologies on the Society," Saturday, October 20, 2007.
4. Ozyegin University, "What is going on in Copenhagen?" December 17, 2009.
5. Ozyegin University, "Climate, Energy and Cities," for Energy Law Certificate, presented twice in 2011.
6. Ozyegin University, "Climate, Energy and Cities," for the UG Sectoral Solutions, 2012, 2013.
7. High School Students from Denmark, Ozyegin University, "Climate, Energy and Cities," Sept. 18, 2014.

RESEARCH GRANTS AWARDED

1. UNIVERSITY OF KENTUCKY, Graduate School, 1986 Summer Faculty Research Fellowship, \$2,400, July-August 1986. *Funded.*
2. UNIVERSITY OF KENTUCKY, Graduate School, 1987 Special Summer Faculty Research Fellowship from Singletary Fund for Excellence, \$5,000, July-August 1987. *Funded.*
3. UNIVERSITY OF KENTUCKY, Bond Issue Program, "In-Situ Measurements of Radiative Properties of Combustion Products at Infrared," Principal Investigator, Grant No: P-126-8H700, \$14,500, 1987.
4. NATIONAL SCIENCE FOUNDATION, Engineering Initiation Award, "Determination of the Inverse Radiation Problem Using Angular Tomography," Principal Investigator, Grant No: CBT-8708679, \$34,722, 1987-1989.
5. NATIONAL SCIENCE FOUNDATION - EPSCoR, "Collaborative Research in the Computational Sciences at the University of Kentucky," Faculty Member, Grant No: RII-8610671, \$317,541 (NSF) and \$315,666 (State) 1986-1991. *Funded.*
6. UNIVERSITY OF KENTUCKY, President Special Research Incentive Grant, \$7,500, 1988-1990. *Funded.*
7. UNIVERSITY OF KENTUCKY, Major Research Equipment Grant, \$17,000, 1989-1990. *Funded.*

8. DEPARTMENT OF ENERGY, PETC - Advanced University Coal Research Program, "Determination of Local Radiative Properties in Coal-Fired Flames," Principal Investigator, Grant No: DE-FG22-87PC79916, \$199,963, 1987-1991. *Funded.*
9. IBM, Lexington, KY, "Thermal Design of Electronic Boards," \$63,533, (Direct Cost) 1988-1990. (with Professors K. Tagavi and C.J. Cremers.) *Funded.*
10. NSF/BYU ADVANCED COMBUSTION ENGINEERING RESEARCH CENTER, "Measurement of Radiative Properties of Pulverized-Coal Samples," Principal Investigator, \$18,750, 1989-1990. *Funded.*
11. ENEL - ENTE NAZIONALE PER L'ENERGIA ELETTRICA, PISA, ITALY, "Measurement of Radiative Properties of Italian Coals," Principal Investigator, \$40,000, 1989-1991. *Funded.*
12. NSF - Engineering Ahead, Summer School for High School Students, Faculty Member, 1991-1997. *Funded.*
13. ENEL - ITALIAN ELECTRICITY BOARD, PISA, ITALY, "Radiative Properties of Combustion Products in Fuel-Rich Zone of Flames," Principal Investigator, \$45,000, 1991-1993. *Funded.*
14. NATIONAL SCIENCE FOUNDATION, "Radiation Heat Transfer in Highly Coupled Physical Systems," Faculty Member, Principal Investigators: J.R. Howell and T.L. Bergman, University of Texas-Austin. (This proposal is to organize a workshop between the US and Russian/Belorussian scientists in October 1993.) *Funded.*
15. DEPARTMENT OF ENERGY, PETC - Advanced University Coal Research Program, "Radiative Properties of Char, Fly-Ash and Soot Particles in Coal Flames," Principal Investigator, \$140,000, 1992-1996. *Funded.*
16. DEPARTMENT OF ENERGY, PETC - University Coal Research Internship Program, PI, for Erin Rapela, \$1,300, 1993. *Funded.*
17. DEPARTMENT OF ENERGY, PETC - Advanced University Coal Research Program, "Radiation-Turbulence Interaction in Coal-Fired Flames," Principal Investigator; Co-PI: J.M. McDonough, \$200,000, 1993-1998. *Funded.*
18. TRW, Vehicle Safety Systems, Inc., "Classification of Particulates Generated by Propellant Combustion," Principal Investigator, \$25,330, 1994. *Funded.*
19. UNIVERSITY OF KENTUCKY, Major Research Equipment Grant, "Optical Parametric Oscillator," \$61,000, 1994. *Funded.*
20. NATIONAL SCIENCE FOUNDATION, "Invited Participant Travel Support for the International Symposium on Radiative Heat Transfer," Co-PI; PI: Brent Webb of Brigham Young University; \$10,000, 1995. *Funded.*
21. US DEPARTMENT OF AGRICULTURE, "Light Backscatter Sensor Development for Measurement of Food Consistency," Co-PI; PI: Fred Payne, \$180,000, 1998-2001. *Funded.*
22. NATIONAL SCIENCE FOUNDATION, "Radiation Transfer in Medical Applications," Principal Investigator, \$47,300, Grant No. CTS-9816593, August 1998 - July 1999. *Funded.*
23. NSF-SBIR Grant, "Characterization of Ceramic Powders", subcontract from Synergetic Technologies, Inc, \$21,000, January-September 2000. *Funded.*
24. SYNERGETIC TECH. INC, "Particle Characterization System Prototype Design and Manufacturing," \$21,500; January-September 2000. *Funded.*
25. Kentucky Partnership for Food Safety and Quality Assurance, "Improving Food Safety Using Fluorescence Correlation Spectroscopy for Detecting Low Concentrations of Viable Bacteria in Near-Real Time," \$60,000, January 2000-June 2001; CoPI; Other Co-Pis: Fred Payne, Sue Nokes. *Funded.*
26. NSF-SBIR Phase 2 Grant Subcontract from Synergetic Tech. Inc, "Characterization of Ceramic Powders" \$40,000, August 2000-June 2002. *Funded.*
27. NSF-SBIR Phase 2 Grant Subcontract from Synergetic Tech. Inc, "On-Line, Non-Destructive, Rapid Characterization of Nanopowders and Agglomerates" \$60,000, August 2001-June 2003. *Funded.*
28. NSF Travel Grant for Emerging Scientists; co-PI, PI: Brent Webb, BYU, \$16,000, May-June, 2001. *Funded.*
29. "NIRT: Staggered Probes for Integrating Nano Machining and Metrology," National Science Foundation-NIRT, \$1,000,000 (PI: Ryan Vallance; co-PIs: A. Rao, S. Jin, K. Javed), August 2002-December 2008. *Funded.*
30. "Precision Agriculture: Polarization Techniques to Enhance Remote Sensed Imagery," US Department of Agriculture/CSREES (Multi-co-PI Award), \$685,620 (MPM is one of the faculty members with sub-award about \$70,000 with S. Shearer and T. Stambough). October 2002-October 2005. *Funded.*

31. “Vacuum Chamber for Carbon-Nanotube based Precision Machining Applications,” Major Research Equipment Initiative, Office of Vice President for Research, University of Kentucky, \$50,000, with Ryan Vallance, 2003. *Funded*.
32. “Development of an Optical Technique for on-line measurements of Particle and Bubble Sizes,” DOE, Center for Advanced Separation Technologies (via Virginia Tech), \$152,653; April 2003-January 2005; PI: Daniel Tao; co-PIs: M. P. Mengüç and C. Crofcheck. *Funded*.
33. “Nano-Scale Engineering Education for Undergraduates at the University of Kentucky,” NSF-NUE, \$130,000, January 2004 – December 2006, PI: M. Pinar Mengüç; co-PIs: R. Vallance, V. Singh, B. Hinds, Z. Chen. *Funded*.
34. “Characterization of Nano Size Metallic Particles via Polarized Light,” Kentucky Science and Engineering Foundation,” \$15,000, June 2003-June 2005; PI: M. Pinar Mengüç, co-PI: M. Aslan. *Funded*.
35. “Monitoring of Bubble size and Liquid Hold-up in a Foam Fractionation Column,” Kentucky Science and Engineering Foundation,” \$15,000, June 2003-December 2005; PI: C. Crofcheck, co-PI: M. Pinar Mengüç. *Funded*.
36. “Sensor Technology Development for Monitoring and Control of Curd Syneresis,” Kentucky Science and Engineering Foundation,” \$15,000, June 2003-June 2005; PI: F. Payne, co-PI: M. Castello, M. Pinar Mengüç. *Funded*.
37. “Design and Development of Surface-Wave Based Particle Characterization System,” Major Research Equipment Initiative, Office of Vice President for Research, University of Kentucky, \$28,300, with M. Aslan, 2004-2005. *Funded*.
38. NSF Travel Grant for Emerging Scientists; co-PI, PI: Brent Webb, BYU, \$16,000, May-June, 2004. *Funded*.
39. “Elliptically-Polarized-Surface-Wave-Scattering-Based Diagnosis of Self-Assembly and Nano-Fabrication,” NSF-NER, \$130,000, July 2004-June 2006; PI: M.P. Mengüç; co-PIs: M. Aslan and B.J. Hinds. *Funded*.
40. “Syneresis Sensor Technology Development for Curd Moisture Control,” co-PI, PI: Fred Payne; other co-PIs: C. Hicks, M. Castillo, M. Pinar Mengüç, USDA, \$350,000, September 2004-August 2007. *Funded*.
41. “Directed Self-Assembly of Nano-Size Particles,” NSF-NER, \$130,000, June 2006-December 2007; PI: T. Hastings, co-PIs: M.P. Mengüç, C. Crofcheck. *Funded*.
42. NSF Travel Grant for Emerging Scientists; co-PI, PI: Brent Webb, through BYU, \$10,000, May-June, 2007. *Funded*.
43. “Exploration of Nano-Melting,” PI, co-PI: S. Rankin, KSEF, \$100,000, Jan. 2007- July 2009. *Funded*.
44. “Estimation of Analytic Surfaces with Applications to Nanoparticle Characterization via Surface Waves,” Co-PI; PI: Richard Charnigo, co-PI, Cid Srinivisan, NSF, \$250,000, August 2007-July 2010, *Funded*.
45. “Nanomaterials and Architectures for Energy Conversion & Storage,” co-PI, PI: S. Rankin, DOE-EPSCoR, UK-part \$223,848/year, July 2007-August 2010. *Funded*.
46. “Syneresis Technology Validation,” co-PI, PI: M. Castillo, Fred Payne; other co-PIs: C. Hicks, M. Pinar Mengüç, USDA, \$182,996, January 2008-June 2009. *Funded*.
47. “Tip Directed-Assembly of Nanoparticles via Surface-Plasmon Excitation,” NSF, \$500,000, May 2008-May 2011; with T. Hastings. *Funded*.
48. “Experimental Investigation of Near-Field Radiative Transfer for High-Efficiency Thermophotovoltaic Power Generators,” PI, KSEF, \$100,000, July 2008-June 2011. *Funded*.
49. “NF-RAD: Near-Field Radiation Absorption and Scattering by Nanoparticles on Surfaces”, FP7-PEOPLE-IRG-2008 Marie Curie Actions—International Re-integration Grants (IRG), Ozyegin University, May1, 2009-April 30, 2012, 75,000 Euro. (about \$110,000). *Funded*. (At Ozyegin University, Istanbul, Turkey)
50. TUBITAK 1001, November 2009-October 2011, 193,000 TL (about \$130,000). *Funded*. (At Ozyegin University, Istanbul, Turkey)
51. “Emerging Engineer Travel Support, The Sixth International Symposium on Radiative Transport,” NSF, w/ B.W. Webb, 2010, \$14,800.
52. ‘Coherent Teachings of Energy, Environment and Economy for Zero Istanbul 2050,’ IBM Global, at Özyeğin University, 2010, 10,000 USD. *Funded*. (with Dr. Pinar Özuyar). (one of the two projects funded in TR) (http://public.dhe.ibm.com/software/dw/university/innovation/2010_smarter_planet_recipients.pdf)
53. ‘Engineering and Architecture of Sustainable Buildings,’ *Funded* by the US National Science Foundation, jointly with the University of Illinois. (NSF Budget of \$80,000; 2011) (with Dr. P. Özuyar, CEEE/EÇEM).
54. ‘New Energy Efficient Design for Buildings, (NEED4B)’ *Funded* by EU-FP-7 PPP on Buildings; With ACCIONA, Spain and D’APPOLONIA, Italy, €714,000, at Özyeğin University, CEEE Budget for 5 years

- (2012-2017) (CEEE/EÇEM). (MPM is the PI; total budget overseen by OzU CEEE is €942,000, including FIBA Group and B-Design budgets). (<http://www.need4b.eu/index.aspx>)
55. ‘City Logistics Istanbul,’ DHL, Ozyegin University, €15,000. 2012.
 56. ‘New Refrigeration Sytems’ Bosch-Siemens Turkey; along with A. Kosar and K. Sendur of Sabanci University; Ozyegin University budget is €18,000. 2012-2013.
 57. ‘Sustainable Energy Solutions for Bosch-Siemens Cerkezkoy Campus’, Bosch-Siemens Turkey; Ozyegin University budget is €7,000. 2013.
 58. “Total Renovation Strategies for Energy Reduction in Public Building Stock”, BRICKER, EU 7th Framework Programme, With ACCIONA, Spain, €443,000, at Özyeğin University, CEEE Budget for 4 years; October 2013 – October 2017.
 59. “Risk Management of Energy Retrofits in Urban Development Projects”, TUBITAK 2501, 120,000 TL. (Collaborative Grant with US-NSF; Georgia Tech part is funded by NSF; PI at GT; Godfried Augenbroe; \$50,000 additional); November 2013 - October 2014. PI, with P. Ozuyar, co-PI.
 60. TRIBE: "TRaIning Behaviours towards Energy efficiency: Play it!", EU - Horizon 2020: EE 11 – 2014: New ICT-based solutions for energy efficiency, €217.500, Özyeğin University, CEEE, February 2015 - February 2017

ARCHIVAL PUBLICATIONS

BOOKS

- B 1. Basil Wong and M. Pinar Mengüç, “*Thermal Transport for Applications in Micro/Nanomachining,*” Microtechnology and MEMS Series, Springer, Germany, June 2008.
- B 2. J.R. Howell, R. Siegel, M. P. Mengüç, “*Thermal Radiation Heat Transfer,*” 5th Edition, Taylor and Francis, CRC Press, New York, September 2010.
J.R. Howell, M. P. Mengüç, R. Siegel, “*Thermal Radiation Heat Transfer,*” 6th Edition, Taylor and Francis, CRC Press, New York, August 2015.

EDITED BOOKS (EB) and SPECIAL ISSUE OF JOURNALS (EJ)

- EB 1. M.P. Mengüç, Editor, “*Radiative Transfer I,*” Proceedings of the First International Symposium on Radiative Transfer, (held in Kusadasi, Turkey, August 1995; organized by the International Centre For Heat and Mass Transfer), Begell House, New York, 1996.
- EB 2. M.P. Mengüç, Editor, “*Radiative Transfer II,*” Proceedings of the Second International Symposium on Radiative Transfer, (held in Kusadasi, Turkey, July 1997; organized by the International Centre For Heat and Mass Transfer), Begell House, New York, 1998.
- EB 3. M.P. Mengüç, N. Selcuk, Editors, “*Radiative Transfer III,*” Proceedings of the Third International Symposium on Radiative Transfer, (held in Antalya, Turkey, June 2001; organized by the International Centre For Heat and Mass Transfer), 2001.
- EJ 4. M.P. Mengüç, N. Selcuk, J.R. Howell, J.-F. Sacadura, co-editors, “*Selected papers from the Third International Symposium on Radiative Transfer,*” Special Issue of *Journal of Quantitative Spectroscopy and Radiative Transfer,*” Volume 73, Number 2-5, 2002.
- EJ 5. P. Lybaert, N. Selcuk, D. Lemonnier, M.P. Mengüç, co-editors, “*Selected papers from Eurotherm 73*” Special Issue of *Journal of Quantitative Spectroscopy and Radiative Transfer,*” January 2004.
- EJ 6. M.P. Mengüç, N. Selcuk, B.W. Webb, D. Lemonnier, co-Editors, “*Selected papers from the Fourth International Symposium on Radiative Transfer*” Special Issue of *Journal of Quantitative Spectroscopy and Radiative Transfer,*” Vol. 93, Numbers 1-3, July 2005.
- EJ 7. D. Lemonnier, P. Lybaert, N. Selcuk, M.P. Mengüç, co-editors, “*Selected papers from Eurotherm 78*” Special Issue of *Journal of Quantitative Spectroscopy and Radiative Transfer,*” March 2007.
- EJ 8. M.P. Mengüç, N. Selcuk, B.W. Webb, D. Lemonnier, co-Editors, “*Selected papers from the Fifth International Symposium on Radiative Transfer*” Special Issue of *Journal of Quantitative Spectroscopy and Radiative Transfer,*” Vol. 109, Number 2, January 2008.

- EJ 9. M. Mishchenko, G. Videen, M.P. Mengüç, co-Editors, “*Selected papers from the Tenth Electromagnetic Wave/Light Scattering Conference*,” Special Issue of *Journal of Quantitative Spectroscopy and Radiative Transfer*,” Vol. 109, Number 8, May 2008.

BOOK CHAPTERS (BC)

- BC 1. R. Viskanta and M.P. Mengüç, "Modeling of Radiative Heat Transfer," *Encyclopedia of Environmental Control Technology*, Editor: P. Chermisinoff, Gulf Publishing Co., New York, Vol. 1, pp. 599-646, 1989.
- BC 2. R. Viskanta and M.P. Mengüç, "Principles of Radiative Heat Transfer in Combustion Systems," *Handbook of Heat and Mass Transfer- Vol. 4: Fundamentals of Combustion Systems*, Editor: P. Cheremisinoff, Gulf Publishing Co., New York, pp. 925-978, 1990.
- BC 3. M.P. Mengüç and B.W. Webb, "Radiative Heat Transfer," in *Fundamentals of Coal Combustion: Clean and Efficient Use*, Editor: L.D. Smoot, Elsevier Publishing Co., New York, 1993, pp. 375-430.
- BC 4. J.R. Howell and M.P. Mengüç, “Radiation,” in *Handbook of Heat Transfer*, Chapter 7, Editors: W. Rohsenow, J. Hartnett, Y. Cho, McGraw Hill, 1998.

JOURNAL EDITORIALS (JE)

- JE 1. E.E. Anderson, C.T. Avedisian, M.P. Mengüç,; (39 Authors in alphabetical order), “Heat transfer in the new millennium - Views by members of the ASME heat transfer division,” *ASME Journal of Heat Transfer*, Vol. 122, No. 1, Editorial, 2000.
- JE 2. M.P. Mengüç, N. Selcuk, J.R. Howell, J.F. Sacadura, “Third International Symposium on Radiative Transfer - Special Issue on Radiation III - Preface,” *Journal of Quantitative Spectroscopy and Radiative Transfer*, Vol. 73 (2-5), pp. 129-130, April 2002.
- JE 3. P. Lybaert, N. Selcuk, D. Lemonnier, M.P. Mengüç, “Special issue based on Eurotherm Seminar 73 - Computational Thermal Radiation in Participating Media II – Preface,” *Journal of Quantitative Spectroscopy and Radiative Transfer*, Vol. 84(4), pp. 369-370, April 2004.
- JE 4. M.P. Mengüç, N. Selcuk, B.W. Webb, D. Lemonnier, “Special issue based on selected papers from the Fourth International Symposium on Radiative Transfer, *Journal of Quantitative Spectroscopy and Radiative Transfer*, Vol. 93 (1-3), pp. 1-3, June-July 2005.
- JE 5. D. Lemonnier, N. Selcuk, P. Lybaert, and M.P. Mengüç, “Special issue based on Eurotherm Seminar 78 - Computational Thermal Radiation in Participating Media II – Preface,” *Journal of Quantitative Spectroscopy and Radiative Transfer*, Vol. 104 (2), pp. 197-198, March 2007.
- JE 6. Z.M. Zhang and M.P. Mengüç, “Special Issue on Nano/Microscale Radiative Transfer, *ASME Journal of Heat Transfer*, Vol. 129 (1), pp. 1-2, January 2007.
- JE 7. M.P. Mengüç, N. Selcuk, B.W. Webb, D. Lemonnier, “Special issue based on selected papers from the Fifth International Symposium on Radiative Transfer, *Journal of Quantitative Spectroscopy and Radiative Transfer*, Vol. 109, pp. 1-3, January 2008.
- JE 8. M. Mishchenko, G. Videen, M.P. Mengüç, co-Editors, “*Selected papers from the Tenth Electromagnetic Wave/Light Scattering Conference*,” Special Issue of *Journal of Quantitative Spectroscopy and Radiative Transfer*,” Vol. 109, Number 8, May 2008. Pages: 1335-1337.
- JE 9. Coelho, P.J., Lemonnier, D., Lybaert, P., Special issue based on Eurotherm Seminar No. 83: Computational thermal in participating media III, *Journal of Quantitative Spectroscopy & Radiative Transfer*, Vol. 111, Issue: 2, Special Issue: SI, Pages: 262-263, Jan. 2010.
- JE 10. Mengüç, M.P., Stoop, J., JQRST Young Scientist Award on Radiative Transfer, *Journal of Quantitative Spectroscopy & Radiative Transfer*, Vol. 111, Issue: 2, Pages: 261-261, Jan. 2010.
- JE 11. Mishchenko, M., Rothman L.S., Mengüç, M.P., 50 years of JQRST: Milestone papers, *Journal of Quantitative Spectroscopy & Radiative Transfer*, Vol. 111, Issue: 11, Pages: 1455-1458, Jul. 2010.
- JE 12. Mengüç, M.P., A retrospective view on “3-dimensional radiation in absorbing and scattering media using discrete-ordinates approximation” by JS Truelove, *Journal of Quantitative Spectroscopy & Radiative Transfer*, Vol. 111, Issue: 11, Special Issue: SI, Pages: 1644-1645, Jul. 2010.
- JE 13. Mengüç, M.P., Viskanta, R., On “Radiative transfer in three-dimensional rectangular enclosures containing inhomogeneous, anisotropically scattering media”, *Journal of Quantitative Spectroscopy & Radiative Transfer*, Vol. 111, Issue: 11, Special Issue: SI, Pages: 1625-1626, Jul. 2010.

- JE 14. Mishchenko, M.I., Mengüç M.P., Rothman L.S., Van de Hulst Light-Scattering Award, *Journal of Quantitative Spectroscopy & Radiative Transfer*, Vol. 112, Issue: 4, Special Issue: SI, Pages: 559-559, Mar. 2011
- JE 15. Jose, Stoop, M. Mishchenko, Mengüç M.P., Special Issue Polarimetric Detection, Characterization, and Remote Sensing, *Journal of Quantitative Spectroscopy and Radiative Transfer*, Vol. 112, Issue. 13, Pages: 2041-2041, Sep. 2011.
- JE 16. Stoop, J., Mengüç, M.P., Mishchenko, Rothman L.S., The Poynting Award on Radiative Transfer, *Journal of Quantitative Spectroscopy & Radiative Transfer*, Vol. 112, Issue: 4, Special Issue: SI, Pages: 559-559, Mar. 2011 .
- JE 17. Boulet, P., Lacroix, D., Lemonnier, D., Special issue based on the Eurotherm Seminar 95-Computational Thermal Radiation in Participating Media IV, *Journal of Quantitative Spectroscopy & Radiative Transfer*, Vol. 128, Special Issue: SI, Pages: 1-1, Oct. 2013.
- JE 18. Zhang Z., Maruyama S., Sakurai A., Special Issue on Micro- and Nano-Scale radiative Transfer Preface, *Journal of Quantitative Spectroscopy & Radiative Tr.*, Vol. 132, Special issue: SI, Pages: 1-2, Jan. 2014.

REFEREED JOURNAL ARTICLES (JA)

- JA 1. M.P. Mengüç and R. Viskanta, "Comparison of Radiative Transfer Approximations for a Highly Forward Scattering Planar Medium," *Journal of Quantitative Spectroscopy and Radiative Transfer*, Vol. 29, No. 5, pp. 381-394, 1983.
- JA 2. M.P. Mengüç and R. Viskanta, "Radiative Transfer in Three-Dimensional Rectangular Enclosures Containing In-Homogeneous, Anisotropically Scattering Media," *Journal of Quantitative Spectroscopy and Radiative Transfer*, Vol. 33, pp. 533-549, 1985.
- JA 3. M.P. Mengüç and R. Viskanta, "On the Radiative Properties of the Polydispersions: A Simplified Approach," *Combustion Science and Technology*, Vol. 44, pp. 143-159, 1985.
- JA 4. M.P. Mengüç, R. Viskanta, and C.R. Ferguson, "Multidimensional Modeling of Radiative Transfer in Diesel Engines," *SAE Transactions*, SAE Paper No: 850503, 1985.
- JA 5. M.P. Mengüç and R. Viskanta, "Radiation Transfer in a Cylindrical Vessel Containing High Temperature Corium Aerosols," *Nuclear Science and Engineering*, Vol. 92, pp. 570-583, 1986.
- JA 6. M.P. Mengüç and R. Viskanta, "Radiative Transfer in Axisymmetric, Finite Cylindrical Enclosures," *ASME Journal of Heat Transfer*, Vol. 108, pp. 271-276, 1986.
- JA 7. M.P. Mengüç, W.G. Cummings III, and R. Viskanta, "Radiative Transfer in a Gas Turbine Combustor," *AIAA Journal of Propulsion and Power*, Vol. 2, pp. 241-247, 1986.
- JA 8. M.P. Mengüç and R. Viskanta; "A Sensitivity Analysis for Radiative Heat Transfer in Pulverized-Coal Fired Furnaces," *Combustion Science and Technology*, Vol. 51, Nos. 1 & 2, p. 51, 1986.
- JA 9. M.P. Mengüç and R. Viskanta, "An Assessment of Spectral Radiative Heat Transfer Predictions for a Pulverized Coal Fired Furnace," in *Heat Transfer - 1986*, C.L. Tien, V.P. Carey, and J.K. Ferrell, editors, Hemisphere, Washington, D.C., Vol. 2, pp. 815-820, 1986.
- JA 10. D.W. Mackowski, R.A. Altenkirch, and M.P. Mengüç, "Extinction and Absorption Coefficients of Cylindrically-Shaped Soot Particles," *Combustion Science and Technology*, Vol. 53, pp. 399-411, 1987.
- JA 11. R. Viskanta and M.P. Mengüç, "Radiative Heat Transfer in Combustion Systems," *Progress in Energy and Combustion Sciences*, Vol. 13, pp. 97-160, 1987.
- JA 12. M.P. Mengüç and R.K. Iyer, "Modeling of Radiation Transfer Using Multiple Spherical Harmonics Approximation," *Journal of Quantitative Spectroscopy and Radiative Transfer*, Vol. 39, pp. 445-462, 1988.
- JA 13. M.P. Mengüç and R. Viskanta, "Effect of Fly-Ash Particles on Spectral and Total Radiation Blockage," *Combustion Science and Technology*, Vol. 60, pp. 97-115, 1988.
- JA 14. D.W. Mackowski, R.A. Altenkirch, M.P. Mengüç, and K. Saito, "Radiative Properties of Chain-Agglomerated Soot Formed in Hydrocarbon Diffusion Flames," *Proceedings of Twenty-Second Symposium (International) on Combustion*, The Combustion Institute, Pittsburgh, PA, 1989; pp. 1263-1269.
- JA 15. R.K. Iyer and M.P. Mengüç, "Quadruple Spherical Harmonics Approximation For Radiative Transfer in Two-Dimensional, Rectangular Enclosures," *Journal of Thermophysics and Heat Transfer*, Vol. 3, pp. 266-273, 1989.

- JA 16. K.R. Varma and M.P. Mengüç, "Effects of Particulate Concentrations on Temperature and Heat Flux Distributions in a Pulverized Coal-Fired Furnace," *International Journal of Energy Research*, Vol. 13, pp. 555-572, 1989.
- JA 17. D.W. Mackowski, R.A. Altkirch, and M.P. Mengüç, "A Comparison of Electromagnetic Wave and Radiative Transfer Equation Analyses of a Coal Particle Surrounded by a Soot Cloud," *Combustion and Flame*, Vol. 76, pp. 415-420, 1989.
- JA 18. R. Viskanta and M.P. Mengüç, "Radiative Transfer in Dispersed Media," *ASME Applied Mechanics Reviews*, Vol. 42, pp. 241-259, 1989.
- JA 19. M.P. Mengüç and S. Subramaniam, "A Step Phase Function Approximation for the Determination of the Effective Scattering Phase Function of Particles," *Journal of Quantitative Spectroscopy and Radiative Transfer*, Vol. 43:3, pp. 253-262, 1990.
- JA 20. D.W. Mackowski, R.A. Altkirch, and M.P. Mengüç, "Internal Absorption Cross Sections in a Stratified Sphere," *Applied Optics*, Vol. 29:10, pp. 1551-1559, 1990.
- JA 21. B.M. Agarwal and M.P. Mengüç, "Single and Multiple Scattering of Collimated Radiation in an Axisymmetric System," *International Journal of Heat and Mass Transfer*, Vol. 34, No. 3, pp. 633-647, 1991.
- JA 22. S. Subramaniam and M.P. Mengüç, "Solution of Inverse Radiation Problem for Inhomogeneous and Anisotropically Scattering Medium Using a Monte-Carlo Technique," *International Journal of Heat and Mass Transfer*, Vol. 34, No. 1, pp. 253-266, 1991.
- JA 23. M.P. Mengüç and S. Subramaniam, "Radiative Transfer Through an Inhomogeneous Fly-Ash Cloud: Effects of Temperature and Wavelength Dependent Optical Properties," *Numerical Heat Transfer, Part A: Applications*, Vol. 21, pp. 261-273, 1992.
- JA 24. J.N. Funk, M.P. Mengüç, K.A. Tagavi, and C.J. Cremers, "A Semi-Analytical Method to Predict Printed Circuit Board Package Temperatures," *IEEE Transactions: Components, Hybrids and Manufacturing Technology*, Vol. 15, No. 5, pp. 675-684, 1992.
- JA 25. M.P. Mengüç and S. Manickavasagam, "Inverse Radiation Problem in Axisymmetric Cylindrical Media," *AIAA Journal of Thermophysics and Heat Transfer*, Vol. 7, No. 3, pp. 479-486, 1993.
- JA 26. W.M. Godfrey, K. Tagavi, C.J. Cremers, and M.P. Mengüç, "Interactive Thermal Modeling of Electronic Circuit Boards," *IEEE Transactions: Components, Hybrids and Manufacturing Technology*, Vol. 16, No. 8, pp. 978-985, 1993.
- JA 27. S. Manickavasagam and M.P. Mengüç, "Effective Optical and Radiative Properties of Coal Particles as Determined from FT-IR Spectroscopy Experiments," *Energy and Fuel*, Vol. 7, No. 6, pp. 860-869, 1993.
- JA 28. M.P. Mengüç and P. Dutta, "Scattering Tomography and Application to Sooting Diffusion Flames," *ASME Journal of Heat Transfer*, Vol. 116, No. 1, pp. 144-151, 1994. (ASME Heat Transfer Division Best Paper Award.)
- JA 29. M.P. Mengüç, S. Manickavasagam, and D.A. D'sa, "Determination of Radiative Properties of Pulverized Coal Particles from Experiments," *FUEL*, Vol. 73, No. 4, pp. 613-625, 1994.
- JA 30. B. M. Vaglieco, O. Monda, F. E. Corcione, M. P. Mengüç, "Optical and Radiative Properties of Particulates at Diesel Engine Exhaust," *Combustion Science and Technology*, Vol. 102, pp. 283-299, 1994.
- JA 31. J.A. Thomasson, M.P. Mengüç, and S.A. Shearer, "A Radiative Transfer Model for Relating NIR and Micronaire Measurements of Cotton Fibers," *Transactions of the ASAE*, Vol. 38 (2), pp. 367-377, 1995.
- JA 32. Z. Ivezic and M.P. Mengüç, "An Investigation of Dependent/Independent Scattering Regimes for Soot Particles Using Discrete Dipole Approximation," *International Journal of Heat and Mass Transfer*, Vol. 39, No. 7, pp. 811-822, 1996.
- JA 33. D. Bhanti, S. Manickavasagam, and M.P. Mengüç, "Identification of Non-Homogeneous Spherical Particles from their Scattering Matrix Elements," *Journal of Quantitative Spectroscopy and Radiative Transfer*, Vol. 56, No. 4, pp. 591-608, 1996.
- JA 34. S. Manickavasagam and M.P. Mengüç, "Scattering Matrix Elements of Fractal-like Soot Agglomerates," *Applied Optics*, Vol. 36, No. 6, pp. 1337-1351, 1997. (Correction/Addition: *AO*, Vol. 36, No. 27, p. 7008, 1997)
- JA 35. Z. Ivezic, M.P. Mengüç, and T.G. Knauer, "A Procedure to Determine the Onset of Soot Agglomeration from Multiwavelength Experiments," *Journal of Quantitative Spectroscopy and Radiative Transfer*, Vol. 57, No. 6, pp. 859-865, 1997.

- JA 36. M.P. Mengüç and S. Manickavasagam, "Characterization of size and structure of agglomerates and inhomogeneous particles via polarized light," *International Journal of Engineering Sciences*, Special issue on memory of S. Chandrasekhar, Vol. 36, pp. 1569-1593, 1998.
- JA 37. S. Mukerji, J.M. McDonough, M.P. Mengüç, S. Manickavasagam and S. Chung, "Chaotic Map Models of Soot Fluctuations in Turbulent Diffusion Flames," *International Journal of Heat and Mass Transfer*, 1998.
- JA 38. S. Manickavasagam and M.P. Mengüç, "Scattering Matrix Elements of Coated Infinite-Length Cylinders," *Applied Optics*, Vol. 37, No. 12, pp. 2473-2482, 1998.
- JA 39. A. Fowler and M.P. Mengüç, "Propagation of Focussed and Multibeam Laser Energy in Biological Tissues," *ASME Journal of Biomechanical Engineering*, Vol 122, pp. 534-540, 2000.
- JA 40. C.L. Crofcheck, F.A. Payne, C.L. Hicks, M.P. Mengüç, and S.E. Nokes, "Fiber Optic Sensor Response to Low Levels of Fat in Skim Milk," *Journal of Food Process Engineering*, Vol. 23, pp. 163-175, 2000.
- JA 41. C.L. Crofcheck, F.A. Payne, C.L. Hicks, M.P. Mengüç, and S.E. Nokes, "Fiber Optic Sensor Response to High Levels of Fat in Cream," *Transactions of ASAE*, 45(1):171-178, 2002.
- JA 42. C.L. Crofcheck, F.A. Payne, and M.P. Mengüç, "Characterization of Milk Properties using a Radiative Transfer Model," *Applied Optics*, 41(10):2028, 2002.
- JA 43. B. Wong and M.P. Mengüç, "Depolarization of Radiation by Foams," *Journal of Quantitative Spectroscopy and Radiative Transfer*, Vol. 73, Numbers 2-5, pp. 273-284, 2002.
- JA 44. B. Wong and M.P. Mengüç, "Comparison of Monte Carlo Techniques to Predict the Propagation of a Collimated Beam in Participating Media," *Numerical Heat Transfer: Part-B Fundamentals*, 42:119-140 2002.
- JA 45. C. Klusek, S. Manickavasagam and M.P. Mengüç, "Compendium of Scattering Matrix Element Profiles for Soot Agglomerates," *Journal of Quantitative Spectroscopy and Radiative Transfer*, Vol. 79-80, pp. 839-859, 2003.
- JA 46. M. M. Aslan, J. Yamada, M. P. Mengüç, A. Thomasson, "Characterization of Individual Cotton Fibers via Light Scattering: Experiments," *AIAA Journal of Thermophysics and Heat Transfer* Vol. 17, No. 4, pp. 442-449. 2003.
- JA 47. D.-Kui Qing, M. P. Mengüç, F. Payne, M.G. Danao, "Fluorescence Correlation Spectroscopy for Detection of Trace Amount of Biological Agents," *Applied Optics*, Special Issue, Vol. 42, No: 16, pp: 2987-2994. 2003.
- JA 48. Christy A. Trinkle, P. Kichambare, R. Ryan Vallance, Basil T. Wong, M. P. Mengüç, B.Sadanadan, A. R. Rao, A. Bah and K. Javed, "Thermal Transport During Nanoscale Machining by Field Emission of Electrons from Carbon Nanotubes," *ASME Journal of Heat Transfer*, Vol. 125, No. 4, pp. 546, 2003.
- JA 49. Basil T. Wong and M. Pinar Mengüç, "Monte Carlo Methods in Radiative Transfer and Electron Beam Processing," *Journal of Quantitative Spectroscopy and Radiative Transfer*, Vol. 84, 437-450, 2004.
- JA 50. Rodolphe Vaillon, Basil T. Wong and M. Pinar Mengüç, "Polarized Radiative Transfer in a Particle Laden Transparent Medium via Monte Carlo Method," *Journal of Quantitative Spectroscopy and Radiative Transfer*, Vol. 84, 383-394, 2004.
- JA 51. C. Saltiel, Q. Chen, S. Manickavasagam, L.S. Schandler, R.W. Siegel, and M.P. Mengüç, "Identification of Dispersion Behavior of Surface-Treated Nano-Scale Powders," *Journal of Nanoparticle Research*, Vol. 6, pp. 35-46, 2004.
- JA 52. B.T. Wong, M.P. Mengüç, R.R. Vallance, "Nanoscale machining via Electron Beam and Laser Processing," *ASME Journal of Heat Transfer*, Vol. 126, pp. 566-576, 2004. (This paper was one of the final 10 papers considered for the *JHT Best Paper Award* in 2005)
- JA 53. G. Videen, M. M. Aslan, M. P. Mengüç, "Characterization of Metallic Nanoparticles via Surface wave Scattering: A. Theoretical Framework," *Journal of Quantitative Spectroscopy and Radiative Transfer*, Vol. 93, pp. 195-206, 2005.
- JA 54. M. M. Aslan, M. P. Mengüç, G. Videen, "Characterization of Metallic Nanoparticles via Surface wave Scattering: B. Physical Concept and Numerical Experiments," *Journal of Quantitative Spectroscopy and Radiative Transfer*, Vol. 93, pp. 207-217, 2005.
- JA 55. C. Saltiel, S. Manickavasagam, M.P. Mengüç, and R. Andrews, "Light Scattering and Dispersion Behavior of Multi-Walled Carbon Nanotubes," *Journal of Optical Society of America-A*, Vol. 22, No. 8, pp. 1546-1554, 2005.
- JA 56. C. Crofcheck, J. Wade, M. M. Aslan, M. Pinar Mengüç, Effect of Fat and Casein Particles in Milk on the

- Scattering of Elliptically-Polarized Light, *Transactions of ASAE*, Vol. 48(3), pp. 1147-1155, 2005. (This paper received the *ASABE Honorable Mention Paper Award* in 2006 (one of the top 18 papers out of 417 papers published in the *Transactions*.)
- JA 57. Basil T. Wong, M. Pinar Mengüç, and R. Ryan Vallance, "Sequential Nano-Patterning Using Electron and Laser Beams: A Numerical Methodology," *Journal of Computational and Theoretical Nanoscience*, Vol. 3, No. 2, pp. 1-12, 2006.
- JA 58. Padmakar Kichambare, R. Ryan Vallance, B. Sadanadan, Apparao M. Rao, Kazi Javed, and M. Pinar Mengüç, Growth of Tungsten Oxide Nanorods with Carbon Caps, *Journal of Nanoscience and Nanotechnology*, 6, 536–540, 2006.
- JA 59. King-Fu Hii, R.R. Valance, S.B. Chickkaramanahalli, M.P. Mengüç, A. Rao, "Characterization of Field Emission from Carbon-Nanotubes at Small Distances," *Journal of Vacuum Science and Technology B* Volume 24, Issue 3, pp. 1081-1087, 2006.
- JA 60. M. M. Aslan, Czarena Crofcheck, Daniel Tao, and M. Pinar Mengüç, "Evaluation of Micro Bubble Size and Gas Hold up in Two Phase Gas-Liquid Columns via Scattered Light Measurements," *Journal of Quantitative Spectroscopy and Radiative Transfer*, Vol. 101, pp. 527-539, 2006.
- JA 61. M. M. Aslan, M. Pinar Mengüç, Siva Manickavasagam and Craig Saltiel, "Size and shape prediction of colloidal metal oxide MgBaFeO particles from light scattering measurements," *Journal of Nanoparticle Research*, V. 8, No. 6, pp. 981-994, 2006.
- JA 62. J. N. Swamy, C. Crofcheck and M. P. Mengüç, "A Monte Carlo Ray Tracing Study of Polarized Light Propagation in Liquid Foams," *Journal of Quantitative Spectroscopy and Radiative Transfer*, Vol. 101, pp. 527-539, 2007.
- JA 63. E.A. Hawes, J.T. Hastings, C. Crofcheck, and M.P. Mengüç, "Spectrally selective heating of Nanosized Particles by Surface Plasmon Resonance," *Journal of Quantitative Spectroscopy and Radiative Transfer*, Vol. 101, pp. 527-539, 2007.
- JA 64. P. Garudadi Venkata, M. M. Aslan, M. Pinar Mengüç, G. Videen, "Surface Plasmon Scattering Patterns of Gold Nanoparticles and 2D Agglomerates," *ASME Journal of Heat Transfer*, (Special Issue on Micro- and Nano-Scale Radiative Transfer), Vol. 129, pp. 59-71, 2007.
- JA 65. M. Francoeur, P.G. Venkata, and M. Pinar Mengüç, "Sensitivity Analysis for Characterization of Gold Nanoparticles and 2D-Agglomerates via Surface Plasmon Scattering Patterns," *Journal of Quantitative Spectroscopy and Radiative Transfer*, V. 106, pp. 44 -55, 2007.
- JA 66. Basil T. Wong, M. Pinar Mengüç, and R. Ryan Vallance, "Thermal Conduction Induced by Electron Beam," *International Journal of Heat and Mass Transfer*, Vol. 50, pp. 5099-5107, 2007.
- JA 67. J. A. Sánchez, Basil T. Wong and M. Pinar Mengüç, Pablo Albella, "Field emission and electron deposition profiles as a function of CNT tip geometries," *Journal of Applied Physics*, 101: 114313, 2007.
- JA 68. R. Charnigo, M. Francoeur, M. P. Mengüç, A. Brock, M. Leichter, C. Srinivasan, "Nanoparticle Characterization via Derivatives of Scattering Profiles," *Journal of Optical Society of America A*, Vol. 24, no. 9, pp. 2578-2589, 2007.
- JA 69. J. A. Sanchez and M. Pinar Mengüç, "Phase Change Phenomena during Electron-Beam Based Nanomachining: Molecular Dynamics Simulations," *Physical Review B*, V. 76. 224104 (1-11), 2007.
- JA 70. M. Kozan, J. Thangala, R. Bogale, M. Pinar Mengüç, Mahendra K. Sunkara, "In-Situ Characterization of Dispersion Stability of WO₃ Nanoparticles and Nanowires" *Journal of Nanoparticle Research*, Volume: 10 Issue: 4 Pages: 599-612, April 2008.
- JA 71. M. Francoeur and M. P. Mengüç, "Role of the fluctuational electrodynamics theory in near-field radiative heat transfer," *Journal of Quantitative Spectroscopy and Radiative Transfer*, Vol. 109, pp 280-293, 2008.
- JA 72. M. Kozan and M. P. Mengüç, "Exploration of fractal nature of WO₃ nanowire aggregates," *Journal of Quantitative Spectroscopy and Radiative Transfer*, Vol. 109, pp 380-393, 2008.
- JA 73. J.A. Sánchez, M. P. Mengüç, "Geometry dependence on the electrostatic and thermal response of a carbon nanotube during field emission." *Nanotechnology*, Article Number: 075702, February 20, 2008.
- JA 74. J.A. Sánchez, M.P. Mengüç, "Melting and evaporation of Cu and Ni films during electron-beam heating." *Journal of Applied Physics*, 103, Issue: 5, Article Number: 054316, March 2008.
- JA 75. J.A. Sanchez, K.-F. Hii, M.P. Mengüç, and R.R. Vallance, "Heat transfer during field emission from carbon nanotubes," *AIAA Journal of Thermophysics and Heat Transfer*, Volume 22, Number 2, April-June 2008.
- JA 76. E.A. Hawes, J.T. Hastings, C. Crofcheck, and M.P. Mengüç, "Spatially Selective Melting and Evaporation of Nanosized Gold Particles," *Optics Letters*, Vol.33, Issue 12, pp. 1383-1385, 2008.
- JA 77. M. Francoeur, M.P. Mengüç, R. Vaillon, "Near-field radiative heat transfer enhancement ia surface

- phonon-polaritons coupling in thin films," *Applied Physics Letters*, Article: 43109, July 28, 2008.
- JA 78. I. Kunadian, R. Andrews, D. Qian, M.P. Mengüç, "Growth Kinetics of MWCNT's Synthesized by Continuous-Feed CVD Method," *Carbon*, Vol. 47, pp. 384-395, 2009.
- JA 79. I. Kunadian, Rodney Andrews, Dali Qian, M. P. Menguc, Thermoelectric power generation using doped MWCNTs, *Carbon*, Volume 47, 589-601, 2009.
- JA 80. I. Kunadian, Rodney Andrews, M. P. Menguc, Dali Qian, Multiwalled carbon nanotube deposition profiles within a CVD reactor: An experimental study, *Chemical Engineering Science*, 64(7), Page 1503-1510, 2009.
- JA 81. J. N. Swamy, C. Crofcheck and M. P. Mengüç, "Time Dependent Scattering Properties of Slow Decaying Foams," *Colloids and Surfaces A-Physicochemical and Engineering Aspects*, Issue: 1-3 Pages: 80-86, April, 15 2009.
- JA 82. Basil T. Wong, M. Pinar Mengüç, "Analysis of Electrical and Thermal Responses of n-doped Silicon to impinging Electron Beam and Joule Heating," *International Journal of Heat and Mass Transfer*, Volume: 52 Issue: 11-12 Pages: 2632-2645, 2009.
- JA 83. A. Thomasson, S. Manickavasagam, and M. Pinar Mengüç, "Cotton Fiber Characterization with FTIR and Laser Techniques," *Applied Spectroscopy*, Vol. 63, No. 3, pp. 321-330, 2009.
- JA 84. M. Francoeur, M.P. Mengüç, R. Vaillon, "Solution of near-field thermal radiation in one-dimensional layered media using dyadic Green's functions and the scattering matrix method," *Journal of Quantitative Spectroscopy and Radiative Transfer*, Vol 110(18), pp. 2002-2018, 2009.
- JA 85. K.F. Hii, R. Vallance, M. P. Mengüç, "Design, operation, and motion characteristics of a precise piezoelectric linear motor," *Precision Engineering*, Vol 34(2), pp. 231-241, 2010.
- JA 86. Benoit Gay, Rodolphe Vaillon and M. Pinar Mengüç, "Polarization imaging of multiply-scattered radiation based on Integral-Vector Monte Carlo Method," *Journal of Quantitative Spectroscopy and Radiative Transfer*, Volume: 111, Issue: 2, Pages: 287-294, Jan. 2010
- JA 87. B.T. Wong and Menguc, M.P., "A unified Monte Carlo treatment of transport of electromagnetic energy, electrons and phonons in absorbing and scattering media," *Journal of Quantitative Spectroscopy and Radiative Transfer*, Volume: 111, Issue: 3, Pages: 399-419, Feb. 2010
- JA 88. M. Francoeur, M.P. Mengüç, R. Vaillon, "Near-field radiative heat exchanges between two thin films supporting surface phonon-polaritons," *Journal of Applied Physics*, Vol, 107 Issue: 3 Article Number: 034313, Feb 2010
- JA 89. J. N. Swamy, C. Crofcheck, M.P. Menguc, "Polarized Light Based Scheme to Monitor Column Performance in a Continuous Foam Fractionation Column," *Journal of Biological Engineering*, 2010 (under review)
- JA 90. M. Francoeur, M.P. Menguc, and R. Vaillon, Local density of electromagnetic states within a nanometric gap formed between two thin films supporting surface phonon-polaritons. *Journal of Physics-D: Applied Physics*, Volume: 43, Issue: 7, Article Number: 075501, Feb. 24 2010.
- JA 91. Loke, V., and Mengüç, M.P. (2010). Surface Waves and AFM Probe-Particle Near-Field Coupling: Discrete Dipole Approximation with Surface Interaction. *Journal of the Optical Society of America - A*. JOSA A, Vol. 27 Issue 10, pp.2293-2303 (2010). Available on-line freely as it is Selected to Spotlight in Optics: <http://www.opticsinfobase.org/spotlight/summary.cfm?uri=josaa-27-10-2293>)
- JA 92. Basil T. Wong, Mathieu Francoeur, M. Pinar Mengüç, A Monte Carlo Simulation for Phonon Transport within Silicon Structures at Nanoscales with Heat Generation," *International Journal of Heat and Mass Transfer*, Vol. 54, Issue: 9-10, pages: 1825-1838, Apr. 2011
- JA 93. Richard Charnigo, Mathieu Francoeur, Patrick Kenkel, M. Pinar Mengüç, Benjamin Hall, and Cidambi Srinivasan, "Estimating Quantitative Features of Nanoparticles using multiple derivatives of scattering profiles" *Journal of Quantitative Spectroscopy and Radiative Transfer*, Vol. 112, Issue: 8, Pages: 1369-1382, May. 2011
- JA 94. Francoeur, M., Vaillon, R., and Mengüç, M.P. Impacts of Thermal Effects on the Performances of Nanoscale-Gap Thermophotovoltaic Power Generators. *IEEE Transactions on Energy Conversion*. Vol. 26, Issue:2, Pages: 686-698, Jun. 2011
- JA 95. Howell, J.R., and Mengüç, M.P. The JQSRT Web-Based Configuration Factor Catalog: A Listing of Relations for Common Geometries. *Journal of Quantitative Spectroscopy and Radiative Transfer*. Elsevier. Volume: 112 Issue: 5 Pages: 910-912 DOI: 10.1016/j.jqsrt.2010.10.002, March 2011.
- JA 96. Francouer, M.F., Vaillon, R., and Mengüç, M.P. Control of near-field radiative heat transfer via surface

- phonon-polariton coupling in thin films. *Journal of Applied Physics A.*, Vol. 103, Issue: 3, Pages: 547-550, Jun. 2011
- JA 97. Sendur, K., Koşar, A., and Mengüç, M.P. Localized Radiative Energy Transfer from a Plasmonic Bow-Tie Nanoantenna to a Magnetic Thin-Film Stack. *Journal of Applied Physics A.*, Vol. 103, Issue: 3, Pages: 703-707, Jun. 2011
- JA 98. Loke, V., Nieminen, T.A., and Mengüç, M.P. DDA with Surface Interaction: Computational Toolbox for MATLAB. *Journal of Quantitative Spectroscopy and Radiative Transfer*. Vol. 112, Issue:11, Special Issue SI, Pages: 1711-1725, Jul. 2011
- JA 99. Gazi, M. Huda, Donev, Eugeni, U., Mengüç, M.P., J.T. Hastings, Effects of a Silicon Probe on Gold Nanoparticles on Glass under Evanescent Illumination, *Optics Express*, Vol. 19, Issue: 13, Pages: 12679-12687, Jun. 2011
- JA 100. Francoeur, M.F., Vaillon, R. and Mengüç M.P., Coexistence of Multiple Regimes for Near-field Thermal Radiation between Two Layers Supporting Surface Phonon Polaritons in the Infrared, *Physical Review B.*, Vol. 84, Issue: 7, Aug. 2011.
- JA 101. Charnigo, R., Francoeur, M., Kenkel, P., Mengüç, M.P., Hall, B., Srinivasan, C. Credible intervals for nanoparticle characteristics, *Journal of Quantitative Spectroscopy and Radiative Transfer*, Volume 113, issue 2, pp. 182-193, 2012.
- JA 102. C. A. Jarro, E U. Donev, M. P. Mengüç, and J.T. Hastings, Silver Patterning Using an Atomic Force Microscope Tip and Laser-Induced Chemical Deposition from Liquids, *Journal of Vacuum Science & Technology B*, Volume: 30, Issue:6, Article No: 06FD02 DOI: 10.1116/14764093, Nov. 2012.
- JA 103. S. Muhsincan, Y. Teksen, K. Sendur, M.P. Mengüç, H. Ozturk, H. F. Yagcı Acar, and A. Kosar, Heat Transfer Enhancement with Actuation of Magnetic Nanoparticles Suspended in a Base Fluid, *Journal of Applied Physics*, Volume: 112 Issue: 6, Article No: 064320 DOI: 10.1063/1.4752729 Sep. 15, 2012.
- JA 104. E. Ogut, M.P. Mengüç, and K. Sendur. Integrating Magnetic Heads With Plasmonic Nanostructures in Multilayer Configurations, *IEEE Transactions on Magnetics*, Vol:49 Issue:7 Pages: 3687-3690 DOI: 10.1109/TMAG.2013.2247982, Jul 2013.
- JA 105. S. Muhsincan, Y. Teksen, B. Şahin, K.Şendur, M.P. Mengüç and A. Koşar, “Boiling heat transfer enhancement of magnetically actuated Nanofluids”, *Applied Physics Letters*, Vol: 102, Issue: 16, Article Number: 163107, DOI: 10.1063/1.4802791, April 22, 2013.
- JA 106. Loke, V., Huda, G.M., Donev, E.U., Schmidt, V., Hastings, J.T., Mengüç, M.P., Wriedt, T., Comparison between discrete dipole approximation and other modeling methods for the plasmonic response of gold nanospheres, *Applied Physics B: Lasers and Optics*; DOI: 10.1007/s00340-013-5594-z, Vol. 115(2), pp. 237-246, 2014.
- JA 107. B.T. Wong, M. Francoeur, V. N-S Bong, and M.P. Mengüç, “Coupling of near-field thermal radiative heating and phonon Monte Carlo simulation: Assessment of temperature gradient in doped silicon thin film”, *Journal of Quantitative Spectroscopy and Radiative Transfer*, Vol. 143, pp. 46-55, 2014. (DOI: 10.1016/j.jqsrt.2013.09.002), 2013.
- JA 108. Azadeh Didari and M. Pinar Mengüç, ‘Analysis of Near-Field Radiation Transfer within Nano-Gaps Using FDTD Method, *Journal of Quantitative Spectroscopy and Radiative Transfer*, Vol. 146 pp. 214-226, 2014.
- JA 109. M. Karimzadehkhoei, S. Yalcin, K. Şendur, M. Pinar Mengüç, A. Koşar, Pressure drop and heat transfer characteristics of nanofluids in horizontal microtubes under thermally developing flow conditions, *Exp. Therm. Fluid Sci.* Vol. 67, 37-47, 2014.
- JA 110. A. Didari, M. P. Mengüç, " Near-Field Thermal Emission between Structured Surfaces separated by Nano-Gaps," *Journal of Quantitative Spectroscopy and Radiative Transfer*, Vol. 158, 43-51, 2015.
- JA 111. A. Didari, M. P. Mengüç, " Near to Far-Field Coherent Thermal Emission by Surfaces Coated by Nanoparticles: Evaluation of Effective Medium Theory," *Optics Express*, 23 (11), A547-A552, 2015.
- JA 112. A. Didari, M. P. Mengüç, " Near-field thermal radiation transfer by mesoporous metamaterials," *Optics Express*, under review, 2015.
- JA 113. M. Karimzadehkhoei, K. Şendur, M. P. Mengüç and Ali Koşar, “Experimental study on Subcooled Flow Boiling Heat Transfer and Stability of γ -Al₂O₃/Water Nanofluids in Horizontal Microtubes,” *International Journal of Heat and Mass Transfer*, under review, 2015.

MAGAZINE PUBLICATIONS

- MA 1. S. Manickavasagam, M. P. Mengüç, Z. B. Drozdowicz, C. Ball, "Size, Shape, and Structure Analysis of Fine Particles," *American Ceramic Society Bulletin*, 81 (7): 29-33 July 2002.
- MA 2. M.-G.C. Danao, F.A. Payne, C.L. Hicks, M.P. Mengüç, S.E. Nokes, T.S. Stombaugh, "Enhanced real time optical detection of micron-sized particles in water using standing ultrasonic wave fields, *SPIE Proceedings*, Volume 5994, 2005.
- MA 3. M. P. Mengüç, Y. Somuncu, "Enerji Verimliliği Boyutu Ve İstanbul 2050'ye Doğru", *Enerji Journal*, 46-68, February 2012.
- MA 4. M. P. Mengüç, "Tasarımın Yeşil Zirvesi 'EKODesign Konferansı Bu Yıl 5.Yaşımı Kutladı", *Yapı Journal Addition*, 54-56, May 2012.
- MA 5. M. P. Mengüç, Interview with Özyeğin University CEEE Director, "İstanbul'u 2050'ye Hazırlıyorlar", *Milliyet Cadde*, July 2012, available at: http://cadde.milliyet.com.tr/2012/07/27/HaberDetay/1572330/Istanbul_u_2050_ye_hazirliyorlar
- MA 6. M. P. Mengüç, Interview with Özyeğin University CEEE Director, "Özyeğin Üniversitesi Yeşil Kampüsü", *Yapı Journal Addition*, 67-70, October 2012.

CONFERENCE PUBLICATIONS

REFEREED CONFERENCE ARTICLES AND PRESENTATIONS (RA)

- RA 1. R. Viskanta, A. Urgan, and M.P. Mengüç, "Predictions of Radiative Properties of Pulverized Coal and Fly-Ash Polydispersions," ASME Paper No: 81-HT-24, 1981. Presented at the ASME National Heat Transfer Conference in Milwaukee, WI, August 1981.
- RA 2. M.P. Mengüç and R. Viskanta, "Comparison of Radiative Transfer Approximations for Highly Forward Scattering Planar Medium," ASME Paper No: 82-HT-17, 1982. Presented at the ASME/AIAA Thermophysics and Heat Transfer Conference in St. Louis, MO, June 1982.
- RA 3. M.P. Mengüç, Y. Yener, and M.N. Ozisik, "Interaction of Radiation and Convection in Thermally Developing Laminar Flow in a Parallel-Plate Channel," ASME Paper No: 83-HT-035, 1983. Presented at the ASME National Heat Transfer Conference, Seattle, WA, August 1983.
- RA 4. M.P. Mengüç and R. Viskanta, "Radiative Transfer in Three-Dimensional Rectangular Enclosures," ASME Paper No: 84-HT-035, 1984. Presented at the ASME National Heat Transfer Conference, Niagara Falls, NY, August 1984.
- RA 5. M.P. Mengüç and R. Viskanta, "Radiative Transfer in Axisymmetric, Finite Cylindrical Enclosures," in *Fundamentals of Thermal Radiation Heat Transfer*, T.C. Min, Editor, ASME, New York, 1984. Presented at the ASME Winter Annual Meeting in New Orleans, LA, December 1984.
- RA 6. M.P. Mengüç, R. Viskanta, and C.R. Ferguson, "Multidimensional Modeling of Radiative Transfer in Diesel Engines". Presented at SAE International Congress, Detroit, MI, February 27 - March 2, 1985.
- RA 7. M.P. Mengüç, W.G. Cummings III, and R. Viskanta, "Radiative Transfer in a Gas Turbine Combustor," AIAA Paper No: 85-1072. Presented at AIAA 20th Thermophysics Conference, Williamsburg, VA, June 19-21, 1985.
- RA 8. M.P. Mengüç and R. Viskanta, "A Sensitivity Analysis for Radiative Heat Transfer in Pulverized-Coal Fired Furnaces," in *Heat Transfer in Fire and Combustion Systems*, C.K. Law, Y. Jaluria, W.W. Yuen, K. Miyasaka editors, ASME, New York, pp. 221-229, 1985. Presented at the ASME National Heat Transfer Conference in Denver, CO, August 1985.
- RA 9. M.P. Mengüç and R. Viskanta, "Effect of Fly-Ash Particles on Spectral and Total Radiation Blockage," in *Fundamentals and Applications of Radiation Heat Transfer*, A.M. Smith and T.F. Smith editors, ASME HTD-Vol. 72. Presented at the 1987 National Heat Transfer Conference, Pittsburgh, PA, August, 1987.
- RA 10. S. Chakravarty, M.P. Mengüç, D.W. Mackowski and R.A. Altenkirch, "Application of Two Inversion Schemes to Determine the Absorption Coefficient Distribution in Flames," in *1988 National Heat Transfer Conference Proceedings*, Vol. 1, H.R. Jacobs editor, ASME HTD-Vol. 96, pp. 171-178. Presented at the ASME National Heat Transfer Conference, Houston, TX, July, 1988.
- RA 11. R.K. Iyer and M.P. Mengüç, "Quadruple Spherical Harmonics Approximation for Two-Dimensional Rectangular Enclosures," in *1988 National Heat Transfer Conference Proceedings*, Vol. 1, H.R. Jacobs

- editor, ASME HTD-Vol. 96, pp. 251-258. Presented at the ASME National Heat Transfer Conference, Houston, TX, July, 1988.
- RA 12. M.P. Mengüç and B. Chen, "Difference Formulation of Radiative Transfer For Application to Closely Packed Media". Presented at the ASME Winter Annual Meeting, Chicago, IL, November, 1988.
- RA 13. S. Jolly, M.P. Mengüç, K. Saito, and R.A. Altenkirch, "Scaling Flashover Phenomena in Compartment Fires," *Proceedings of the First International Symposium on Scale Modeling*, Tokyo, Japan, 1989.
- RA 14. S. Subramaniam and M.P. Mengüç, "Inverse Radiation Problem in Single and Double layer Planar Systems with Monte Carlo Technique," in *Radiation Heat Transfer: Fundamentals and Applications*, T.F. Smith, M.F. Modest, A.M. Smith, S.T. Thynell, Editors; HTD-Vol. 137, pp. 157-164. Presented at the 1990 ASME/AIAA Joint Thermophysics and Heat Transfer Conference, Seattle, WA, June 1990.
- RA 15. W.M. Godfrey, K. Tagavi, C.J. Cremers, M.P. Mengüç, "Interactive Thermal Modeling of Electronic Circuit Boards" in *Thermal Modeling and Design of Electronic Systems and Devices*, R.A. Wirtz, E.L. Lehmann, Editors, HTD-Vol. 153, pp. 65-71. Presented at the 1990 ASME Winter Annual Meeting, Dallas, Texas, December 1990.
- RA 16. M.P. Mengüç, D. Dsa, and S. Manickavasagam, "Determining the Radiative Properties of Pulverized Coal Particles from Experiments," *Proceedings of the ASME-JSME Thermal Engineering Joint Conference*, J.R. Lloyd, Y. Kurosaki, Editors; Vol. 5, pp. 22-33. Presented at Reno, Nevada, March, 1991.
- RA 17. M.P. Mengüç and S. Manickavasagam, "Inverse Radiation Problem in Axisymmetric, Non-Homogeneous Media," in *Fundamentals of Radiation Heat Transfer*, W.A. Fiveland, A.L. Crosbie, A.M. Smith, T.F. Smith, Editors; HTD-Vol. 160, pp. 61-68. Presented at the ASME National Heat Transfer Conference, Minneapolis, MN, July 1991.
- RA 18. J. Funk, M.P. Mengüç, K. Tagavi, and C.J. Cremers, "A Semi-Analytical Method to Predict Printed Circuit Board Package Temperatures". Presented at the IEEE-CHMT Semiconductor Thermal and Temperature Measurement Symposium, Phoenix, AZ, February 1991.
- RA 19. M.P. Mengüç and P. Dutta, "Scattering Tomography and its Application to Sooting Diffusion Flames," in *Heat Transfer in Fire and Combustion Systems*, A.M. Kanury and M.O. Brewster, Editors; ASME HTD-Vol 199, pp. 37-44. Presented at the ASME National Heat Transfer Conference, San Diego, CA, August 1992.
- RA 20. M.P. Mengüç, A. Mahadeviah, K. Saito, S. Manickavasagam, "Application of the Discrete Dipole Approximation to Determine the Radiative Properties of Soot Agglomerates," in *Heat Transfer in Fire and Combustion Systems*, A.M. Kanury and M.O. Brewster, Editors; ASME HTD-Vol. 199, pp. 9-16. Presented at the ASME National Heat Transfer Conference, San Diego, CA, August, 1992.
- RA 21. F.E. Corcione, O. Monda, B.M. Vaglieco, and M.P. Mengüç, "Optical Characteristics of Soot Particles at D.I. Diesel Engine Exhaust: Shape and Spectral Effects," in *Proceedings of the 2nd International Conference on Fluid Mechanics, Combustion, Emission and Reliability in Reciprocating Engines*, Presented at Capri, Italy, September 1992.
- RA 22. S. Manickavasagam and M.P. Mengüç, "Effective Radiation Properties of Coal Particles in Planes at $=10.6\mu\text{m}$," in *Heat Transfer in Fire and Combustion Systems-1993*, B. Farouk, M.P. Mengüç, R. Viskanta, C. Presser, S. Chellaiah, Editors, ASME HTD-Vol. 250, pp. 145-157. Presented at the ASME National Heat Transfer Conference, Atlanta, GA, August 1993.
- RA 23. S. Manickavasagam and M.P. Mengüç, "Inverse Radiation-Conduction Problem in Planar Systems," in *Radiation Heat Transfer Theory and Applications*, A. M. Smith and S. H. Chan, Editors, ASME HTD-Vol. 244, pp. 67-75, Presented at the ASME National Heat Transfer Conference, Atlanta, GA, August 1993.
- RA 24. B.M. Vaglieco, D. Monda, F.E. Corcione, and M.P. Mengüç, "Optical and Radiative Properties of Soot Agglomerates at D.I. Diesel Engine Exhaust," in *Heat Transfer in Fire and Combustion Systems-1993*, B. Farouk, M.P. Mengüç, R. Viskanta, C. Presser, S. Chellaiah, Editors, ASME HTD-Vol. 250, pp. 137-143. Presented at the ASME National Heat Transfer Conference, Atlanta, GA, August 1993.
- RA 25. J.A. Thomasson, M.P. Mengüç, and S.A. Shearer, "Light Scattering on Cotton fibers: Relating Optical Properties to Quality," ASAE Paper No: 931067, St. Joseph, MI, 1993.
- RA 26. J.A. Thomasson, M.P. Mengüç, and S.A. Shearer, "Modeling Light Propagation in Cotton with Radiation Heat Transfer Models," ASAE Paper No: 931610, St. Joseph, MI, 1993.
- RA 27. R. Govindan, S. Manickavasagam, and M.P. Mengüç, "On Measuring the Mueller Matrix Elements of Soot Agglomerates," *Radiation-I: Proceedings of the First International Symposium on Radiative Heat Transfer*; presented at Kusadasi, Turkey, August 1995. Begell House, NY, 1996.

- RA 28. J.M. McDonough, D. Wang, and M.P. Mengüç, "Radiation-Turbulence Interactions in One-Dimensional Flames," *Radiation-I: Proceedings of the First International Symposium on Radiative Heat Transfer*; presented at Kusadasi, Turkey, August 1995. Begell House, NY, 1996.
- RA 29. M.P. Mengüç, J.M. McDonough, S. Manickavasagam, S. Mukerji, S. Swabb, S. Ghosal, "Chaotic Fluctuations of Soot Particles in Turbulent Diffusion Flames: Experimental Data and Logistic Map Models," presented at the International Mechanical Engineering Congress and Exposition, Atlanta, GA, November, 1996. Published in *Symposium on Fire and Combustion Systems*, M. P. Mengüç, K. Ball, and O. Ezekoye, eds, ASME HTD-Vol. 335, pp. 271-280, 1996.
- RA 30. S. Manickavasagam, R. Govindan, M.P. Mengüç, "Estimation of the Morphology of Soot Agglomerates by Measuring their Scattering Matrix Elements," presented at the International Mechanical Engineering Congress and Exposition, Dallas, TX, November, 1997. Published in ASME HTD-Vol. 352, eds. K. Annamalai, et al., pp. 29-32, 1997.
- RA 31. S. Manickavasagam, C. Klusek, and M.P. Mengüç, "Scattering Matrix Elements of Agglomerates: Experimental Data and Theoretical Predictions," *Radiation-II: Proceedings of the Second International Symposium on Radiative Heat Transfer*; presented at Kusadasi, Turkey, July 1997. Begell House, NY, 1998.
- RA 32. R. Vaillon, J.F. Sacadura, and M.P. Mengüç, "Analysis of Radiation Polarization in an Emitting-Absorbing and Scattering medium," Presented at the European Thermal Sciences Meeting, Heidelberg, Germany, September 7-10, 2000.
- RA 33. C.L. Crofcheck, F. A. Payne, M. P. Mengüç. Characterization of Light Propagation in Milk Using a Radiative Transfer Model. Presented at the 2001 National Heat Transfer Conference in Anaheim, California, June 2001.
- RA 34. Basil Wong and M. P. Mengüç. "Comparison of Monte Carlo Techniques to Predict the Propagation of a Collimated Beam in Participating Media," Presented at the 2001 National Heat Transfer Conference in Anaheim, California, June 2001.
- RA 35. B. Wong and M.P. Mengüç, "Depolarization of Radiation by Foams," *Proceedings of Radiation-III*, Edited by M. P. Mengüç and Nevin Selcuk, Antalya, Turkey, June 2001.
- RA 36. M. Kozan, M.P. Mengüç, S. Manickavasagam, C. Saltiel, "Effect of Particle Shape Irregularities on the Angular Profiles of Scattering Matrix Elements," presented at the 8th Joint AIAA/ASME Thermophysics and Heat Transfer Conference, St Louis, MO, June 24-26, 2002.
- RA 37. M. Aslan, J. Yamada, M.P. Mengüç, A. Thomasson, A., "Radiative Properties of Individual Cotton Fibers: Experiments and Predictions," to be presented at the 8th Joint AIAA/ASME Thermophysics and Heat Transfer Conference, St Louis, MO, June 24-26, 2002.
- RA 38. B. Wong, M.P. Mengüç, R. Valance, C. Trinkle, "Modeling of Energy Transfer in Field Emission of Carbon Nanotubes," to be presented at the 8th Joint AIAA/ASME Thermophysics and Heat Transfer Conference, St Louis, MO, June 21-24, 2002.
- RA 39. D.-K. Qing, M.P. Mengüç, F. Payne, M.G. Danao, "Fluorescence Correlation Spectroscopy for Detection of Trace Amount of Biological Agents," ASME International Mechanical Engineering and Congress, New Orleans, November 17-22, 2002.
- RA 40. Y. Xu, J.M. McDonough, M.P. Mengüç, "Radiation-Turbulence Interactions in Flames: A Chaotic-Map Based Formulation," ASME International Mechanical Engineering and Congress, New Orleans, November 17-22, 2002.
- RA 41. C. Trinkle, P. Smith, R. Valance, B. Wong, M.P. Mengüç, "Thermal Finite Difference Analysis of Threshold Heating for Nanoscale Machining," ASME International Mechanical Engineering and Congress, New Orleans, November 17-22, 2002.
- RA 42. C.A. Trinkle, R.R. Vallance, M.P. Mengüç, A. Bah, K. Javed, A.M. Rao, and S. Jin. "Nanoprobe Concepts for Field Emission Nanomachining". *Proceedings of the 17th Annual Meeting of the American Society for Precision Engineering*. St. Louis, MO. October 20-25, 2002.
- RA 43. Basil T. Wong and M. Pinar Mengüç, "Monte Carlo Methods in Radiative Transfer and Electron Beam Processing," *Eurotherm 73, Proceedings of Eurotherm73 on Computational Thermal Radiation in Participating Media*, 15-17 April 2003, Mons, Belgium.
- RA 44. Rodolphe Vaillon, Basil T. Wong and M. Pinar Mengüç, "Polarized Radiative Transfer in a particle laden Transparent Medium via Monte Carlo Method," *Eurotherm 73, Proceedings of Eurotherm73 on Computational Thermal Radiation in Participating Media*, 15-17 April 2003, Mons, Belgium.

- RA 45. S. Ghosal, S. Manickavasagam, M. Pinar Mengüç, J. Sheng, H. Blomquist, "Optical Sizing of Particles Generated by Propellant Combustion," Third Mediterranean Combustion Symposium, Marrakech, Morocco. June 8-13, 2003.
- RA 46. Basil T. Wong and M. Pinar Mengüç, "Electronic Thermal Conduction in Thin Gold Films," ASME Summer Heat Transfer Conference, HT2003-47172, Las Vegas, NE, July 21-23, 2003.
- RA 47. Basil T. Wong, M. Pinar Mengüç, and R. Ryan Vallance, "Nano-Indentation Using a Carbon Nanotube," ASME International Mechanical Engineering Congress and Exposition, IMECE 2003, Paper #42361, November 15-21, 2003.
- RA 48. Basil T. Wong, R. Vaillon, and M. Pinar Mengüç, "Depolarization of Linearly and Circularly Polarized Light by Absorbing Foam and Froth," ASME International Mechanical Engineering Congress and Exposition, IMECE 2003, Paper #42018, November 15-21, 2003.
- RA 49. G. Videen, M. Aslan, M. P. Mengüç, "Characterization of Metallic Nanoparticles via Surface Wave Scattering: A. Theoretical Framework," Fourth International Symposium on Radiative Transfer, Istanbul, Turkey, June 20-25, 2004.
- RA 50. M. Aslan, M. P. Mengüç, G. Videen, "Characterization of Metallic Nanoparticles via Surface Wave Scattering: B. Physical Concept and Numerical Experiments," Fourth International Symposium on Radiative Transfer, Istanbul, Turkey, June 20-25, 2004.
- RA 51. Basil T. Wong, M. Pinar Mengüç, and R. Vallance, "Sequential Nano-Patterning: A Numerical Approach," the Fourth Int. Symposium on Radiative Transfer, Istanbul, Turkey, June 20-25, 2004.
- RA 52. P.G. Venkata, M.M. Aslan, M.P. Mengüç, G. Videen, "The Surface plasmon scattering patterns of gold nanoparticles and agglomerates," 2005 ASME International Mechanical Engineering Congress and Exposition, Orlando, Florida, USA, November 5-11, 2005.
- RA 53. J. N. Swamy, C. Crofcheck and M. P. Mengüç, "A Monte Carlo Ray Tracing Study of Polarized Light Propagation in Liquid Foams," Proceedings of Eurotherm78 – Computational Thermal Radiation in Participating Media II, 5-7 April 2006, Poitiers, France.
- RA 54. E.A. Hawes, J.T. Hastings, C. Crofcheck, and M.P. Mengüç, "Spectrally selective heating of Nanosized Particles by Surface Plasmon Resonance," Proceedings of Eurotherm78 – Computational Thermal Radiation in Participating Media II, 5-7 April 2006, Poitiers, France.
- RA 55. E.A. Hawes, J.T. Hastings, C. Crofcheck, and M.P. Mengüç, "Near Field Absorption and Scattering by the Surface Plasmon Resonance of Agglomerated Gold Particles," 9th Electromagnetic Wave and Light Scattering Conference, St. Petersburg, Russia, June 3-9, 2006.
- RA 56. M. Francoeur, P. G. Venkata, M. M. Aslan, and M. P. Mengüç, "Preliminary sensitivity analysis for characterization of gold nano-particles via surface wave scattering," 9th Electromagnetic Wave and Light Scattering Conference, St. Petersburg, Russia, June 3-9, 2006.
- RA 57. M. P. Mengüç, E. Hawes, J. Jensen, I. StOmer, "Impact of Emerging Technologies on Society: From Aqueducts to Nanotechnology," Paper 2006-2360, ASEE Conference, Chicago, IL, June 18-21, 2006.
- RA 58. M. Francoeur and M. P. Mengüç, "Role of the fluctuational electrodynamics theory in near-field radiative heat transfer," The Fifth International Symposium on Radiation Transfer, Bodrum Turkey, June 17-23, 2007.
- RA 59. M. Kozan and M. P. Mengüç, "Exploration of fractal nature of WO₃ nanowire aggregates," The Fifth International Symposium on Radiation Transfer, Bodrum, Turkey, June 17-23, 2007.
- RA 60. Benoit Gay, Rodolphe Vaillon and M. Pinar Mengüç, "Polarization imaging of multiply-scattered radiation based on Integral-Vector Monte Carlo Method," *Eurotherm Seminar #83 on Computational Thermal Radiation in Participating Media III*, Lisbon, Portugal, Editors: P. Coelho, D. Lemonnier, P. Lybaert, N. Selcuk, April 2009, pp. 131-142.
- RA 61. M. Francoeur, M.P. Mengüç, R. Vaillon, "Near-field radiation emission from thin SiC films," *Eurotherm Seminar #83 on Computational Thermal Radiation in Participating Media III*, Lisbon, Portugal, Editors: P. Coelho, D. Lemonnier, P. Lybaert, N. Selcuk, April 2009, pp. 335-346.
- RA 62. B. Wong and M.P. Mengüç, "Monte Carlo Procedures: A unified view for radiative transfer, electron beam transport and for thermal conduction by electrons and phonons," *Eurotherm Seminar #83 on Computational Thermal Radiation in Participating Media III*, Lisbon, Portugal, Editors: P. Coelho, D. Lemonnier, P. Lybaert, N. Selcuk, April 2009, pp. 335-346.
- RA 63. R. Charnigo, M. Francoeur, P. Kenkel, M.P. Mengüç, B. Hall, and C. Srinivasan, "Nonparametric derivative estimation and the computation of posterior probabilities for nanoparticle characteristics", 2009 Joint Statistical Meetings, Washington DC, USA, August 1-6, 2009.

- RA 64. M. Francoeur, M.P. Mengüç, and R. Vaillon, "Control of near-field radiative heat transfer via surface phonon-polariton coupling in thin films", META'10: 2nd International Conference on Metamaterials, Photonic Crystals and Plasmonics, Cairo, Egypt, February 22-25, 2010 (Paper).
- RA 65. M. Francoeur, R. Vaillon, and M.P. Mengüç, "Thermal effects on performances of GaSb and In_{0.18}Ga_{0.82}Sb based nanoscale-gap thermophotovoltaic energy conversion device: A. Mathematical modeling", Sixth International Symposium on Radiative Transfer, Antalya, Turkey, June 13-19, 2010.
- RA 66. Sendur, K., Kosar, A., and Mengüç, M.P., Localized radiative energy transfer from a plasmonic bow-tie nanoantenna to a magnetic thin film stack. International Conference on Metamaterials, Photonic Crystals and Plasmonics (META'10), pp. 582-586, 2010.
- RA 67. Sesen, M., Arslanap, M., Sendur, K., Mengüç, M.P., Yagci, A., and Kosar, A., Compact Heat Removal System with Magnetic Nanoparticles . 6th Nanoscience and nanotechnology Conference (NanoTR6), pp. 401A., 2010.
- RA 68. Dönmezer, N., Mengüç, M.P., and Okutucu, T., Dependent Absorption and Scattering by Interacting Nanoparticles. RAD 10: Sixth International Symposium on Radiative Transfer, Note: Reviewed and Published in CD-ROM., 2010.
- RA 69. Bayer, O. and Mengüç, M.P., Roof Pond Applications as a Passive Cooling Technology for Buildings: A Critical Review. Clima 2010 Proceedings, Note: CLIMA 2010 Congress CD; the ISBN Code of the CD is 978-975-6907-14-6, 2010.
- RA 70. Gazi M. Huda, M. Pınar Mengüç, and J. Todd Hastings., (2012). Absorption suppression of silver nanoparticles in the presence of an AFM tip: A harmonic oscillator model, THE FIFTH INTERNATIONAL WORKSHOP ON THEORETICAL AND COMPUTATIONAL NANO-PHOTONICS: TaCoNa-Photonics 2012, Germany, AIP Conf. Proc. 1475, pp. 134-136, available on-line: <http://dx.doi.org/10.1063/1.4750120> (3 pages)
- RA 71. Vaillon R., Dupré O., Francoeur M., and Mengüç, M.P., (2013). NEXTGEN NANO PV, Thermal Issues in the Design of PV Devices: Focus on Nanoscale-Gap Thermophotovoltaic Cells, 2013.
- RA 72. A. Didari and M.P. Menguc, 'Nano-Gap Analysis with FTDT Method', 7th Internatioal Symposium on Radiative Transfer, RAD-13, Kuşadası, Turkey, Organized by International Centre for Heat and Mass Transfer (ICMHT), June 2-8, 2013.
- RA 73. A. Didari, M. P. Mengüç, "Analysis of Near-Field Emission Within Nano-Gaps Using Finite Difference Time Domain Method " Electromagnetic and Light Scattering Conference XIV, Lille, France, June 17-June 21, 2013 (Poster).
- RA 74. B.T. Wong, M. Francoeur, V. N-S Bong, and M.P. Mengüç, "Coupling of near-field thermal radiative heating and phonon Monte Carlo simulation: Assessment of temperature gradient in doped silicon thin film," *Proceedings of the 7th International Symposium on Radiative Transfer(RAD-13)*, Kusadasi, Turkey, June 2-8, 2013 (Paper).
- RA 75. R. Charnigo, M. Francoeur, P. Kenkel, M.P. Mengüç, B. Hall, and C. Srinivasan, "Nonparametric derivative estimation and the computation of posterior probabilities for nanoparticle characteristics," *2009 Joint Statistical Meetings*, Washington DC, USA, August 1-6, 2009 (Paper).
- RA 76. M. Francoeur, M.P. Mengüç, and R. Vaillon, "Near-field thermal radiation emission from SiC thin films," *Eurotherm Seminar 83: Computational Thermal Radiation in Participating Media III*, Lisbon, Portugal, April 15-17, 2009 (Paper).
- RA 77. M. Francoeur, R. Vaillon and M.P. Mengüç, "Performance analysis of nanoscale-gap thermophotovoltaic energy conversion devices," submitted to *TMNN-2011: Thermal and Materials Nanoscience and Nanotechnology*, Antalya, Turkey, May 29-June 3, 2011 (Paper).
- RA 78. M. Francoeur, M.P. Mengüç, and R. Vaillon, "Control of near-field radiative heat transfer via surface phonon-polariton coupling in thin films," *META'10: 2nd International Conference on Metamaterials, Photonic Crystals and Plasmonics*, Cairo, Egypt, February 22-25, 2010 (Paper).
- RA 79. Gazi M. Huda, M.P. Mengüç and J. Todd Hastings, "Absorption Suppression of Silver Nanoparticles in the presence of an AFM tip: a Harmonic Oscillator Model", 5th International Workshop on Theoretical and Computational Nano-Photonics (TaCoNa-Photonics), Bad Honnef, Germany, Book Series: AIP Conference Proceedings Volume: 1475 Pages: 134-136 DOI: 10.1063/1.4750120, Oct 24-26, 2012
- RA 80. Didari, M. P. Mengüç, "Analysis of Near-Field Emission Within Nano-Gaps Using Finite Difference Time Domain Method " RAD 13: Seventh International Symposium on Radiative Transfer, Kusadasi, Turkey, June 2-8, 2013 (Paper)
- RA 81. A. Didari, M. P. Mengüç, "Near to Far-Field Thermal Emission by Nanoparticles on a Substrate: Evaluation

- of Effective Medium Theory,” Optics for Solar Energy (OSA), Canberra, Australia, Dec 2-5, 2014 (Paper).
- RA 82. A. Didari, M. P. Mengüç, “Impact of Nanostructures on Near-Field Radiative Heat Transfer: Modeling by Finite Difference Time Domain Method,” CHT-15, 6th International Symposium on Advances in Computational Heat Transfer, Piscataway, USA, May 25-29, 2015 (Paper).
- RA 83. S. Celik, Roxana Family, M.P. Mengüç, "Thermal evaluation of perlite and pumice based building insulation materials using reverse heat leak method", The First Thermal and Fluids Engineering Summer Conference (TFESC), New York City, NY, USA, Aug. 9-13, 2015.
- RA 84. Sina Talebi Moghaddam, M. P. Mengüç, Hakan Ertürk, "Heating of noble metal nanostructures on a dielectric surface due to plasmonic resonances and the effect of a probe", The First Thermal and Fluids Engineering Summer Conference (TFESC), New York City, NY, USA, Aug. 9-13, 2015.
- RA 85. Y. Somuncu, M. P. Mengüç, The “Energy-Efficiency-Core” Concept for a New Building, PLEA 2015-31th International PLEA Conference ARCHITECTURE IN (R)EVOLUTION, Bologna, Italy, 9-11 September 2015 (Paper)
- RA 86. M. P. Mengüç, Y. Somuncu, U. Simitli, B. Sefer, Ş. Çağlayan, S. Özkan , “Integrated Engineering and Architecture for Energy Efficient Academic Buildings, 14th International Conference of the International Building Performance Simulation Association, Hyderabad – India, 7-9 December 2015.
- RA 87. Q. Wang, R. Ocal, G. Augenbroe, M. P. Mengüç, P. Ozuyar, ‘An Evaluation of Energy Efficiency Measures in a Turkish Campus Building for Thermal Comfort and Economic Risk,” 14th International Conference of the International Building Performance Simulation Association, Hyderabad – India, 7-9 December 2015.

EXTENDED ABSTRACTS, POSTERS AND PRESENTATIONS (EA)

- EA 1. M.P. Mengüç, and R. Viskanta, "Radiative Transfer in Multidimensional Enclosures Containing Absorbing, Emitting and Anisotropically Scattering Media," NSF and NASA Workshop on Parallel Computations in Heat Transfer and Fluid Flows, University of Maryland, College Park, MD, November 14-15, 1984.
- EA 2. D.W. Mackowski, R.A. Altenkirch, and M.P. Mengüç, "Multiple-Wavelength Pyrometer Measurement of Particle Size in Pulverized-Coal Flames," Eastern States Combustion Symposium, Philadelphia, PA, November 1985.
- EA 3. D.W. Mackowski, R.A. Altenkirch, and M.P. Mengüç, "Extinction and Absorption Coefficients of Cylindrically-Shaped Soot Particles" Central States Section, The Combustion Institute Technical Meeting, Argonne National Laboratory, Chicago, IL, May 1987.
- EA 4. D.W. Mackowski, R.A. Altenkirch, K. Saito, and M.P. Mengüç, "Optical Determination of Soot Agglomeration in Gas Diffusion Flames" Central States Section, The Combustion Institute Technical Meeting, Argonne National Laboratory, Chicago, IL, May 1987.
- EA 5. D.W. Mackowski, R.A. Altenkirch, and M.P. Mengüç, "Electromagnetic Wave Analysis of a Coal Particle Surrounded by a Soot Cloud" Central States Section, The Combustion Institute Technical meeting, Indianapolis, IN, April 1988.
- EA 6. M.P. Mengüç, "Radiative Properties of Pulverized-Coal Particles" DOE Contractors Meeting, Pittsburgh, PA, July 1989.
- EA 7. M.P. Mengüç, and S. Subramaniam, "Inverse Monte Carlo Technique for Determining Single Scattering Albedo and Asymmetry Factor of Multiple Scattering Planar Media" *2nd International Congress on Optical Particle Sizing*, Tempe, Arizona, March 1990.
- EA 8. M.P. Mengüç, and B.M. Agarwal, "Recovering the Phase Functions of Mono-and Poldispersions from Experiments" *2nd International Congress on Optical Particle Sizing*, Tempe, Arizona, March 1990.
- EA 9. M.B. Bush, D. Dsa, S. Manickavasagam, and M.P. Mengüç, "Design and Calibration of a CO₂-laser Nephelometer for Determining the Radiative Properties of Pulverized Coal Particles" Combustion Institute Central States Section Meeting, Cincinnati, OH, May 1990.
- EA 10. M.P. Mengüç, M.B. Bush, D. Dsa, S. Manickavasagam, and S. Pasini, "Determining the Radiative Properties of Italian Coals from Experiments" *23rd International Symposium on Combustion*, Combustion Institute, Orleans, France, July 1990.
- EA 11. A. Manickavasagam, and M.P. Mengüç, "Radiative Properties of Pulverized Coal Particles Heated in a Diffusion Flame," Central States Section Meeting, Combustion Institute, Columbus, OH, April 1992.

- EA 12. M.P. Mengüç, A. Mahadeviah, K. Saito, and S. Manickavasagam, "Application of the Discrete Dipole Approximation to Determine the Radiative Properties of Soot Agglomerates," Central States Section Meeting, Combustion Institute, Columbus, OH, April 1992.
- EA 13. F.E. Corcione, D. Monda, B.M. Vaglieco, and M.P. Mengüç, Combustion Institute, French, Italian, Swedish Sections Meeting, Capri, Italy, September 1992.
- EA 14. M.P. Mengüç, O. Monda, and B.M. Vaglieco, "Optical Radiative Properties of Diesel Particles," Combustion Institute, Joint Meeting of the Italian and Spanish Sections, Stresa, Italy, June 28-July 1, 1993.
- EA 15. M.P. Mengüç, and S. Manickavasagam, "Effective Optical and Radiative Properties of Coal/Char Particles," presented at the NSF Workshop on Radiative Transfer in Highly Coupled Physical Systems, University of Texas, Austin, TX, October 1993.
- EA 16. S. Ghosal, S. Manickavasagam, and M.P. Mengüç, "Light Scattering Experiments for Simultaneous Determination of Soot and Char Volume Fractions in Coal-Fired Flames," presented at the Poster Session, 25th International Symposium on Combustion, Irvine, CA, August 1994.
- EA 17. S. Manickavasagam, and M.P. Mengüç, "Effective Optical Properties of Pulverized Coal/Char Particles," presented at the Poster Session, 25th International Symposium on Combustion, Irvine, CA, August 1994.
- EA 18. M.P. Mengüç, and J.M. McDonough, "The Regime Maps of Radiation-Turbulence Interactions in Pulverized-Coal Laden Flames," presented at the Poster Session, 25th International Symposium on Combustion, Irvine, CA, August 1994.
- EA 19. D. Wang, J.M. McDonough, and M.P. Mengüç, "Modeling of Radiation-Turbulence Interactions in Flames Using Additive-Turbulence Decomposition Approach," presented at the Poster Session, 25th International Symposium on Combustion, Irvine, CA, August 1994.
- EA 20. B.M. Vaglieco, S. Manickavasagam, and M.P. Mengüç, "Spectral Radiative Properties and Structure of Soot Agglomerates at D.I. Diesel Engine Exhaust," presented at the Poster Session, 25th International Symposium on Combustion, Irvine, CA, August 1994.
- EA 21. S. Manickavasagam, M.P. Mengüç, and B.M. Vaglieco, "Identification of Size and Structure of Soot Agglomerates at the Exhaust of Diesel Engines," presented at the Italian Section Meeting of the Combustion Institute, Napoli, Italy, 1995.
- EA 22. M.P. Mengüç, S. Manickavasagam, and R. Govindan, "Diagnostics of Particulate Size and Structure Using Polarized Light and Scattering Matrix Concept," presented at "The Symposium on Thermal Science and Engineering" in Honor of Chancellor Chang-Lin Tien, November 14, 1995, University of California, Berkeley.
- EA 23. M.P. Mengüç, "Fundamentals of Scattering-Matrix Based Particle Characterization Techniques," presented at the Italian Section Combustion Meeting, May 26-28, 1998, Ravello, Italy. (invited key note lecture)
- EA 24. Basil T. Wong, M.P. Mengüç, R.R. Vallance, A. Rao. "Modeling of Energy Transfer for Carbon Nanotube-Based Precision Machining". Proceedings of the Annual Meeting American Physical Society (APS) March Meeting 2003. Austin, TX. March 3-7, 2003.
- EA 25. B. Wong, M.P. Mengüç, R.R. Vallance, International Forum on Heat Transfer, Kyoto, Japan, November 25-27, 2004.
- EA 26. M.M. Aslan, M.P. Mengüç, Surface Wave-Scattering-Based Characterization of Nano-Particles, NANO2004-46062, The 3rd Annual Integrated Nanosystems: Design, Synthesis & Applications Conference, the Westin in Pasadena, California USA, September 22-24, 2004, Poster.
- EA 27. P.G. Venkata, M.M. Aslan, B.J. Hinds, and M.P. Mengüç, Monitoring of Gold Nano-Particles on Metallic/Dielectric Films via Evanescent Waves: Numerical Results, NanoMAT-2004 International Workshop, September 19-21, 2004, Lexington-KY USA, Poster.
- EA 28. M. Kozan, B. Gharaibeh, M.M. Aslan, A.J. Salazar, K. Saito, and M.P. Mengüç, Effect of fluorescent additives on optical behavior of ultra high solid epoxy paint – A polarized light scattering analysis, 2005 Paint Technology Workshop, Lexington, Kentucky USA, October 12-13, 2005, Presentation.
- EA 29. J.N. Swamy, C. Crofcheck, M. P. Mengüç. A Monte Carlo Ray Tracing Simulation of Polarized Light Propagation in Liquid Foams: a Preliminary Approach to Foam Characterization. Presented at the 2005 AIChE Annual Meeting in Cincinnati, OH. Presentation No. 18a.
- EA 30. Jaime A. Sanchez, King-Fu Hii, M. Pinar Mengüç and R.R. Vallance, Exploration of multiphysics phenomena during field emission from a carbon nanotube. Poster session HTD K7 Nano/microscale Radiative Transfer and Properties at the ASME IMECE, November 5-11, 2005, Orlando, Fl. (Presented by Sanchez).

- EA 31. Jaime A. Sanchez, Basil T. Wong, M. Pinar Mengüç and R.R. Vallance, Molecular Dynamics Study of Phase Change Phenomena during Field Emission Induced Nanomachining. Poster session at the ASME IMECE, November 5-10, 2006, Chicago, IL. (Presented by Sanchez).
- EA 32. Mathieu Francoeur, Pradeep G. Venkata, and M. Pinar Mengüç. "Sensitivity analysis for characterization of gold nanoparticles and 2D-agglomerates via surface plasmon scattering patterns". 2006 International Mechanical Engineering Congress & Exposition. Chicago, IL. November 5-10, 2006. Poster 06-019, Oral Presentation IMECE2006-16390. (Presented by M. Francoeur).
- EA 33. Mathieu Francoeur, M. Pinar Mengüç, Rodolphe Vaillon, "Modeling of surface phonon-polaritons coupling in thin films for near-field thermal radiation," 11th Electromagnetic Wave and Light Scattering Conference, Hertfordshire, United Kingdom, September 8-13, 2008. (Presented by M. Francoeur).
- EA 34. Mathieu Francoeur, M. Pinar Mengüç, Rodolphe Vaillon, "Polarized-surface-wave-scattering system (PSWSS) for characterization of nanoparticles," 11th Electromagnetic Wave and Light Scattering Conference, Hertfordshire, United Kingdom, September 8-13, 2008. (Presented by M. Francoeur).
- EA 35. Nazli Donmezer, Tuba Okutucu, M. Pinar Mengüç, "Dependent Absorption and Scattering by Interacting Nano-Sized Particles," Nano-TR, Eskisehir, Turkiye, June 4-8, 2009.
- EA 36. M. Francoeur, and M.P. Mengüç, "Near-field thermal radiation and potential application for clean energy production", KYNanomat 2008, Louisville, KY, March 16-18, 2008 (Poster).
- EA 37. M. Francoeur, M.M. Aslan, P.G. Venkata, and M.P. Mengüç, "Polarized-surface-wave-scattering system (PSWSS) for in-situ and on-line characterization of nanostructures", KYNanomat 2008, Louisville, KY, March 16-18, 2008 (Poster).
- EA 38. M. Francoeur, M.M. Aslan, P.G. Venkata, and M.P. Mengüç, "Polarized-surface-wave-scattering system (PSWSS) for in-situ and on-line characterization of nanostructures", NSF CMMI Engineering Research and Innovation Conference 2008, Knoxville, TN, January 7-10, 2008 (Poster).
- EA 39. Nazli Donmezer, Tuba Okutucu, M. Pinar Mengüç, "Dependent Absorption and Scattering by Interacting Nano-Sized Particles," Nano-TR, Eskisehir, Turkiye, June 4-8, 2009.
- EA 40. M. Francoeur, M. Arik, and M.P. Mengüç, "Estimating near-field thermal radiation between two flat silicon wafers with surface roughness", International Conference on Nanomaterials and Nanosystems, Istanbul, Turkey, August 10-13, 2009.
- EA 41. Kursat Sendur, Ali Kosar, M. Pinar Mengüç, "Localized Nanoscale Heating using Nano-Optical Antennas, IEEE 2009 Annual Meeting, October 2009, Antalya, Turkey.
- EA 42. Vaillon R., Dupre O., Francoeur M. and Mengüç M.P., "Thermal issues in the design of PV devices: focus on nanoscale-gap thermophotovoltaic cells", Nextgen Nano PV, anotechnology for Next Generation High Efficiency Photovoltaics Spring International School, IES Cargese, Corsica, France, April 1-6, 2013
- EA 43. O. Dupre, R. Vaillon, M. Francoeur, P.-O. Chapuis, and M.P. Mengüç, "Thermal issues in solar and near-field thermophotovoltaics," 2013 ELYT Lab Workshop, Zao To-o-gatta, Japan, February 17-20, 2013
- EA 44. M.P. Mengüç, B.T. Wong, and M. Francoeur, "Energy transfer at nanoscales via MC simulations," ECCOMAS Special Interest Conference: Numerical Heat Transfer 2012, Gliwice-Wroclaw, Poland, September 4-6, 2012 (Extended Abstract).
- EA 45. M.P. Mengüç, M. Francoeur, R. Vaillon, D.K. Webb, H. Ertürk, T. Okutucu, Z. Artvin, V. Loke, S.K. Sankaralingam, T. Hastings, G. Huda, and E. Donev, "Near-field thermal radiation transfer for manufacturing and energy harvesting applications," Eurotherm 91: Microscale Heat Transfer III, Poitiers, France, August 29-31, 2011 (Extended Abstract).
- EA 46. M. Francoeur, R. Vaillon, and M.P. Mengüç, "Near-field thermal radiation regimes between two layers supporting surface phonon-polaritons," Eurotherm 91: Microscale Heat Transfer III, Poitiers, France, August 29-31, 2011 (Extended Abstract).
- EA 47. M. Francoeur, M.P. Mengüç, and R. Vaillon, "Coexistence of different near-field thermal radiation regimes between two layers supporting surface phonon-polaritons in the infrared," USNCCM-11: Minisymposium on Computational Radiative and Convective Heat Transfer, Minneapolis, USA, July 25-29, 2011
- EA 48. A. Didari, M. P. Mengüç, "FDTD Analysis of Near-Field Thermal Radiation Emission " 20th European Doctoral School on Metamaterials. Louvain-La-neuve, Belgium, May 7-May 12, 2012 (Oral pres. by AD).
- EA 49. A. Didari, M. P. Mengüç, "Finite Difference Time Domain Method For Analysis Of Near Field-Emission Within Nano-Gaps" Electromagnetic and Light Scattering Conference XIV, Lille, France, June 17-June 21, 2013 (Poster).
- EA 50. A. Didari, M. P. Mengüç, "Analysis of Near-Field Emission Within Nano-Gaps Using Finite Difference Time Domain Method " Nanoscale Radiative Heat Transfer School, Physics school, Les Houches, France,

May 11-May 17,2013 (Poster).

- EA 51. E. Ogut, M. P. Menguc, and K. Sendur, "Integrating Magnetic Heads with Plasmonic Nanostructures in Multilayer Configurations", in Recording Physics and Modeling I, 12th Joint MMM/Intermag Conference, Chicago, Illinois, USA: IEEE Magnetics Society, Jan. 2013.
- EA 52. K. Sendur, E. Ogut, and M. P. Menguc, "Plasmonic resonances and damping mechanisms in the vicinity of magnetic layers," Seagate University Conclave, Minneapolis, USA, June 2013.
- EA 53. A. Didari, M. P. Mengüç, "Finite Difference Time Domain Method for Analysis of Near Field-Emission within Nano-Gaps," 14th Electromagnetic and Light Scattering Conference (ELS-XIV), Lille, France, June 17-21, 2013 (Abstract).
- EA 54. A. Didari, M. P. Mengüç, "Near-Field Thermal Emission between Corrugated Surfaces separated by Nano-Gaps," Nanoscale and Microscale Heat Transfer IV (Eurotherm 103), Lyon, France, October 15-17, 2014 (Extended Abstract).
- EA 55. A. Didari, M. P. Mengüç, "Effect of Nanoparticles to Near-Field Thermal Emission Calculations by FDTD Method," 2nd International workshop on Nano and Micro Thermal radiation (NanoRad14, Shanghai, China, June 6-9, 2014 (Extended Abstract).

PATENTS

- PT 1. "Radiation Modulator Systems," (Co-inventors: M. P. Mengüç, B. Walcott, M. Marra) US Patent Awarded August 25, 1998; #5,797,736
(See <http://www.google.com.tr/patents/US5797736>)
- PT 2. "Non-Intrusive Method and Apparatus for Characterizing Particles Based in Scattering Matrix Elements Measurements Using Elliptically Polarized Light," (Co-inventors: M. P. Mengüç and S. Manickavasagam) US Patent Awarded on April 13, 2004; #6,721,051.
(See <http://www.google.com.do/patents/US6721051>)
- PT 3. "Nano-scale Machining with Carbon Nanotubes," (Co-inventors: R. Vallance, A.R. Rao, M. P. Mengüç) US Patent Awarded on December 9, 2003; #6,660,959
(See <https://www.google.com/patents/US20030173338>)
- PT 4. "Substrate Patterning by Electron Emission-Induced Displacement" (Co-inventors: J.B. Reppert, J.B.Gaillard, B.C. Elliott, D. E. Dickel, A.R. Rao, M. P. Mengüç) Patent Disclosure to Clemson University. September 29, 2007; Full patent application made through Clemson University and the University of Kentucky, October 2008. United States Patent No: 7818816, October 19, 2010.
(See <https://www.google.com/patents/US7818816>)
- PT 5. "Cascaded Photovoltaic and Thermophotovoltaic Energy Conversion Systems with Near-Field Radiation Transfer Enhancement at Nanoscale Gaps," (M. Francoeur, R. Vaillon, M.P. Mengüç), Patent Disclosure to the University of Kentucky. June 25, 2008 (Provisional patent application for US 20100031990 A1)
(See <http://www.google.com/patents/US20100031990>).
- PT 6. "Nanoscale localized heating and cooling, Kursat Sendur, Ali Kosar, (Sabanci University), M. P. Mengüç (Ozyegin University), June 2009 (Patent Concept is being finalized for Provisional Patent Application.)
(See <https://www.google.com/patents/WO2013052045A1>)

OTHER PUBLICATIONS

PUBLISHED BOOK REVIEW (BR)

- BR 1. "Theory of Reflection of Electromagnetic and Particle Waves," by J. Lekner, in *American Scientist*, May-June 1989, p. 300.

INDUSTRIAL ACTIVITIES/CONTRACTS

M. P. Mengüç is one of the founders of the Synergetic Technologies Inc., (STI), an advanced particle characterization start-up company, established in 1996, with Dr. Sivakumar Manickavasagam (former Ph.D. student) and Dr. Craig Saltiel. Since 1997, STI has received several SBIR grants from NSF and NIH. Currently, M. P. Mengüç is the Vice-President of the company. In September 2007, STI licence was transferred to Horiba, Japan, to develop a benchtop measurement system, which will be marketed starting in 2008. The STI grants are listed below:

- NSF Phase I, II, IIB (all same title): (1997-2002)
Characterization of Ceramic Particles Based on Elliptically Polarized Light
\$99,837, \$399,977, \$350,000
- NSF Phase I, II: (1999-2003)
On-Line, Non-Destructive, Rapid Characterization of Nanopowders and Agglomerates
\$99,959, \$499,977
- NSF Phase I: (1998-1999)
Monitoring and Characterization of Fine Particulates from Combustion Sources
\$99,955
- NIH Phase I: (2001-2002)
Characterization of Nano-Scale Pharmaceutical Powders
\$99,997
- NSF Phase I: (2008-2009)
Spectroscopic Measurements based Diagnostics.
\$100,000.

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