

# CURRICULUM VITAE

Professor Dr.

**M. PINAR MENGÜÇ**

## PERSONAL

- FIBA Renewable Energy Endowed Chair Professor (FYE Chair Professor), Özyegin University, Istanbul, Turkey
- Founding and Current Director of Center for Energy, Environment and Economy, (CEEE/EÇEM), Özyegin University, Istanbul, Turkey
- Professor of Mechanical Engineering, Özyegin University, Istanbul, Turkey
- Courtesy Professor of Design, Technology and Society Program, School of Architecture and Design, Özyegin University, Istanbul, Turkey

OFFICE ADDRESS: Özyegin University  
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[mpmenguc@gmail.com](mailto:mpmenguc@gmail.com)

WEB SITES: [www.ozuceee.net](http://www.ozuceee.net)  
[www.ozyegin.edu.tr/energy](http://www.ozyegin.edu.tr/energy)  
[www.thermalradiation.net](http://www.thermalradiation.net)

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SCOPUS ID No: 35781248000  
Web of Science Researcher ID: O-3114-2013 [www.researcherid.com/rid/O-3114-2013](http://www.researcherid.com/rid/O-3114-2013)  
Amazon Authors Page: <https://www.amazon.com/stores/author/B093FJ8D8H>

## 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: 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: Yaman 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

**AREAS 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  
Transdisciplinary Studies

**PROFESSIONAL EMPLOYMENT**

7/2022-...	FIBA Renewable Energy Endowed Chair Professor (FYE Chair Professor), Özyegin University, Istanbul, Turkey
7/2023-...	Courtesy Professor of Design, Technology and Society Program, School of Architecture and Design, Özyegin University, Istanbul, Turkey
4/2009 – ...	Founding and Current Director, Center for Energy, Environment and Economy, (CEEE/EÇEM), Ozyegin University, Istanbul, Turkey
12/2008 – 2/2019	Founding and the first Head of Mechanical Engineering, Ozyegin University, Istanbul, Turkey
12/2008 – ...	Professor of Mechanical Engineering, Ozyegin University, Istanbul, Turkey
2/2022 – 8/2022	Visiting Professor, UCLA Samueli School of Engineering, Los Angeles, California, USA
7/2011 – 6/2021	Alumni Chair Professor Emeritus in Engineering, University of Kentucky, Lexington, KY, USA.
1/2009 – 6/2011	Engineering Alumni Chair Professor, UK, Lexington, KY, USA
7/1993 – 6/2011	Professor of Mechanical Engineering, UK, Lexington, KY, USA
1/2007 – 12/2008	President of Synergetic Technologies, Inc., USA
8/2006 – 12/2011	External Advisory Board Member, University of Louisville, ElectroOptics Research Institute & Nanotechnology Center, Louisville, KY, 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 (NECP) 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

## AWARDS AND HONORS

Parlar Foundation Honor Award, Middle East Technical University, Ankara, (one of the 11 recipients of the Honor Awardees, given since 1989), presented in April 2025. <https://parlar.org.tr/2024-yili-odulleri/>

Michael I. Mishchenko Medal, JQSRT-Elsevier, June 2023. Presented for the outstanding service and superior scholarly activities on light scattering and radiative transfer.

One of the 100 Patents in the 100th year of Turkish Republic;  
w/ Ali Koşar, Kürşat Şendur, (No: 2019/13359; cited in <https://iprgezgini.org/2023/10/27/cumhuriyetin-100-yilinda-100-turk-patenti/>)

Purdue University Outstanding Mechanical Engineer Award, June 2020  
Award was given on Sep. 10, 2021 due to pandemic; so far, awarded to about 320 alumni since 1991 out of more than 30,000 Purdue ME graduates. <https://engineering.purdue.edu/ME/People/OME/2020>

Heat Transfer Memorial Award in the Category of Art of Practice, The American Society of Mechanical Engineers (ASME), Life-time Award, (one of only 130 awards given so far, since 1959), presented at ASME IMECE, Pittsburgh, PA, USA, November 2018.

(<https://www.asme.org/about-asme/honors-awards/achievement-awards/heat-transfer-memorial-award>)

Energy Efficiency Award, the *First Place*, granted to CEEE/EÇEM by the Istanbul Chamber of Commerce and the Republic of Turkey Minister of Energy and Natural Resources, Istanbul, January 2020. (Received for the CEEE/EÇEM NEED4B-SCOLA Building project.)

Finalist and Honorable Mention, NEXT-GEN Project, Community Engagement Initiative of the Year; given by ACEEU (Accreditation Council for Entrepreneurial and Engaged Universities) at the Asia-Pacific Triple E Awards, Kochi, India, January 2020. (Received for CEEE/EÇEM)

Efficiency Award, the *First Place* for the Public Category, granted to CEEE/EÇEM, presented by the Republic of Turkey Ministry of Science and Technology, Ankara, November 2019. (Received for the CEEE/EÇEM NEED4B Project on SCOLA Building project.)

Elected Member, Science Academy, Turkey, 2016. (Executive Committee, 2017-)

Senior Member, Optical Society of America (OSA), 2015.

The Outstanding Researcher Award, Ozyegin University, 2015.

The Inaugural Knowledge Transfer Award, Ozyegin University, 2014.

IBM Smarter Planet Award, 2010 (one of the 24 recipients worldwide.)

Dedication Award, RAD'10, International Symposium on Radiation Transfer, ICHMT, Antalya, Turkey (2010).

Founding Member, Sustainable Transportation Association, Istanbul, Turkey (2012)

Honorary Member, GENSED (Solar Industry Association), Istanbul, Turkey (2010)

Alumni Association Professor of Engineering, University of Kentucky (2008-2011)

Alumni Association Professor Emeritus of Engineering, University of Kentucky (2011-)

<https://www.engr.uky.edu/research-faculty/departments/mechanical-engineering/people>

Invited Member of ElectroOptics Research Institute, University of Louisville, KY (2006)

Honorary Professor, ESPOL, Guayaquil, Ecuador (2006)

R&D 100 Award for Particle Characterization System, Synergetic Technologies (2005)

Fellow, ICHMT (International Center for Heat and Mass Transfer) (2002)

Fellow, ASME (American Society of Mechanical Engineers) (1999) (No: 000001574128)

Best Paper Award, ASME Heat Transfer Division (1994) (presented in November 1995)  
(JA 28)

Outstanding Research Paper Award, College of Engineering, University of Kentucky  
(1994) (JA 28)

Outstanding Research Paper Award, College of Engineering, University of Kentucky  
(1991) (JA 21)

Listed in the Marquee's Who's Who in the World (2000)

Cited in Who's Who Among Young American Professionals, 2nd Edition (1992 -)

Cited in Who's Who in South and Southwest, 22nd Edition (1990 -)

University of Kentucky Presidential Special Faculty Incentive Award (1988-1990)  
IBM Summer Research Faculty (1988)  
National Science Foundation Engineering Research Initiation Award (1987)  
University of Kentucky Special Summer Faculty Research Fellowship (1987)  
University of Kentucky Summer Faculty Research Fellowship (1986)  
Turkish Scientific and Technical Research Council Fellowship (1972-1980)

## PROFESSIONAL ACTIVITIES

### EDITORIAL RESPONSIBILITIES:

Editor-in-Chief, along with Ping Yang and Peter Bernath (previously, with Larry Rothman and late Michael Mishchenko)  
*J. of Quantitative Spectroscopy and Radiative Transfer, JQSRT*, 2006-2024.  
Editor, *Physics Open*, Elsevier, 2019-2021.  
Editorial Advisory Board, *J. of Enhanced Heat Transfer*, Begell House, 2019-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:

Organizer, Low-Carbon Energy Technologies (LCET'2025) Conference (with Tim Fisher of UCLA and Wojciech Lipinski of Cyprus Institute), Istanbul, Türkiye, October 2025.  
Executive Committee Member, International Center for Heat and Mass Transfer, 2018-.  
(serving as the Chair of the Executive Committee from 2023 to 2025)  
Executive Committee Member, Science Academy, Turkey, 2017-2024.  
Organizer, Science Academy Conferences, Turkey, 2017-2021, 2024.  
Turkish Delegate, European Union COST Action on Energy Islands, Modenerlandas, by TUBITAK and EU COST Program, 2021-.  
Turkish Delegate, European Union FP7 & Horizon 2020 Energy Commissions, by TUBITAK, 2010-2016.  
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, 1998-2018.  
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.
- 10<sup>th</sup> 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; 2014: Shanghai, China; 2017: Daejeon, South Korea; 2024: Sapporo, Japan.

Scientific Advisory Committee Member:

International Symposium on Radiative Transfer (Antalya 2010; Kusadasi, 2013; Cappadocia, 2016; Athens 2019; Thessaloniki 2023; Kuşadası 2025)

Electromagnetic Wave/Light Scattering Conferences (St Petersburg, Russia, 2006; Harverdshire, England, 2008; Helsinki, Finland, 2010; Taormina, Sicily, 2011; Lille, France, 2013; Leipzig, Germany, 2015; Maryland, USA, 2017; College Station, TX, USA, 2018; Russia, 2021 (on line); St. Petersburg, Russia, 2023 (on-line) (Granada, Spain, 2023); Sicily, Italy 2025.

Eurotherm Conferences on Computational Radiative Transfer (2003-2021)

ASME MicroNano Conference, Hong Kong; 2008; Singapore, 2016

International Conferences on Combustion Technologies for a Clean Environment, Lisbon, Portugal (3<sup>rd</sup> Conference in July 1995, 4<sup>th</sup> in 1997; 5<sup>th</sup> in 1999; 6<sup>th</sup> in 2001; 7<sup>th</sup> 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;

Organizer:

- Covid'19 Forecasting and Solution Preparation Team, with Ozgur Ertunc and Selenga Gürmen, Ozyegin University, Istanbul, Turkey, 2020-2021.
- Transdisciplinary Faculty Workshops 'Bağlantılar'; Ozyegin University, Istanbul, Turkey, Spring 2019.
- Transdisciplinary Workshop 'Yaklaş; with Özlem Bahadır and Gökçe Ersel of CEEE/EÇEM, Ozyegin University, Istanbul, Turkey, October 2018.
- Integrated Engineering and Architecture Workshop in Istanbul, with the University of Illinois, USA, sponsored by NSF and TUBITAK, at Ozyegin University, Istanbul, Turkey, May 2010.
- Zero Istanbul 2050 Workshop; Organized with the support from EU and Fiba Holding, Ozyegin University, Istanbul, Turkey, May 2010.
- 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 8<sup>th</sup> 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, 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.

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. (1985-1999)

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, Lexington, KY, USA (1985-2008):

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 -199
- Center for Robotics and Manufacturing Systems, Liaison Committee, 1989-1990

College Wide:

- Member, Steering Committee, Calculus in Engineering, 2007-2008
- Director, Nano-Scale Engineering Certificate Program, 2003-2008.
- Program Faculty for the Joint Mechanical Engineering Program between UK (Lexington) and WKU (Bowling Green, KY), 2003-2005

Departmental Wide:

- Thermo-Fluid Sciences Area Chairman, 1999-2002
- ME Faculty Development Committee, 1999-2002
- Curriculum Development Committee, Chairman, 1996-1997
- William Maxwell Reed Seminars Coordinator, 1988-1990; 2003-2004
- Mechanical Engineering Energy Committee, Chairman, 1985-1987
- Graduate Studies Committee, 1985-1987
- Undergraduate Studies Committee, 2005-2008.

At OZYEGIN UNIVERSITY, Istanbul, Turkey (Since 2009):

Within the University:

- Founding Director, Center for Energy, Environment and Economy (CEEE/ECM) (2009...)
- Founding Head of Department of Mechanical Engineering, 11/2008-2/2019
- University Representative to UAK (Council for Turkish Universities) (Üniversiteler Arasi Kurul); 2009-2012.
- University Administrative Executive Council Member; 2010-2018.
- University Senate (2016-2022)

University Scientific Ethics Committee, 2017-2019.  
College of Engineering Administrative Council Member; 2009-2022.  
University Strategy Committee (2015-2016)  
University Awards Committee (2016-2019), Chair (2017, 2018)

#### Executive Council Member

Özyeğin University, University-Wide (2009-2018)  
Özyeğin University, Institute of Arts and Sciences (2009-2018)  
Özyeğin University, College of Engineering (2009-2021)  
Özyeğin University, College of Architecture and Design (2014-2015)  
Özyeğin University, College of Civil Aviation (2016-2021)

#### Outside the University:

Istanbul Collaborative (Grass-roots effort for science and technology research and development specific to nanotechnology, photonics, and radiative transfer; one of the three founders, along with Kürşat Şendur and Ali Koşar) (2009- )

Turkish Delegate to US-NSF Engineering for Sustainable Future Program,  
(Appointed by TUBITAK) (2012-2016.)

Turkish Delegate to EU FP-7 and Horizon 2020 Programs, Energy Theme  
(Appointed by TUBITAK) (2010-2016)

Turkish Delegate to Climate Change Talks (COP15, Copenhagen), 2009.

Turkish Delegate to Climate Change Talks (COP25, Madrid), 2019.

Turkish Delegate to Climate Change Talks (COP26, Glasgow), 2021.

Board and Founding Member, Sustainable Transportation Association, 2010-  
Istanbul Climate Group, Coordinator, 2010-.

Honorary Member, GENSED, 2010.

Associate Board Member, ÇEDBIK (Green Buildings Association of Turkey),  
2011-2018.

Advisory Board; World Resources Institute-Turkey, 2014-2018.

Executive Council Member, United Nations Sustainable Development  
Sustainability Network, UNSDSN-Turkey, 2015- 2018.

Delegate of Turkey to European Union COST Action CA20109 on “Assesment of  
Sustainable Energy Rources for Energy Islands,” 2021-2024.

#### SOCIETY MEMBERSHIP:

Science Academy, Turkey (Elected Member; 2016; Exec. Comm. since 2017)

American Society of Mechanical Engineers, Fellow

International Society of Heat and Mass Transfer, Fellow

The Combustion Institute

Optical Society of America, Senior Member

Society of Engineering Sciences  
Tau Beta Pi, Sigma Xi, Pi Tau Sigma

**REVIEWER:** Reviewer for NSF, EU programs, NIH, and major journals including JQSRT, IJHMT, Applied Optics, Combustion and Flame, Nature Communications, Science, TUBITAK, NSF, DOE, European Union, and others.

#### **ENTREPRENEURSHIP / INDUSTRIAL ACTIVITIES:**

One of the three founding members of the Synergetic Technologies, Inc., Lexington, KY; Developer of particle characterization tools. (w/ former Ph.D. Student, Sivakumar Manickavasagam, and w/ C. Saltiel). Vice-President 2005-2008; President, 2007-2008; The Company was closed after licensing its patent and the product to Horiba, Japan in 2008.

#### **PHD DISSERTATIONS DIRECTED**

1. **Siva Manickavasagam**, "Effective Optical and Radiative Properties of Pulverized Coal and Char," Ph.D., 1993. (*Working for his own school system, Bangalore, India*)
2. **S. Mukerji**, "Radiation-Turbulence Interactions," Ph.D. 1997 (Co-Advisor with Professor J.M. McDonough).
3. **C. Crofcheck**, "Identification of Optical/Radiative Properties of Dairy Products," Ph.D. 2001 (Co-Advisor w/ Fred Payne). (*Professor at the University of Kentucky, Lexington, KY, USA*).
4. **Basil T. Wong**, "Thermal Heat Transport at the Nano-Scale Level and its Application to Nano-Machining" Ph.D. 2006. (*Associate Professor at Swinburne University of Technology (Sarawak), Malaysia.*)
5. **J.N. Swamy**; "A Polarized Light Scattering Based Techniques to Characterize the Dynamics of Liquid Foams," (Co-Advisor w/ C. Crofcheck), Ph.D., 2007.
6. **M. Kozan**, "Characterization of Agglomeration of Nanostructures," Ph.D., 2007. (*Research Engineer, Bridgewater, NJ, USA*).
7. **Ellie (Derbyshire) Hawes**; "Directed Self-Assembly of Nano-Size Particles," (Co-Advisor w/ C. Crofcheck), Ph.D., 2007.
8. **Jaime Sanchez**; "Electron Field-Emission from Carbon Nanotubes for Nanomachining Applications," Ph.D., 2008. (*Research Engineer at Intel, Portland, OR, USA*).
9. **Illay "Victor" Kunadian**, "Carbon-nano-tube based energy devices," (Co-Advisor w/ R. Andrews), Ph.D. 2008.
10. **K.-F. Hii**, "Precision Instrumentation for Nanomachining," (Co-Advisor w/ R. Vallance), Ph.D. 2008.
11. **Mathieu Francoeur**, "Nearfield Radiation Transfer and Nanoparticle Characterization," Ph.D. 2010. (Received the 2011 JQSRT/Elsevier Young Scientist Award). (*Associate Professor at the University of Utah, Salt Lake City, UT, USA*).
12. **Benoit Gay**, "Polarized Imaging," INSA-Lyon, CETHIL, France (served in the committee after guiding him in Lexington; Co-advisor w/ R. Vaillon; December 2010).

13. **Gazi M. Huda**, “AFM Based Nanomanufacturing,” at the University of Kentucky Electrical Engineering, Ph.D., 2013, Co-Advisor w/ T. Hastings. (Started as a co-advisor; finished as a Committee Member).
14. Erdem Ogut, “Integration of Magnetic Heads with Plasmonic Nanostructures”, Sabancı University ((*Ad-hoc* co-advisor w/K. Şendur; served officially as a Committee Member)., PhD 2014.
15. **Azadeh Didari**, “Near-and Far-Field Radiation Transfer in Metamaterials and the Development of via NF-RAD-FDTD Algorithm,” Ozyegin U, Istanbul, PhD, EE, 2016. (Received the Outstanding Research Assistant Award, 2016; Received the 2017 Elsevier/JQSRT Young Scientist Award). (*was Assistant Professor at Sehir University, Istanbul; now researcher at Hanbat National University, South Korea*).
16. **Farhad Kazemi Khosroshahi**, “Design of Spectrally Selective Coatings for High Efficiency Power Generation Devices,” Boğaziçi University, ME, PhD. 2017. (Co-advisor with Hakan Ertürk). (*Research Engineer at Ford Otosan, Istanbul*).
17. **Layth Ismael Al-Ghebory**, “Effect of pH on Particle Agglomeration and Radiative Transfer in Nanoparticle Suspensions,” Özyeğin University, Istanbul, PhD, 2018. (*Associate Professor at Baghdad University, Iraq*).
18. **Hayder Mohammed**, “Thermal and Radiative Energy/Exergy Analyses for Parabolic Trough Collector Systems,” Özyeğin University, Istanbul, PhD, 2018. (*Associate Professor at Kerala University, Iraq*).
19. **Raaid Aldoury**, 'Energy and Exergy Efficiency Analyses of High-Performance Buildings,' Özyeğin University, Istanbul, PhD, 2018. (*Associate Professor at Tikrit University, Iraq*).
20. **Roxana Family**, “Radiative Cooling by Spectrally Selective Materials for Buildings,” Özyeğin University, Istanbul, PhD, 2018.
21. **Elif Begum Elcioglu**, Fabrication of Silicon Carbide-on-Silicon Based Devices for Effective Near-Field Thermal Radiation Transfer”, METU, Ankara (Co-advisor; with Tuba Okutucu), PhD 2018. (*Assistant Professor at Eskişehir Technical University, Eskişehir, Turkey*).
22. **Cem Keskin**, “Augmenting Occupant Thermal Experience with Cyber-Physical-Social Systems: A Case-Study on Adaptive Vents,” Özyeğin University, Istanbul, PhD, 2020. (*Now R&D Administrator at CEEE/EÇEM, Ozyegin University, Istanbul, Turkey*).
23. **Tufan Akba**, ‘Micro-Scale Concentrating Solar Power System Design and Construction,’ Özyeğin University, Istanbul, PhD 2023.
24. **Gökçe Ersel**, ‘Transdisciplinary System Design for Sustainability Transitions,’ Design, Society, and Technology Program; Özyeğin University, Istanbul, PhD 2025.
25. **Canan Özsoy**, ‘A Transdisciplinary Approach and Design Thinking Methodology for Energy Transition,’ Design, Society, and Technology Program; Özyeğin University, Istanbul, PhD 2026.
26. Ersin Yildiz, ‘Radiative Heat Transfer in Continuous Heat Treatment Furnaces,’ Ozyegin University, Istanbul, PhD 2025 (PhD advisor Altuğ Başol).
27. Tolga Altınoluk, ‘Radiative Heat Transfer in Glass Melting Process,’ Ozyegin University, Istanbul, PhD 2026 (PhD advisor Altuğ Başol).
28. Berkay Halvaşi, ‘Radiative Heat Transfer in Combustion Systems,’ Ozyegin University, Istanbul, PhD 2026 (PhD advisor Altuğ Başol).

29. **Gökçe Tomrukçu**, Ozyegin University, Istanbul, PhD 2024 (with Aslihan Ünlü, Architecture).

(Own students are shown by **bold** letters; others are academically guided students.)

## M.S. THESES/PROJECTS DIRECTED

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

20. **B. Hawes**, MS in Mechanical Engineering (no Thesis option/project only), University of Kentucky, MSME 2008.
21. Nazli Donmezer, “Dependent Absorption/Scattering by Particles,” ODTU/METU Ankara, in collaboration with Ozyegin University, Istanbul, MSME 2009. (Co-Advisor w/Tuba Okutucu). *(After receiving his PhD at Georgia Tech, became an Assistant Professor at METU, Ankara then at Bogaziçi University, Istanbul).*
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 University of Kentucky, 2011. *(Working for Mastercard Inc. USA)*
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**, “Preparation of Samples for Near Field Radiation Experiments,” in collaboration with ODTU/METU Ankara MSME 2012. (co-advised w/ Dr. Tuba Okutucu-Öztürk).
26. **Sina Talebi Moghaddam**, ‘Enhancing Local Absorption Patterns within Gold Nano-Structures on a Dielectric Surface an AFM Probe and with Evanescent Wave Illumination,’ Bogazici University (co-advisor with Hakan Erturk), Istanbul, MSME 2016. *(PhD student at Waterloo University in Canada.)*
27. **Güven Fidan**, ‘Determining Thermal Comfort in Built Environment Using Computational Fluid Mechanics Simulations.’ Ozyegin University, Istanbul, MSME 2017. *(Working for his own company, Istanbul)*
28. **Zahra Rostampour Fath**, ‘Modified Discrete Dipole Approximation with Surface Interactions (DDA-SI-z): A Study on Surface Plasmon Resonance of an Array of Gold Nano-Particles on a Dielectric Substrate,’ Ozyegin University, Istanbul, MSME 2017.
29. **Burak Sefer**, ‘Integrated Design and Application of a Campus-Wide Distributed-Photovoltaic System,’ Ozyegin University, Istanbul, MSME 2018. *(Started his own company, Reengen, with two others, Istanbul)*
30. **Ruşen Acet**, ‘Investigation of Thermal Comfort Performance of Radiant Heating Systems; Comparisons of Different Heating Surface Configurations,’ Ozyegin University, Istanbul, MSME 2018. *(Started his own company, Istanbul)*
31. **Doga Gizem Memis**, ‘An Occupant-Oriented Circular Model for Facility Management Strategy,’ Ozyegin University, Istanbul, MSME August 2018. *(Working professionally in Canada.)*
32. **Dilan Avsar**, ‘Absorption Patterns within Gold Nano-spheres on a Dielectric Substrate’ Bogazici University (co-advisor with Hakan Erturk), Istanbul, MSME 2019. *(PhD student at Waterloo University in Canada.)*
33. **Ebru Tatar**, ‘Effect of Garments on Thermophysiological Comfort,’ Ozyegin University, Istanbul, MSME 2020.
34. **Elif Gizem Tuncel**, ‘Human Body Heat Exchange Mechanism and Thermal Comfort via Visual Impact,’ Ozyegin University, Istanbul, MSME 2020.
35. **Ali Can Yelekçi**, ‘Advanced Heat Transfer Simulations in Buildings,’ Ozyegin University, Istanbul, MSME 2021.
36. **Tolga Arda Eraslan**, ‘Prediction of Flows in Buildings for Comfort,’ Ozyegin University, Istanbul, MSME 2023.

37. **Ahmet Hocaoglu**, ‘Radiative Cooling by Sand,’ Ozyegin University, Istanbul, MSEE 2024.

(Own students are shown by **bold** letters; others are academically guided students.)

## **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. Ozgür Bayer, PhD., METU, Turkey, 2007-2008.
7. Basil Wong, Ph.D. from University of Kentucky, 2006 - 2009.
8. Ellie Hawes, Ph.D. from University of Kentucky, 2007 - 2008. (w/ Todd Hastings).
9. Vincent Loke, PhD from University of Brisbane, Australia 2009-2010 (at Ozyegin University)
10. Sinan Eren Yalcın, PhD from Old Dominion University, USA 2012-2013 (at Ozyegin University)
11. Azadeh Didari, PhD from Ozyegin University, Turkey 2016-2019 (at Ozyegin University)
12. Cem Keskin, PhD from Ozyegin University, Turkey 2020-2025 (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, March-April, 2007; June-July 2008.
3. Pablo Albella, Universita de Cantabria, Santander, Spain, 2006 Summer.
4. Benoit Gay. INSA-Lyon, France, February-August 2008.
5. Serdar Celik, US Southern Illinois University (visit to Özyegin University), August-December 2014.
6. Maxim Yurkin, (visit to Özyegin University), April-August, 2023.

## **DISSERTATION AND THESES COMMITTEES SERVED AS A COMMITTEE MEMBER (UK for University of Kentucky; others are indicated.)**

1. K.C. Midkiff, Jr., Ph.D. in Mechanical Engineering, UK, 1986.
2. D.W. Mackowski, Ph.D. in Mechanical Engineering, UK, 1987.\*
3. J.S. Zaveri, M.S. in Chemical Engineering, UK, 1988.
4. N. Srikantaiah, M.S. in Mechanical Engineering, UK, 1988.

5. M.W. Whitney, M.S. in Civil Engineering, UK, 1988.
6. S. Jolly, M.S. in Mechanical Engineering, UK, 1989.\*
7. B. Chen, Ph.D. in Mechanical Engineering, UK, 1990.\*
8. W. Godfrey, M.S. in Mechanical Engineering, UK, 1990.\*
9. Y. Raja, M.S. in Chemical Engineering, UK, 1992.
10. Z. Ivezic, Ph.D. in Astronomy, UK, 1995.\*
11. R.T. Pogue, Ph.D. in Chemistry, UK, 1995.
12. D. Bhandi, Ph.D. in Chemical Engineering, UK, 1996.\*
13. A. Thomasson, Ph.D. in Agricultural Engineering, UK, 1997.\*
14. D. Weatherly, Ph.D. in Mechanical Engineering, UK, 1997.
15. D. Wang, Ph.D. in Mechanical Engineering UK, (student left).\*
16. V. Devakandra, Ph.D. in Chemical Engineering, UK, 1998.
17. F. Wu, Ph.D. in Electrical Engineering UK (student left).
18. L. Yuan, Ph.D. in Mechanical Engineering, UK, 2001.
19. D. Vinkovich, Ph.D. in Physics and Astronomy, UK, 2003.
20. M. Omar, Ph.D. in Mechanical Engineering, UK, 2005.
21. H. Xu, Ph.D. in Mechanical Engineering, UK, 2007.
22. Maoming Fan, Ph.D. in Mining Engr., UK, 2008.
23. M.G. Danao, M.S. in Agricultural Eng and Biosystems, UK, 2001; Ph.D. 2005.\*
24. Sriram Venkatesan, M.S. in Mechanical Engineering, UK, 2005.
25. Sarang Kortikar, M.S. in Mechanical Engineering, UK, 2005.
26. Tracy Xu, Ph.D. in Mechanical Engineering, UK, 2006.
27. Belal Gharabieh, Ph.D. in Mechanical Engineering, UK, 2006.
28. Q. Deng, Ph.D. in Mechanical Engineering, UK, 2009.
29. Daniel Busbaher, MS in Mechanical Engineering, UK, 2008.
30. Piao Liu, PhD, in Electrical Engineering, UK, 2009.
31. Robert Nikutta, Ph.D. in Physics and Astronomy, UK, 2012
32. Carlos Andrés Jarro, PhD., in Electrical Engineering, UK, 2013.\*
33. Gazi Huda, Ph.D. in Electrical Engineering, UK, 2013.\*
34. Muhsincan Sesen, MS in Engineering, Sabancı University, 2012.\*
35. Erdem Ogut, Ph.D. in Engineering, Sabancı University, 2012.\*
36. Mehrdad Karimzadeh, Ph.D. in Engineering, Sabancı University, 2017.\*
37. Ali Keçecioglu, Ph.D. in Engineering, Sabancı University, 2020.\*

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

**INTERNATIONAL/NATIONAL DISSERTATION COMMITTEES; INVITED  
EXTERNAL 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. Benoit Gay. CETHIL, INSA-Lyon, Lyon, France, 2010.
5. Henrik Hofgren, University of Lund, Lund, Sweden, 2015.
6. Muhammad Rafique, Harbin Institute of Technology, Harbin, China, 2017.

## **UNDERGRADUATE RESEARCH STUDENTS**

(More than 50 total at University of Kentucky and at Özyeğin University.)

## **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 Thermo I, Spring '12, '13, '14, '15, '16, Fall'19, '20, '21, '23.  
CEEE 211 Energy, Environment and Economy for Smarter Istanbul, Spring 2011, 2012,  
Fall 2014 (new course).  
ME 373 History of Technology, Fall '12, '13, '14, '15, '16, '17. (new course)  
EE 401/402 Capstone Design Course, Since Fall 2012. (9 Students)  
ME 409/509 Sustainable Energy, Systems and Materials, Spring 2017 (new course)  
ME 566 Coherent Energy Applications for Buildings, Spring 2012 (new course)  
ME 527 Radiative Heat Transfer, Spring 2013, Spring 2020, Spring 2021.  
ME 599 Nano-Scale Radiative Transfer, Fall 2012 (Special course).  
DIS 561 Special Project on Design (Energy Transition), Spring 2021, Spring 2022.  
SEC 373 Energy and Energy Transition at the focus of Climate Crisis, Spring 2024.

## **INVITED SEMINARS**

Delivered more than 180 keynote and invited seminars worldwide at major universities and research institutions including UCLA, Purdue, Texas A&M, Georgia Tech, Harvard/MGH, NTU Athens, Hong Kong University, etc. Detailed list is below.

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. Università 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,” Invited Speaker, 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, 2009.
66. ‘Radiation Heat Transfer and Climate Change’, Solar Future 2010, Istanbul, Turkey. February 14, 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 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, Wroclaw, 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, 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," Nanoscale Radiative Heat Transfer, Organized by Physics School Les Houches, Switzerland, Invited Speaker; May 15, 2013,
92. '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](http://www.cedbik.org/icerikdetay_eng.asp?ID=178&IcerikID=344), February 18-19, 2013,
93. 7th International Symposium on Radiative Transfer, RAD-13, Kuşadası, Turkey, Organized by International Centre for Heat and Mass Transfer (ICMHT), Lecturer, The Symposium site is: <http://www.ichmt.org/rad-13/>, June 2-8, 2013,
94. 14th Electromagnetic & Light Scattering Conference, ELS-XIV, Lille, France, Organized by Oleg Dubovik (CNRS) and Laurent Labonnote (Université de Lille 1), Lecturer, The Conference site is: <http://www-loa.univ-lille1.fr/ELS-XIV/>, June 17-21, 2013,
95. 'Green Buildings', Moderator, 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,
96. ECOWEEK İstanbul'13-Crossing the Bridge: Between Tradition and Vision Symposium, Organized by: Mimar Sinan Fine Arts University, Invited Speaker with Y. Somuncu, "Integration of Engineering and Architecture for Sustainable Buildings", Mimar Sinan Fine Arts University Faculty of Architecture, İstanbul <http://ecoweekistanbul.org/>, 18 November, 2013,
97. Energy Conservation and Waste Heat Recovery Workshop, Organized by: UCLA Institute of Pure and Applied Mathematics, Invited Speaker, "Near Field Radiation Transfer for Energy Harvesting and Characterization", Los Angeles, CA, [http://www.ipam.ucla.edu/programs/msews4/msews4\\_poster.pdf](http://www.ipam.ucla.edu/programs/msews4/msews4_poster.pdf), <http://www.ipam.ucla.edu/programs/msews4/>, 18-22 November, 2013,

98. 2nd World Intelligent Cities Summit and Exhibition (WICS 2013), Moderator, Organized by: EurAsia Strategies, Conrad İstanbul Hotel, <http://www.wicsummit.com/>, 27-28 November, 2013,
99. 4th Micro/Nanoscale Heat & Mass Transfer International Conference (MNHMT - 13), Sponsored by: ASME Heat Transfer Division, Organized by: Hong Kong University Department of Mechanical Engineering, Invited Speaker, Hong Kong, China, 11-14 December, 2013.  
[www.asmeconferences.org/MNHMT2013/CallForPapersDetail.cfm](http://www.asmeconferences.org/MNHMT2013/CallForPapersDetail.cfm),
100. 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, “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,
101. Concentrated Solar Power Workshop, Organized by: Middle East Technical University (METU), The Center for Solar Energy Research and Applications (GUNAM), Invited Speaker, “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,
102. Gaziantep 2nd International Energy Summit, Organized by: Gaziantep Metropolitan Municipality and Sustainability Academy, Invited Speaker and Moderator, “Industrial Energy Management and Efficient Use of Energy”, Şehitkamil Congress and Culture Center, Gaziantep, <http://www.gaziantepenerjizirvesi.org/>, 21 February 2014,
103. 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, Dan Panorama Hotel, Tel-Aviv, Israel, <http://sustain2014.net.technion.ac.il/>, 9-11 March 2014,
104. Yildiz Technical University, Electrical and Electronical Engineering, Smart Cities Summit, Moderator/Speaker at Smart Cities Session; April 1, 2014.
105. Shanghai University of Electric Power, Invited Lecture, “Sustainable Energy and Near Field Energy Transfer”, Shanghai, China, June 6, 2014.
106. Harbin Institute of Technology, Invited Lecture, “Radiation Heat Transfer”, Harbin, China, June 10, 2014.
107. Georgia Institute of Technology, Invited Lecture, “Sustainable Energy and Near Field Energy Transfer”, Atlanta, USA, September 11, 2014.
108. Middle East Technical University, German-Turkish Research on Energy, Invited Lecture, “Sustainable Energy and Near Field Radiative Transfer,” Ankara, TR, October 15, 2014.
109. SOLAR-TR3, Middle East Technical University, Invited Lecture, “Optics and Buildings,” Ankara, TR, April 27, 2015.

110. CHT-15: The 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
111. 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.
112. ELS XV 2015 - 15th Electromagnetic and Light Scattering Conference, Invited Speaker, “Optics for Sustainable Buildings and Cities”, Leipzig, Germany, 21-26 June 2015
113. NHT 2015 - Numerical Heat Transfer, Invited Keynote Lecture, “Far-/Near Field Radiative Transfer”, Warsaw, Poland, 27-30 September 2015.
114. MNHMT-16 - 5th ASME Micro/Nanoscale Heat & Mass Transfer International Conference, “Radiative Cooling,” Invited Plenary Lecture, Singapore, 3-6 January 2016.
115. Turkish Green Building Congress and Summit, “Sustainable Building Management,” Moderator/Lecturer, Istanbul, Turkey, 4-5 February 2016.
116. Texas A&M University, “Optics and Buildings,” Invited talk at the Departmental Colloquium, Atmospheric Sciences, College Station, Texas, September 7 2016.
117. TEDx Talk, 'Inspirations from Light and Energy,' Ozyeğin University event, See the details at <http://www.ozyegin.edu.tr/en/Haberler-ve-Duyurular/Duyurular/2016/WIND-OF--REGENERATION> -AT-OzU-TEDx, Ozyegin University, Istanbul, May 5 2016.
118. METU, Northern Cyprus Campus, Invited Lecture, 'Energy Efficiency for Sustainable Buildings,' Girne, Cyprus, 16 May 2016.
119. Erciyes Technology Transfer Office, 'Energy Efficient Buildings: A Case Study,' Kayseri, 26 May 2016.
120. 8th International Symposium on Radiative Transfer, 'Radiative Cooling,', Invited Lecture, Cappadocia, TR, June 6 2016.
121. “Smart Metropolises: Integrated Solutions for Sustainable Buildings and Cities” Conference, Organized by IMSAD as one of the 22 Global SBE’16 Conferences Worldwide, “Innovation for Buildings: From Science to Comfort,” Invited Talk, Istanbul, October 14 2016.
122. TEDxKocUniversity Talk, 'Vortex: Energy'; Koc University event, December 4 2016. See the details at <https://tedx.ku.edu.tr/speakers>; Koc University, Istanbul.
123. Koç University, Istanbul, Turkey, Invited Lecture, ‘From Optics to Sustainable Buildings, 20 April, 2017. Invited Lecture.
124. Ilgaz Enerji Çalıştayı, Invited Lecture, ‘Sürdürülebilir Anadolu için Enerji Verimliliği’, Ilgaz, Çankırı, Turkey, 13 May 2017.
125. CHT-17: Advances in Computational Heat Transfer, organized by International Center for Heat and Mass Transfer; ‘Impact of Computational Radiation Transfer on Science, Engineering and Society,’ Invited Keynote Lecture; Napoli, Italy, May 28-June 1 2017.
126. Nanjing University of Aeronautics & Astronautics, Invited Lecture, “From Optics to Sustainable Buildings, Nanjing, China, 19 June 2017.

127. Harbin Institute of Technology, Short Course on Nano-Micro Radiation Transfer, ‘Overview of Thermal Radiation and its Applications’, Invited Lecture, Harbin China, Jun 23 2017.
128. Harbin Institute of Technology, Short Course on Nano-Micro Radiation Transfer, ‘Near-Field Radiation Transfer Theory and FDTD Simulations, Invited Lecture, Harbin China, Jun 23 2017. (co-prepared w/ Azadeh Didari).
129. CleanAir’2017, 13th International Conference on Energy for a Clean Environment, Invited Keynote Lecture, ‘Pursue of Low-Carbon Engineering: From Combustion Chambers to Sustainable Buildings,’ Ponta Delgada, Sao Miguel, Azores, Portugal, July 2-6 2017.
130. Workshop on Sustainable Energy for Islands, Invited Lecture, ‘Sustainable Buildings,’ Invited Lecture, Ponta Delgada, Sao Miguel, Azores, Portugal, July 2 2017.
131. Fourth Greenmetric Workshop, 2018; ‘Bringing Sustainability to the Heart of a University through Teaching, Research and Service,’ Invited Lecture, Semarang, Indonesia, April 10 2018. (the related paper was written with Esra Gençtürk, Rector, Ozyegin University).
132. World Cities Istanbul Conference 2018, ‘Energy Management in Smart Cities,’ Moderator and Invited Speaker, Istanbul, April 19 2018.
133. EU Sustainable Energy Days Event 1, ‘Advanced Energy Solutions for Complex Buildings,’ Organizer/Moderator, TurkeyBuild 2018 at Yapi Fuarı, Istanbul, May 10 2018. <https://eusew.eu/energy-days/ceeeeçem-energy-sessions-turkeybuild-istanbul-2018>
134. EU Sustainable Energy Days Event 2, ‘Social-Behavioral Aspects of Energy Consumption,’ Organizer/Moderator, TurkeyBuild 2018 at Yapi Fuarı, Istanbul, May 10, 2018. <https://eusew.eu/energy-days/ceeeeçem-energy-sessions-turkeybuild-istanbul-2018>
135. Second Ilgaz Energy Workshop, Invited Lecture, ‘Sürdürülebilir Kalkınma ve Kayıp Parça’, (Sustainable Development and the Lost Piece), Invited Speaker, Keynote Lecture, 12 May 2018. Ilgaz, Çankırı, Turkey.
136. UMTIK 2018, the 18th International Conference on Machine Design and Production, ‘Impact of Energy Research and Technologies on People’s Life,’ Invited Speaker, Keynote Lecture, Eskişehir, Turkey, 3-6th July 2018.
137. ‘Towards Sustainable Gaziantep Workshop,’ Invited Speaker, Keynote Lecture, Hasan Kalyoncu University, Gaziantep, Turkey, 28 November 2018.
138. ‘Sustainable Energy and Human Element, Invited Speaker, ASME IMECE, Frank Kreith Special Session on Sustainable Energy, Pittsburgh, PA, November 2018.
139. ‘Impact of Radiation Transfer to Science and Society,’ Invited Speaker, Keynote Lecture, First Global Engineering Symposium, Bakü, Azarbaijan, March 14-16 2019.
140. ‘Enerji Verimliliğinde Temel Bariyer: Davranış Değişikliği ve Etkiler,’ (Fundamental Limits for Energy Efficiency: Behavioral Changes and Effects), 10. Enerji Verimliliği Forumu ve Fuarı, (10th Energy Efficiency Forum and Fair), Invited Moderator and Speaker, İstanbul, TR, 11-12 April 2019.
141. Third Ilgaz Energy Workshop, ‘Enerji, Davranış ve Sürdürülebilir Anadolu’, (Energy, Behavior and Sustainable Anatolia), Keynote Lecture, Istanbul, Turkey, 20 June 2019.
142. ‘Transdisciplinary Approaches towards Sustainable Buildings and Cities of Future,’ International Conference of Political Economy 2019, Istanbul, 23 June 2019.
143. World Energy Strategies Conference and Exhibition (WESCE’19), Energy Efficiency as a Transdisciplinary Concept: Research and Applications, Yildiz Technical University, Istanbul, Turkey. (Also participated in two different panels). 27 August 2019,

144. New York University, Abu Dhabi, ‘Energy Efficiency as a Transdisciplinary Concept: Research and Applications,’ Invited Lecture, Abu Dhabi, 27 October 2019.
145. Smart Future, World Expo’19, Invited panelist in the Panel: ‘Mapping the Capacity Development for the Future of Energy in Turkey,’ Istanbul, 30 October 2019.
146. Council on Higher Education (YÖK) of Turkey, ‘Future of Vocations, Vocations of Future Congress,’ Invited Panelist, Ankara, Turkey, 5 November 2019.
147. EEMKON’2019, Electrical-Electronical Engineering Congress, ‘Energy Harvesting,’ Invited Lecture, Harbiye Museum, Istanbul, 16 November 2019.
148. Climate Change Conference of Parties (COP’25), Moderator and a Speaker at a panel at Turkish Pavillion, ‘Impact of Public, Private Sector and Academia Trilogy for Energy Efficiency Policies and Applications,’ with Oğuz Can, Karsten Lindloff, Onur Ünlü, and Özlem Ünlüer, organized by Turkish Republic, Madrid, December 2020.
149. Climate Change Conference of Parties (COP’25), ‘Contributions of CEEE to ‘Action’,’ Invited Lecture, organized by WWF-Turkey, Madrid, December 2020.
150. SUNUM Lecture Series, Sabancı University, “Energy Harvesting Fundamentals and Applications,” Invited Speaker, Istanbul, 19 February 2020.
151. ARÇELİK, ‘Energy Efficiency’, ‘Efficient Talks,’ Energy Efficiency Panel, Invited Speaker by ENVER-Turkey, Istanbul, 20 February 2020.
152. Ozyeğin University, Sustainability Week, ‘Energy and Climate Panel’, Invited Moderator and Speaker, 25 February 2020.
153. American University Sharjah, Sharjah, United Arab Emirates, ‘Energy Efficiency as a Inter-and Trans-disciplinary Concepts,’ Invited Lecture for student groups, (On-line; Zoom), 1 April 2020.
154. Boğaziçi Üniversitesi Mezunları İçin, ‘COVID-19 Salgınında Normalleşme mi, İkinci Dalga mı?’ Invited lecture with Özgür Ertunç, Reyhan Diz-Küçükkaya, (On-line; Zoom), Moderated by Ali Kerem Saysel, 11 June 2020.
155. Zero Build Forum’20 International Conference, ‘Towards Near-Zero Energy Buildings by Interdisciplinary and Transdisciplinary Approaches,’ Keynote Lecture, Istanbul, On-line; 24 September 2020.
156. Sabancı University, ‘Energy Efficiency: An Interdisciplinary and Transdisciplinary Approach,’ EU GEOCOND Project, Invited Lecture, Istanbul, On-line; 12 January 2021.
157. SIUE Energy Symposium, Southern Illinois University, “Sustainable Campus,” April 21, 2021, on-line, invited lecture.
158. Selenga Gürmen and M. Pinar Mengüç, Bilim Akademisi, SARKAÇ Portalı, Meraklısına Bilim Konuşmaları, Invited Lecture, Istanbul, on-line; 1 June 2021. <https://sarkac.org/podcast/krizlerde-toplumsal-davranis-degisimleri-pinar-menguc-ve-selenga-gurmen/>
159. 23. Isı Bilimi ve Tekniği Kongresi (ULIBTK’2021) (Turkish Heat Sciences and Techniques Congress), “Radiation Heat Transfer: Research and Applications”, M. Pinar Mengüç, Keynote Lecture, September 8, 2021, Gaziantep, Turkey, (on-line/in-person) <http://ulibtk2021.gantep.edu.tr/>
160. Fotonik 2021: Ulusal Optic, Elektro-Optic, Fotonik Çalıştayı, (National Optics, Electro-Optics and Photonics Workshop), “Yakın-alan Işınımıyla Isı Transferi,” (“Near-Field Radiation Heat Transfer”), Bilkent University, Ankara, Turkey, M. P. Mengüç, Invited Talk, September 10, 2021, (on-line) <https://www.fotonikcalistay.com/>

161. Purdue University, Heat Transfer Division, “From Heat Transfer to Societal Impact,” Invited Lecture, September 10, 2021.
162. 8th European Thermal Sciences Conference, September 21-23, 2021, M. P. Mengüç, “Sustainable Energy & Human Dimension(s)”, Keynote Lecture, September 21, 2021, Lisbon, Portugal, (on-line) <http://www.eurotherm2020.pt/>
163. American University Sharjah, Sharjah, United Arab Emirates, ‘Energy Efficiency as a Transdisciplinary Concept: Research and Applications,’ Invited Lecture for the College of Engineering Innovation Lecture Series (On-line; Zoom), 13 October 2021. <https://www.aus.edu/media/events/energy-efficiency-as-a-transdisciplinary-concept-research-and-applications>
164. Enerji Verimliliği Derneği (ENVER), Verimli Buluşmalar - 9, Türkiye’nin 2022 Enerji Verimliliği Ajandası, <https://www.youtube.com/watch?v=sWPjbNgfk6M> , M. Pınar Mengüç, Invited panelist, 12 Ocak 2022.
165. The SPARC Workshop on Radiation Transport and Applications, “Radiation Transfer: A Personal Journey,” Indian Institute of Technology, Bhubaneswar, India, (On-line; Zoom), Invited Talk, 21 January 2022.
166. Sürdürülebilirlik Adımları Derneği, “Sürdürülebilirliğin Sorumlu Mühendisleri” Projesi Açılışı, Davetli Konuşmacı, M. Pınar Mengüç, Invited speaker, 16 March 2022.
167. “Sustainable Energy: Complex Systems and Human Dimension(s),” ASTFE (American Society of Thermal and Fluid Engineers) Conference, Las Vegas, Nevada, Keynote Talk, in person, May 17, 2022.
168. “Particles, Plasmons, and Engineering,” Weiglhofer Symposium on Electromagnetic Theory, Edinburgh, Scotland, Invited Talk, in person, 18 July 2022. (Also served as a panelist for the 2030 Vision of Electromagnetics research).
169. “Near-Field Radiation Heat Transfer and Engineering”, National Optics, Electro-Optics and Photonics Workshop, Bilkent University, Ankara, Turkey, M. P. Mengüç, Invited Talk, September 9, 2022, (in person).
170. Panel Presentation, COP’27, Sharm-el-Sheikh, Egypt, November 15, 2022 (on-line).
171. Panel Presentation, COP’27, TUSIAD and Turkish Ministry of Energy, Sharm-el-Sheikh, Egypt, November 17, 2022 (on-line).
172. “From Radiation Transfer to Sustainable Energy,” International Glass Symposium, Keynote Lecture, Istanbul, Turkey, November 18, 2022 (in person).
173. “Energy and Energy Efficiency,” Nano-Open, Sabancı University, SUNUM, Invited Lecture, Istanbul, Turkey, March 8, 2023. (on-line)
174. “How can you find white in a darkened World?” (Kararan bir Dünyada Beyazı Nasıl Bulursun?), Istanbul Technical University Construction Management Summit, Keynote Lecture, Istanbul, Turkey, March 18, 2023 (in person).
175. “Climate Crisis”, Ozyeğin University Climate Crisis Conference, Invited Lecture by the Faculty of Law, Organize by Prof. Gülsün Ayhan Aygörmez and the Faculty of Law, Özyeğin University, Istanbul, May 7, 2024.
176. “Sürdürülebilirlik Liderliği ve Dönüşüm: İklim Krizine Karşı Dayanıklılık ve Uyum,” SustainHub Opening Plenary Lecture, SKD+Ozyegin University Sustainability Platform Organization. On line, İstanbul, Türkiye, April 9, 2025.
177. “Bir Tümlüsel-Türevsel Denklem İnzinde: Işık, Isı ve Toplum Metaforu,” (“In Pursuit of an Integro-Differential Equation: Light, Heat, and the Metaphor of Society”), Mustafa

- Parlar Foundation Honor Award Acceptance Lecture, METU/ODTÜ, Ankara, Türkiye, April 13, 2025.
178. “Çevresel Sürdürülebilirliğe Liderlik Etmek: İklim Krizine Karşı Dayanıklılık ve Uyum,” SustainHub Closing Lecture, SKD+Ozyegin University Sustainability Platform Organization. On line, İstanbul, Türkiye, May 28, 2025.
  179. “Reflections on 30 years of International Symposia on Radiative Transfer,” Plenary Lecture, RAD’2025, Kusadasi, Türkiye, June 14, 2025.
  180. “Light, Heat, Particles, Plasmons & Engineering,” Plenary Lecture, ELS’XXI, XXI Electromagnetic Light Scattering Conference, Milazzo, Sicily, Italy, June 23, 2025.
  181. “History of Radiative Transfer,” International CNRS Thematic School on Radiative Transfer in Semi-Transparent Media, Dinner Lecture, Hendaye, France, 3-9 October 2026.
  182. “Radiative Transfer and Light–Matter Interactions: Foundations for Particle Diagnostics and Micro/Nanoscale Engineering,” 8th Micro/Nanoscale Heat and Mass Transfer International Conference, MNHMT conference in honor of Chang-Lin Tien, Plenary Lecture, Napoli, Italy, January 9-11, 2027.

## RESEARCH GRANTS AWARDED

Served as a PI or co-PI on more than 68 projects from US, Europe and Türkiye. Total funding was more than 14 Million USD (converted to USD at the time of the grant). Details are below.

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. Pınar Özuyar). (one of the two projects funded in TR)  
([http://public.dhe.ibm.com/software/dw/university/innovation/2010\\_smarter\\_planet\\_recipients.pdf](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, Özyeğin University, CEEE Budget for 5 years is €1,023,000, (2012-2018) (CEEE/EÇEM). (MPM is the PI; total budget overseen by OzU CEEE is €1,400,000, including FIBA Group and B-Design budgets). (<http://www.need4b.eu/index.aspx> )
55. ‘City Logistics Istanbul,’ DHL, Ozyegin University, €15,000. 2012-2013.
56. ‘New Refrigeration Systems’ Bosch-Siemens Turkey; along with A. Kosar and K. Sendur of Sabancı University; Ozyegin University budget is €18,000. 2012-2013.
57. ‘Sustainable Energy Solutions for Bosch-Siemens Cerkezkoy Campus’, Bosch-Siemens Turkey; Ozyegin University budget €7,000. 2013.
58. “Total Renovation Strategies for Energy Reduction in Public Building Stock”, BRICKER, EU 7th Framework Programme, With ACCIONA, Spain, Özyeğin University Budget €443,000, CEEE Budget for 4 years; October 2013 – Haziran 2019.
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 - Aralık 2016. PI.
60. TRIBE: "TRaIning Behaviours towards Energy efficiency: Play it!", EU - Horizon 2020: EE 11 – 2014: New ICT-based solutions for energy efficiency, Özyeğin University Budget €217.500, CEEE, February 2015 - February 2019.
  61. "Termofotovoltaik Enerji Harmanlama Sistemlerinde Yakın Alan Işınım Deneyleri", ('Near field radiation transfer experiments for thermophotovoltaic energy harvesting devices'), TUBITAK Proje No: 214M308, PI: Tuba Okutucu, co-PI: Prof. M. Pınar Mengüç; 15.05.2015-15.06.2018 (36 months), Total project budget 295.000,00 TL. (100,000 USD).
  62. 'Capacity Building in the Field of Climate Change in Turkey,' Contracting Authority: Central Finance and Contracts Unit, Grant Scheme (CCGS), Project Name: Project duration: 8 months, September 2017-May 2019, OzU Budget: 50,000 Euros.
  63. 'NEXT-GEN', Islamic Development Bank, Project duration: 14 months, July 2019-October 2020, Ozyegin University/CEEE-EÇEM Budget: 144,000 USD. (With CEEE/EÇEM researchers Yasemin Somuncu, Nil Kutlar, Dilek Saygı).
  64. 'Teaching and Dissemination Materials for Educators,' from RETA Co., via Turkish Ministry of Energy and Natural Resources, 3 months, March 2020-March 2021, Ozyegin University/CEEE-EÇEM Budget: 30.000 TL. (With CEEE/EÇEM researcher Cem Keskin).
  65. 'Travel Grant', YEVDDES, Ministry of Energy and Natural Resources, 6 months, September 2020-May 2021, Ozyegin University/CEEE-EÇEM Budget: 12,000 Euro. (With CEEE/EÇEM researcher Cem Keskin). (Terminated because of pandemic).
  65. 'HASAT', Enerji-SA, 24 months, May 2020-May 2022, Ozyegin University/CEEE-EÇEM Budget: 325.000 TL. (With CEEE/EÇEM researcher Dr. Cem Keskin; Approved but not funded because of budget elimination during pandemic).
  66. Lahore Times Square Project Sustainability Management Consultancy, March 2022-March 2024, 174,000 USD, (134,000 USD collected) (with CEEE/EÇEM researcher Dr. Cem Keskin).
  67. LEGO-FIT: "Adaptable technological solutions based on early design actions for the construction and renovation of Energy Positive Homes", EU – Horizon Innovation Action 2023, Özyeğin University/CEEE Budget €693.000, Total Budget €4,6M, May 2023 - April 2027 (with CEEE/EÇEM researchers Damla Kaleli and Dr. Cem Keskin).
  68. TUSIAD, the Turkish Industry and Business Association and EÇEM Collaboration on "Establishment of National Energy Efficiency Framework for Türkiye." September 2023-October 2025. (Internal funding from FYE Foundation support).

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- 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).
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- EA 58. B. Elcioglu, A Güngör, E. Camadan T. Okutucu, M.P. Menguc, “SiC-on-Si Based Near-Field Radiative Transfer Device Design, Fabrication, and Experimental Setup Development.” NANOTR-14 Conference, Cesme, Izmir. 2018, September. (poster presentation).
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- March 2017, Sayı: 424, Vitruvius’tan Esinlenmeler
- April 2017, Sayı: 425, Teknolojik Vitruvius
- June 2017, Sayı: 427, Geleceğin Binalarına Doğru
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- August 2017, Sayı: 429, Örneklerle Panjur
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- 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> )
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-. “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>). (***did not go through***)

-. “Adaptive Vent System For Localized And Personalized Thermal Comfort,” C. Keskin, M. P. Mengüç. (Ozyegin University), Patent disclosure was made to Ozyegin University, March 27, 2019. PCT Application No: PCT/TR2019/050703. Published as WO 2021/040634 (2021). (***did not go through***)  
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- 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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