Georgia Theano Papadakis

ICFO - The Institute of Photonic Sciences
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Nationality: U.S. and Greek

ICFO Group leader 7/2021

Institute of Photonic Sciences (ICFO) | *Spain*

Research areas: Thermal radiation control and energy
Supported by: NEST program, Fundacio Privada CELLEX

TomKat Postdoctoral Fellow in Sustainable Energy 4/2018-3/2021

Stanford University | *USA*

Research areas: Thermal photonics, near-field heat transfer, thermophotovoltaic systems
Advisor: **Shanhui Fan**

PhD - Applied Physics 10/2012-2/2018

California Institute of Technology | *USA*

"Optical response in planar heterostructures: From artificial magnetism to Angstrom-scale metamaterials"
Thesis advisor: **Harry A. Atwater**

- Thesis committee: Kerry J. Vahala, Andrei Faraon, Chiara Daraio, Keith C. Schwab
- Research areas: Inverse problems in metamaterials & parameter retrievals, experimental characterization schemes for complex nanostructures, artificial magnetism, van der Waals heterostructures
- Technical skills: Code development, COMSOL Multiphysics, Visible and Infrared Spectroscopic Ellipsometry (WVASE, IR VASE, Meta-6)
- External collaborators: P. Yeh (University of California Santa Barbara), A. Polman (FOM Institute AMOLF, Netherlands), N. Engheta (University of Pennsylvania), P. Narang (Harvard University), M. Soljačić (Massachusetts Institute of Technology), R. Sundararaman (Rensselaer Polytechnic Institute)

Master of Science - Applied Physics 10/2012-10/2014

California Institute of Technology | *USA*

Master of Science - Electrical and Computer Engineering 9/2010-6/2011

National Technical University of Athens | *Greece*

Master thesis: *"Study of Broadband Plasmonic Structures for Datacom Applications"*
Thesis advisor: H. A. Avramopoulos, Photonics Communications Research Laboratory
Carried out within the frames of the European Commission project PLATON

Bachelor of Science - Electrical and Computer Engineering 2006-2010

National Technical University of Athens | *Greece*

- **Majors**: Telecommunications & Networks, Microelectronics (five-years coursework)

- **Minors**: Physics and Medical Engineering
- Technical skills: Electronic Circuit design (Verilog, HSPICE), Electromagnetic design (HFSS)
- Additional selective courses: Quantum Mechanics I, Numerical Methods for Differential Equations, Applied & Computational Electromagnetism, Special topics in Electromagnetism, Nuclear & Atomic Physics

Work & Research Experience

Associate Researcher (part-time) 10/2016-2/2018

Northrop Grumman Corporation, NG NEXT (division of fundamental research), Section of Materials & Devices | Redondo Beach, California, USA

- Grant proposals, student mentoring (in collaboration with Caltech & MIT)
- Research activities: ultra-lightweight metamaterials platforms for radiation pressure propulsion (lightsail) for space exploration

Visiting Student Researcher 9-10/2014

FOM Institute AMOLF | Amsterdam, Netherlands

- Photonic Materials Group | Supervised by A. Polman
- Research activities: Spectroscopic ellipsometry and transmission interferometry of nanostructures

Technical Student Fellow 11/2011-7/2012

European Organization for Nuclear Research (CERN) | Geneva, Switzerland

- BE-RF Department, CERN | Supervisor: Dr. Suitbert Ramberger
- Research activities: Linac4, metrology measurements and simulations for RF cavity tuning: drift tubes and post couplers optimization and measurements

Summer Student Fellow 7-9/2010

European Organization for Nuclear Research (CERN) | Geneva, Switzerland

- BE-CO Department, CERN | Supervisors: Dr. Javier Serrano, Dr. Juan David Gonzalez Cobas
- Research activity: Digital signal processing for dynamic testing of ADCs for non-linearity, errors, noise and distortion chamber measurements

Fellowships & Grants

Postdoctoral Junior Leader Fellowship 2021-2024

la Caixa Foundation

Supported by EU's Horizon 2020 Marie Sklodowska-Curie grant agreement No 847648

Institute of Photonic Sciences - ICFO

Princeton Pathway into the Academy Program 2019-2020

Princeton University

Year-long development program for early-stage researchers

TomKat Postdoctoral Fellowship in Sustainable Energy 2018-2020

Stanford University

TomKat Center for Sustainable Energy

Mentor: Shanhui Fan, Electrical Engineering

Marie Sklodowska-Curie Individual European Postdoctoral Fellowship 2018-2020
King's College London
Mentor: Anatoly Zayats
Proposal acronym: Metabeyond (795249)
Maximum amount granted (183,454.80 euros), top 7% (award not accepted)

Breakthrough Starshot seeding through NG NEXT 2016
NG NEXT (Northrop Grumman Corp.), Section of Materials & Devices
Funding for research on ultra-lightweight photonic materials for lightsail, funded by Breakthrough Initiatives. In collaboration with P. Narang, N. Engheta, M. Soljačić.

PhD Dissertation Fellowship 2016-2017
American Association for University Women (AAUW) distinguished award

Graduate Research Fellowship 2013-2016
National Science Foundation (NSF) Graduate Research Fellowship

Summer Student Fellowship 7-9/2010
European Organization for Nuclear Research (CERN) Summer Student Fellowship

Awards

Best Student Paper, Metamaterials 2016 10th International Congress 2016
Metamaterials' 2016 | Chania, Greece
"Broadband Non-Unity Magnetic Permeability in Planar Hyperbolic Metamaterials", G. T. Papadakis & H. A. Atwater

Outstanding Poster Award, Metamaterials Science & Technology Workshop 2015
Center for Metamaterials & Integrated Plasmonics | University of California San Diego, CA
"Tunable graphene-based hyperbolic metamaterial", G. T. Papadakis, M. C. Sherrott, Wei-Hsiang Lin, Philip W. Hon,Luke A. Sweatlock, P. Yeh & H. A. Atwater

Best Poster Award, Spring Material Research Society (MRS) Meeting 2014
Symp. II-Emerging Nanophotonic Materials & Devices | San Franscisco, CA
"Field effect frequency-tunable epsilon-near-zero metamaterial in the visible", G. T. Papadakis, H. W. Lee, H. A. Atwater

Publications

G. T. Papadakis, M. Orenstein, E. Yablonovitch & S. Fan , "*Thermodynamics of light management in near-field thermophotovoltaics*" (in review) (2021)

G. T. Papadakis, C. Ciccarino, L. Fan, P. Narang & S. Fan , "*Deep subwavelength thermal switch via resonant mode coupling in monolayer hexagonal boron nitride*" Phys. Rev. Applied 15, 054002 (2021)

A. M. Morsy, M. T. Barako, V. Jankovic, V. D. Wheeler, M. Knight, G. T. Papadakis, L. A. Sweatlock, P. W. C. Hon & M. L. Povinelli , "*Experimental Demonstration of Dynamic Thermal Regulation using Vanadium Dioxide Thin Films*" Scientific Reports 10, 13694 (2020)

S. Buddhiraju, A. Song, G. T. Papadakis, & S. Fan , "*Nonreciprocal metamaterial obeying time-reversal symmetry*" Phys. Rev. Lett. 124, 257403 (2020)

L. Fan, Y. Guo, G. T. Papadakis, B. Zhao, Z. Zhao, S. Buddhiraju, M. Orenstein, & S. Fan , "*Nonreciprocal radiative heat transfer between two planar bodies*" Phys. Rev. B 101, 085407 (2020)

G. T. Papadakis, S. Buddhiraju, Z. Zhao, & S. Fan , "*Broadening near-field emission for performance enhancement in thermophotovoltaics*" Nano Letters 20, 3, 1654-1661 (2020)

J. Brouillet, G. T. Papadakis, & H. A. Atwater , "*Experimental demonstration of tunable graphene-polaritonic hyperbolic metamaterial*" Optics Express 27, 30225 (2019)

G. T. Papadakis, B. Zhao, S. Buddhiraju, & S. Fan , "*Gate-tunable near-field heat transfer*" ACS Photonics 6, 709 (2019)

G. T. Papadakis, A. Davoyan, P. Yeh, & H. A. Atwater , "*Mimicking surface polaritons for unpolarized light with high-permittivity materials*" Phys. Rev. Materials 3, 015202 [*Editors' Suggestion] (2019)

G. T. Papadakis, D. Fleischman, A. Davoyan, P. Yeh, & H. A. Atwater , "*Optical Magnetism in Planar Metamaterial Heterostructures*" Nature Communications 9, 296 (2018)

G. T. Papadakis, P. Narang, R. Sundararaman, N. Rivera, H. Buljan, N. Engheta, M. Soljacic , "*Ultra-light* Å*-scale Optimal Optical Reflectors*" ACS Photonics 5, 384 (2018)

G. T. Papadakis, & H. A. Atwater , "*Field effect-induced tunability in hyperbolic metamaterials*" Phys. Rev. B 92, 184101 (2015)

G. T. Papadakis, P. Yeh & H. A. Atwater , "*Retrieval of material parameters for uniaxial metamaterials*" Phys. Rev. B 91, 155406 (2015)

H. W. Lee, G. T. Papadakis, S. P. Burgos, K. Chander, A. Kriesch, R. Pala, U. Peschel, H. A. Atwater , "*Nanoscale Conducting Oxide PlasMOStor*" Nano Letters 14, 11, 6463-6468 (2014)

Patents

Nanoscale plasmonic field-effect modulator 1/2018

Patent no. US 9,864,109 B2
H. W. Lee, Stanley Burgos, G. T. Papadakis, H. A. Atwater, California Institute of Technology

Meta-Structure and tunable optical device 12/2017

Patent no. US 9,851,589 B2
S. Han, Y-W. Huang, G. T. Papadakis, H. A. Atwater, California Institute of Technology, Samsung Advanced Institute of Technology

Extreme, broadband tunable values of birefringence and dichroism and tunable optical band-gaps 2016

Patent no. US 20170045759 A1

G. T. Papadakis, S. Han, H. A. Atwater, California Institute of Technology, Samsung Advanced Institute of Technology

Nanoscale Plasmonic Field-Effect Modulator 11/2015

Patent no. US 20170059894 A1

H. W. Lee, S. P. Burgos, G. T. Papadakis, H. A. Atwater, California Institute of Technology

Invited Talks

Fall MRS 12/2021

Key opportunities in near-field thermophotovoltaics

Symposium EN10. Advanced materials for thermal energy management and harvesting | Boston, USA

EOS Annual Meeting 9/2021

Key opportunities in near-field thermophotovoltaics

Session on Thermal radiation and energy management | Rome, Italy

META '2021 7/2021

Active tuning of thermal radiation in the far-field and near-field range with emerging low-dimensional materials

Session SP13. Light-matter interactions in new materials and meta-architectures | Warsaw, Poland

Metamaterials '2021 8/2021

Light management in near-field thermophotovoltaics

Meta '21 | New York, USA

Barcelona Institute of Science and Technology (BIST) 11/2020

Seminar in advanced research, "From heat to light and energy"

BIST | Barcelona, Spain

TomKat Center for Sustainable Energy 5/2020

Seminar, "Broadening near-field emission for performance enhancement in thermophotovoltaics"

TomKat Center| Stanford, CA

Photonics at Thermodynamic Limits Energy Frontier Research Center 4/2020

Postdoc tutorial, "Broadening near-field emission for performance enhancement in thermophotovoltaics"

Stanford University | Stanford, CA

Dartmouth College 1/2020

Jones Seminar on Science, Technology, and Society, "Tailoring the flow of light and radiant heat"

Dartmouth College, Thayer School of Engineering | Hanover, NH

Boston College 1/2020

Colloquium, "Tailoring the flow of light and radiant heat"

Boston College, Dept. of Physics | Boston, MA

Photonics at Thermodynamic Limits Energy Frontier Research Center 7/2019

Postdoc tutorial, "Near-field heat transfer for thermophotovoltaics and thermal radiation tuning"

Stanford University | Stanford, CA

Stanford University 4/2019

Seminar, "Tailoring optical and thermal properties with nanophotonics"

Stanford University, Dept. of Applied Mathematics | Stanford, CA

Wesleyan University 3/2019
Colloquium, "Tailoring optical and thermal properties with nanophotonics
Wesleyan, Dept. of Physics | Middletown, CT

NG NEXT (Northrop Grumman Corp.) 12/2018
Seminar, "Gate-tunable near-field heat transfer"
Section of Materials & Devices, Dept. of Nanophotonics | Redondo Beach, CA

TomKat Center for Sustainable Energy 11/2018
Seminar, "Nanophotonic design for near-field heat transfer"
TomKat Center| Stanford, CA

FOM Institute AMOLF 8/2017
Seminar, "Magnetic effects, active tunability and supermetals with planar metamaterials"
AMOLF Nanophotonics Groups | Amsterdam, Netherlands

MIT Lincoln Laboratory 7/2017
Seminar, "Magnetic effects, active tunability and supermetals with planar metamaterials"
Group of chemical, microsystem and nanoscale technologies | Boston, MA

Intel Corporation 6/2017
Seminar, "Magnetic effects, active tunability and supermetals with planar metamaterials"
Non-Volatile Solutions Memory Group | Boise, ID

NG NEXT (Northrop Grumman Corp.) 12/2016
Seminar, "Ultra-high reflection with graphene-based Van der Waals heterostructures"
Section of Materials & Devices, Dept. of Condensed matter | Redondo Beach, CA

Quantum Metaphotonics & Metamaterials MURI Review 11/2016
Student Highlight Talk, "Optical magnetism in metallo-dielectric metamaterials"
Basic Research Innovation and Collaboration Center | Arlington, DC, USA

Foundation for Research and Technology Hellas (FORTH) 9/2016
Seminar, "Layered optical metamaterials: effective parameters, magnetic effects and active tunability"
Institute of Electronic Structure & Laser (IESL) | Heraclion, Greece

NG NEXT (Northrop Grumman Corp.) 4/2016
Seminar, "Metamaterials parameter retrievals, active tunability and new magnetic effects in hyperbolic media"
Section of Materials & Devices, Dept. of Condensed matter | Redondo Beach, CA

NG NEXT (Northrop Grumman Corp.) 9/2015
Seminar, "Tunable hyperbolic metamaterials at visible and infrared frequencies"
Section of Materials & Devices, Dept. of Nanophotonics | Redondo Beach, CA

Teaching Experience

Introduction to Nanophotonics-Teaching assistant 2014
California Institute of Technology | Instructor: Harry A. Atwater

- Graduate course. Gave lectures on Green's functions & Green's dyadics, energy transfer, plasmonics, Mie scattering theory & effective media. Developed problem sets & solutions, taught finite element methods for nanophotonics. Held problem solving sessions & office hours.
- **Evaluation:** Overall teaching effectiveness: 4.5/5, Presented material clearly in section or lab: 4.5/5, Was well prepared for section, office hours or lab: 4.75/5. Answered questions clearly and concisely: 4.25/5, Provided helpful comments on assignments, papers, exams: 4.25/5

- **Students' comments:** *"Georgia was extremely knowledgeable on the subject and always happy to assist with homework questions, even outside of her scheduled office hours. She was also helpful during lecture, interjecting to help answer other students' questions and raising some of her own. She was a thorough grader and always included comments whenever she removed points. Georgia is a first-rate TA"*, *"Excellent TA. Always explained topics clearly and marked fairly"*

Solid State Electronics for Integrated Circuits-Teaching assistant 2012

California Institute of Technology | Instructor: Axel Scherer

- Undergraduate course. Lab sessions fabricating integrated devices: Schottky Diodes, PN Diodes, MOSFETS, Microfluidic devices. Developed problem sets & solutions.
- **Evaluation:** Overall teaching effectiveness: 4/5, Presented material clearly in section or lab: 4.17/5, Was well prepared for section, office hours or lab: 4/5. Answered questions clearly and concisely: 4.33/5, Provided helpful comments on assignments, papers, exams: 4/5
- **Students' comments:** *"Always prepared and helped us a lot with understanding the material."*, *"Very nice and helpful in the lab and regarding material taught in class. Answered questions clearly and made sure everybody understood. Was well prepared in lab and went over theory while doing the labs."*

Synergistic Activities

Workshop Co-Organizer 12/2021

"Frontiers in Light: Light-harvesting for clean energy".
Participants: ICFO, Stanford University, University of Toronto
Barcelona, December 2021

Guest Editor in Optical Materials Express 2021

Special issue: "Materials and Devices for Engineering of Thermal Light"

Special Event Organizer CLEO 5/2021

"Discussion of Seminal Papers"
Invited Speaker: Eli Yablonovitch
San Jose, CA

Special Symposium Organizer CLEO 5/2021

Thermal radiation control and energy
San Jose, CA

Session Chair CLEO 5/2021

"THz and Infrared Photonics"
San Jose, CA

Executive Committee Member OSA 2020

Photonic Metamaterials Technical Group

Conference Committee Member CLEO 2021-2024

S&I 6: Optical Materials, Fabrication and Characterization
San Jose, CA

Conference Session Co-Organizer FALL MRS 12/2021

Infrared and Thermal Photonic Materials and their Applications
Boston, MA

Advisor Committee for DARPA JUMP 2017

Center 1 - RF to THz sensors and communication systems
Center 6 - Advanced devices, packaging and materials
Serving as an associate researcher at NG NEXT (Northrop Grumman Corp.)

Peer reviewer since 2015

For the journals Physical Review Letters, Physical Review Applied, Physical Review B, Physical Review A, Physical Review Materials, ACS Photonics, Applied Physics Letters, Optics Communications, Optical Materials Express, Journal of European Optical Society - Rapid Communications (Springer Open)

Workshop & Meeting Chair

- "From THz to Optics" Metamaterials' 2016 10th International Doctoral School | Chania, Greece, 2016
- "Physics of Light-Matter Interactions & Excited States Dynamics" Workshop, NG NEXT, Northrop Grumman Corp.| Redondo Beach, CA, 2016

Schools, Seminars & Meetings

Stanford University Photonics Retreat 4/2019
Marshall, CA, USA

Quantum Metaphotonics & Metamaterials MURI Review 11/2016
Basic Research Innovation and Collaboration Center | Arlington, DC, USA

Triservice Metamaterials Review 11/2016
Basic Research Innovation and Collaboration Center | Arlington, DC, USA

Doctoral School: Metamaterials from THz to optics 9/2016
EUPROMETA Doctoral Programme, Metamaterials 2016 International Congress | Chania, Greece

Plasmonics Gordon Research Seminar 7/2016
Newry ME, USA

Metamaterials Science & Technology Workshop 7/2015
Center for Metamaterials & Integrated Plasmonics | San Diego, CA, USA

Plasmonics Gordon Research Seminar 7/2014
Newry ME, USA

International Conference Presentations

1. **International Society for Optics and Photonics SPIE** | San Diego, CA, USA 8/2019

   Oral Presentation | Session: Tunable and Dynamic Photonic Platforms XI
   "*Gate-tunable near-field heat transfer*", G. T. Papadakis, B. Zhao, S. Buddhiraju, S. Fan

2. **American Physical Society March Meeting** | Los Angeles, CA, USA 3/2018

   Oral Presentation | Session: Nanostructures and Metamaterials
   "*Phonons and excitons for omnipolarization surface waves*", G. T. Papadakis, A. Davoyan, P. Yeh, H. A. Atwater

3. **CLEO Laser Science to Photonic Applications** | San Jose, CA, USA 5/2017

   Oral Presentation | Session: Fundamental Science - Nonlinear and Hyperbolic Metamaterials
   "*Artificial magnetism in one-dimensional multilayer metamaterials*", G. T. Papadakis, D. Fleischman, A. Davoyan, P. Yeh, H. A. Atwater

4. **Metamaterials' 2016 10th International Congress** | Chania, Greece 9/2016

   Oral Presentation | Session: Hyperbolic Metamaterials
   "*Non-Unity Magnetic Permeability in Planar Hyperbolic Metamaterials*", G. T. Papadakis & H. A. Atwater

5. **Plasmonics Gordon conference** | Newry, ME, USA 7/2016

   Poster Presentation
   "*Broadband non-unity magnetic permeability in planar hyperbolic metamaterials*", G. T. Papadakis, D. Fleischman, A. Davoyan, P. Yeh, H. A. Atwater

6. **American Physical Society March Meeting** | Baltimore, MA, USA 3/2016

   Oral Presentation | Session: Acoustic, Thermal and Photonic Metamaterial Concepts
   "*Broadband non-unity magnetic permeability in planar hyperbolic metamaterials*", G. T. Papadakis, D. Fleischman, A. Davoyan, P. Yeh, H. A. Atwater

7. **Material Research Society (MRS), Fall Meeting** | Boston, MA, USA 11/2015

   Oral Presentation | Symposium: Emerging Materials and Platforms for Optoelectronics
   "*Tunable Hyperbolic Metamaterials Based on Multilayer Graphene/Dielectric Structures*", G. T. Papadakis, M. C. Sherrott, Philip W. Hon,Luke A. Sweatlock, P. Yeh & H. A. Atwater

8. **Meta'15** | New York, NY, USA 8/2015

   Poster Presentation
   "*Hyperbolic-gap-hyperbolic tunable band structure metamaterials*", G. T. Papadakis, K. Thyagarajan, H. A. Atwater

9. **Metamaterials Science & Technology Workshop, Center for Metamaterials & Integrated Plasmonics** | University of California San Diego, CA, USA 7/2015

   Poster Presentation
   "*Tunable graphene-based hyperbolic metamaterial*", G. T. Papadakis, M. C. Sherrott, Wei-Hsiang Lin, Philip W. Hon,Luke A. Sweatlock, P. Yeh & H. A. Atwater

10. **Surface Plasmon Polariton (SPP) 7** | Jerusalem, Israel 6/2015

    Oral Presentation | Session: Nanoantennas and Hyperbolic Metamaterials
    "*Hyperbolic Metamaterial with Field-Effect Induced Transitions of the Dispersion Surface*", G. T. Papadakis, K. Thyagarajan, H. W. Lee, H. A. Atwater

11. **Surface Plasmon Polariton (SPP) 7** | Jerusalem, Israel 6/2015

    Poster Presentation
    "*Gate-Tunable Conducting Oxide Metasurfaces*", Y-W. Huang, H. W. Lee, R. Sokhoyan, K. Thyagarajan, G. T. Papadakis, S. Han, D. P. Tsai, H. A. Atwater

12. **Material Research Society (MRS), Fall Meeting** | Boston, MA, USA 12/2014

    Oral Presentation | Symposium: Optical Metamaterials and Novel Optical Phenomena Based on Nanofabricated Structures
    "*Field-effect tuning of the optical band gap of hyperbolic metamaterials*", G. T. Papadakis, H. W. Lee, P. Yeh & H. A. Atwater

13. **Julius Springer Forum on Applied Physics** | Amsterdam, Netherlands 9/2014

    Poster Presentation
    "*Field effect frequency- tunable epsilon-near-zero metamaterial in the visible*", G. T. Papadakis, L. A. Sweatlock, H. W. Lee, H. A. Atwater

14. **International Society for Optics and Photonics SPIE** | San Diego, CA, USA 8/2014

    Poster Presentation
    "*Field effect frequency- tunable epsilon-near-zero metamaterial in the visible*", G. T. Papadakis, L. A. Sweatlock, H. W. Lee, H. A. Atwater

15. **International Society for Optics and Photonics SPIE** | San Diego, CA, USA 8/2014

    Poster Presentation
    "*Spontaneous Emission Dynamics of Quantum Emitters Coupled to Epsilon-Near-Zero Metamaterials*", R. Sokhoyan, G. T. Papadakis, H. W. Lee, H. A. Atwater

16. **Plasmonics Gordon conference** | Newry, ME, USA 7/2014

    Poster Presentation
    "*Field effect frequency-tunable epsilon-near- zero metamaterial in the visible*", G. T. Papadakis, H. W. Lee, H. A. Atwater

17. **Material Research Society (MRS), Spring Meeting** | San Fransisco, CA, USA 4/2014

    Poster Presentation | Symposium: II-Emerging Nanophotonic Materials & Devices
    "*Field-effect tuning of the optical band gap of hyperbolic metamaterials*", G. T. Papadakis, H. W. Lee, H. A. Atwater

Other contributions

18. **Nanolight** | Benasque, Spain 3/2016

    "*Dynamic Control of Mid-IR Light via Graphene-Based Structures*", M. C. Sherrott, G. T. Papadakis, P. W. Hon, L. A. Sweatlock, P. Yeh & H. A. Atwater

19. **Frontiers in Nanophotonics** | Zurich, Switzerland 9/2015

    "*Tunable metasurfaces using the field-effect*", Y. W. Huang, H. W. Lee, R. Sokhoyan, K. Tyagarajan, G. T. Papadakis, S. Han, R. Saive, D. P. Tsai, H. A. Atwater

20. **Meta'15** | New York, NY, USA 8/2015

    Keynote talk
    "*Electronically Tunable Metamaterials*", H. A. Atwater, G. T. Papadakis, M. C. Sherrott, V. W. Brar, M. S. Jang, S. Kim, L. Kim, M. Choi, L. A. Sweatlock

21. **Meta'15** | New York, NY, USA 8/2015

    Invited Oral Presentation
    "*Gate-tunable conducting oxide metasurfaces*", Y-W. Huang, H. W. Lee, R. Sokhoyan, K. Thyagarajan, S. Han, G. T. Papadakis, D. P. Tsai, H. A. Atwater

22. **Surface Plasmon Polariton (SPP) 7** | Jerusalem, Israel 6/2015

    Poster Presentation
    "*Graphene/SiO_2 Multilayer Stack as a Hyperbolic Metamaterial*", M. C. Sherrott, G. T. Papadakis, W-S. Lin, P. W. Hon, L. A. Sweatlock, H. A. Atwater

23. **Material Research Society (MRS), Fall Meeting** | Boston, MA, USA 12/2014

    Oral Presentation
    "*Gate-Tunable Conducting Oxide Plasmonic Lightwave Circuits: Modulators and Multistate Logic in Guided Wave Networks*", H. W. Lee, G. T. Papadakis, A. Kriesch, S. P. Burgos, K. Chander, U. Peschel, H. A. Atwater

24. **Surface Plasmon Polariton (SPP) 6** | Ottawa, Canada 5/2013

    Poster Presentation
    "*Nanoscale conducting oxide plasmonic slot waveguide modulator*", H. W. Lee, S. P. Burgos, G. T. Papadakis, H. A. Atwater

Outreach

- Women in Science and Engineering (WISE), Stanford, 2018
- Fundraising via the American Association for University Women (AAUW), Southern California, 2017

Extracurricular Interests & Activities

Musical Studies

- Degree of teaching theory & harmony of music 2005
  Awarded by the Hellenic Ministry of Culture
- Degree of Piano, Theory & Harmony of Music, Solfége, Byzantine Music, Conservatory Choir 1998-2005

Athletics

- Track & field 2001-2006
  Bronze national medal (Greece) in pentathlon (2002), bronze national medal in heptathlon (2003)
- Gymnastics (rhythmic gymnastics, floor, trampoline) -2000
  Bronze national medal (Greece)
- Synchronized swimming, swimming, & sailing -2006