THOMAS C. KATSOULEAS

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V I T A

EDUCATION

B.S., Physics; Summa Cum Laude, 1979
University of California at Los Angeles

Ph.D., Physics, 1984
University of California at Los Angeles

PERMANENT POSITIONS

University of Virginia
- Executive Vice President and Provost, August 2015 – present
- Robert C. Taylor Professor of Electrical and Computer Engineering, Professor of Physics, August 2015

Duke University, Edmund T. Pratt Jr., School of Engineering
- Vinik Dean of Engineering, July 2008 to August 2015
- Professor of Electrical and Computer Engineering, July 2008
- Professor of Physics, July 2012

University of Southern California, School of Engineering
- Professor of Electrical Engineering/Electrophysics, 1997 to 2011
- Interim Vice-Provost for Information Services, June 2006 to February 2007
- President of the Faculty and Academic Senate, 2005-2006
- Associate Dean for Research, February 2000 to June 2001
- Associate Dean for Student Affairs, 1995 to 2000
- Associate Professor of Electrical Engineering-Electrophysics, 1991 to 1997

University of California at Los Angeles
- Adjunct Assistant/Associate Professor of Physics, 1985 to 1991
- Assistant/Associate Research Engineer I, II and III, 1984 to 1991

PROFESSIONAL ACTIVITIES

- Program Steering Committee, 2015 Global Grand Challenges Summit, Bejing China, September 14-16, 2015.
- Program Steering Committee, 2015 Engineering Deans Institute Meeting, Kiawah Island, SC, April 12-15, 2015.
- Chair, National Academy of Engineering's Advisory Committee on Engineering Grand Challenges for the 21st Century, 2012
- Co-Chair, ASEE Global Engineering Education Colloquium, Shanghai, October 23, 2011
- Co-Chair, ASEE Engineering Deans Institute Session on Educational Imperatives of the NAE Grand Challenges, 2010
- Co-founder of the NAE Grand Challenge Scholars Program and K-12 Partners Program
- Organizer of NAE Grand Challenge Summit Series, 6 Cities, 2009
- Track Chair, ASEE Global Engineering Education Colloquium, Budapest, 2009
- Co-Chair and Organizer of first NAE Grand Challenges Summit, Durham, NC 2008
- PI and Co-Director of multi-institutional collaboration on Advanced Accelerator and Beam Physics Research at the Stanford Linear Accelerator Center
- Chair, National Academy of Sciences-National Research Council Panel on Scientific Assessment of Free Electron Laser Technology for Naval Applications 2007-2008
- National Research Council Committee on High Energy Density Physics, Sub-Committee Chair, 2003
- Founding Co-Chair, International Workshop on Laser and Plasma Accelerators 1991, 1995 and 1999; now ongoing biennially
- Program Committee, International Particle Accelerator Conference 1993, '95, '97, '03

TEACHING EXPERIENCE

Duke, USC, and UCLA – developed hands-on courses that empower learners from Freshman introductory Engineering courses to graduate Plasma Dynamics courses; created multi-disciplinary GE course on science, technology and society.

Lecturer: US Particle Accelerator School, Joint US-CERN-Japan-Russia Accelerator School, Trieste Institute for Theoretical Physics (Italy).

HONORS AND AWARDS

- Plasma Science Achievement Award, IEEE Nuclear and Plasma Sciences Society, 2011
- Fellow, Institute of Electrical and Electronics Engineers (IEEE)
- Fellow, American Physical Society
- USC Mortar Board Faculty of the Month, 1995
- USC HKN Electrical Engineering Society Outstanding Faculty Member
- Outstanding Teaching Award, UCLA Physics Department, 1990 and 1991
- IBM Project Advance Recognition Award (for development of teaching software), 1988

BOOKS AND JOURNALS

1. Laser Acceleration of Particles (Malibu, CA; 1985), Chan Joshi and Thomas Katsouleas, editors, AIP Conf. Proc. No. 130 (Am. Inst. Phys., NY, 1985)

2. IEEE Trans. on Plasma Science, Special Issue on Plasma-Based High Energy Accelerators, Thomas Katsouleas, guest editor, April, 1987

3. From Fusion to Light Surfing, Thomas Katsouleas, editor (Addison-Wesley, Redwood City, CA, 1991)

4. Beam-Beam and Beam-Radiation Interactions: High Intensity and Nonlinear Effects, C. Pelligrini, T. Katsouleas, J. Rosenzweig, editors (World Scientific, Singapore, 1992)

5. Physica Scripta, Special Issue on Acceleration and Radiation Generation in Space and Laboratory Plasmas, R. Bingham and T. Katsouleas, guest editors, 1994

6. IEEE Trans. on Plasma Science, Special Issue on 2nd Generation Plasma Accelerators, T. Katsouleas and R. Bingham, guest editors, April 1996.

INVITED TALKS

1. "Plasma Accelerators," Aspen Workshop on FEL's and Plasma Accelerators (Aspen Center for Physics); June 8, 1984.

2. "The Surfatron and Plasma Beat Wave Accelerators," High Energy and Nuclear Physics Colloquium Series (California Institute of Technology); September 28, 1984.

3. "Work at UCLA on the Plasma Beat Wave Accelerator," Second Workshop on Laser Acceleration of Particles (UCLA); January 8, 1985.

4. "Wakefield and Beat Wave Accelerators," CERN Colloquium, Geneva, Switzerland; June 3, 1985.

5. "Laser Accelerators," International SPIE Conference on High Intensity Laser Processes, Quebec City, Canada; June 6, 1986.

6. "Laser Acceleration in Laboratory Plasmas and Scaling to the Ionosphere," URSI National Radio Science Meeting, Boulder, Colorado; January 12, 1987.

7. "Plasma Based High Energy Accelerators," Plenary Review, 14th IEEE International Conference on Plasma Science, Arlington, Virginia; June 1, 1987.

8. “Applications of Plasmas to Particle Accelerators,” Los Alamos National Laboratory, Accelerator Technology Division Colloquium; June 16, 1987.

9. “Radial Plasma Fields For Lenses and Wigglers,” CERN - U. Naples International Workshop on Plasma Focusing, Capri, Italy; October 1, 1987.

10. “Surfing at the Speed of Light--Plasma Based High Energy Accelerators,” Department of Physics Colloquium, California Institute of Technology, Pasadena, CA; April 14, 1988.

11. “Plasma Lenses--Concepts and Status,” International Workshop on Advanced Accelerators, Lake Arrowhead, CA; January 10, 1989.

12. “Plasma Wakefield Accelerators,” Invited talk at SPIE Conf. OE/LASE '89, Los Angeles, CA; January 24, 1989.

13. “Laser and Plasma Research at UCLA--Accelerators, Light Sources, and Phase Conjugate Reflection,” Department of Quantum Electronics Colloquium, University of Southern California, Los Angeles, CA; January 24, 1989.

14. “Role of Plasmas in Future Accelerators,” Plenary Review at XIV International Conf. on High Energy Accelerators, Tsukuba, Japan; August 22, 1989.

15. “Plasma Wakefield Accelerators,” Invited Talk at 2nd All-Soviet Workshop on New Acceleration Methods, Yerevan, Armenia, USSR; October 12, 1989.

16. “Plasma Physics at the Final Focus of High Energy Colliders,” Invited talk at the APS Division of Plasma Physics meeting, Anaheim, CA; November 13-17, 1989.

17. “Physics of Plasmas with Short Pulse Lasers,” Invited talk at SPIE Conf. OE/LASE ‘90, Los Angeles, CA; January 17, 1990.

18. “Wakefield Accelerators,” Invited review talk at Anaheim Physical Society general meeting, Washington, D.C.; April 18, 1990.

19. “The use of 'PC Wave' in Teaching Wave Propagation to Undergraduate,” seminar given at Instructional Technology for Science Faculty in Two-Year Colleges, Santa Ana, CA; August 1, 1990.

20. “Some Curious Aspects of Plasma Wakefields and Lenses,” Invited talk at U.S./Japan Joint Institute for Fusion Theory (JIFT) Workshop; Tsukuba, Japan; October 23, 1990.

21. “Some Curious Aspects of Plasma Accelerators,” Invited talk at International Topical Conference on Research Trends in Coherent Radiation Generation and Particle Accelerators, La Jolla, CA; February 12, 1991.

22. "Plasma Wakefield Accelerators," Invited talk at 10th International Conference on Plasma Turbulence: Collective Acceleration in Collisionless Plasmas, Cargese, Corsica, France; June 9, 1991.

23. "Surfing at the Speed of Light," General physics colloquium to California State University at Northridge Physics Department; October 9, 1991.

24. "From Fusion to Light Surfing," Keynote address at Explore Engineering Day, USC, Los Angeles, CA; October 19, 1991.

25. "From Fusion to Light Surfing," Presentation to UCLA Physics Alumni Alliance, Los Angeles, CA; November 16, 1991.

26. "Summary of the Working Group on Plasma Accelerators," at Int'l Advanced Accelerator Concepts Workshop, Port Jefferson, NY; June 19, 1993.

27. "Computer Simulation of Advanced Accelerator Concepts," Invited talk at Computational Accelerator Physics Conf. (CAPS '93); February 24, 1993.

28. "A DC to Optical Frequency Converter Based on Plasma Ionization," Invited Talk at IEEE International Conference on Plasma Science, Santa Fe, NM; June 7, 1994.

29. "Advanced Accelerator Concepts," plenary presentation at the European Particle Accelerator Conference, London, UK; July 1, 1994.

30. "Beam Loading and Beam Quality in Plasma Accelerators," International Workshop on 2nd Generation Plasma Accelerators, Kardamyli, Greece; June 1995.

31. "Laser and Plasma Accelerators: From 10^{-4} to 5 TeV," Snowmass Workshop on Future Directions in High Energy Physics, Snowmass, CO; June 1996.

32. "Beam Dynamic Issues in Laser Plasma Accelerators," ITP Conference on New Modes of Particle Acceleration, Santa Barbara, CA; August 20, 1996.

33. "Beam Dynamics in Plasmas," 6th ICFA Beam Dynamics Workshop, Arcidosso, Italy, Sept. 1996.

34. "Highlights of New Modes of Particle Acceleration," Future High Energy Colliders Symposium, UCSB Institute for Theoretical Physics, Santa Barbara, CA; October 25, 1996.

35. "Laser Steering of Particle Beams: Refraction of Matter," Conf. On Interaction of Laser & Particle Beams, Tokyo, Japan; October, 1999.

36. "New Methods of Acceleration," Conf. on the Intersection of Particle and Nuclear Physics, Quebec, Canada; June, 2000.

37. "Comparison of MAGIC Simulations and Recent Experimental Results on Acceleration and Radiation Generation," MAGIC Users' Group Meeting, New Orleans, LA; June, 2000

38. "A 100 GeV Plasma Afterburner," plenary talk at the Advanced Accelerator Concepts Workshop, Santa Fe, NM; June, 2000

39. "Overview of Advanced Accelerator Research," American Physical Society, Division of Particles and Fields Meeting, Columbus, OH; August, 2000.

40. "Advanced Accelerator and Beam Physics Research," University of Chicago High Energy and Nuclear Physics Seminar Series; October, 2000.

41. "Plasma Modeling of Electron Clouds in Circular Accelerators," ECLOUD 02, CERN, Geneva, Switzerland; April 18, 2002.

42. "Simulation of Laser and Beam-Driven Plasma Wakefields," American Physical Society Spring Meeting, Albuquerque, NM; April 20, 2002.

43. "John M. Dawson: World's Fastest Surfer," plenary talk at the Advanced Acceleration Concepts Workshop, Oxnard, CA; June, 2002.

44. "Advanced Accelerator R&D," Stanford Linear Accelerator Center Users Organization Meeting; Palo Alto, CA; July 12, 2002.

45. "Engineering 101 'P'," Faculty Showcase Lecture, USC Preview; July 18, 2002.

46. "Research on Advanced Accelerators at USC" – presented to local science teachers, Loyola Marymount University, NSF sponsored RET (Research Experience for Teachers) Program, Spring '03.

47. "Welcome and Overview of the ORION Center," 2nd ORION Users Meeting, Palo Alto, CA Feb. 18, 2003.

48. "R&D Prospects for a Plasma Afterburner at SLAC, " SLAC Future Scenarios Meeting, Palo Alto, CA April 2003.

49. "High Energy Laser and Particle Beams: The X-games of contemporary science and engineering," USC EE –EP Department Colloquium, December 5, 2003.

50. "Progress toward Plasma Accelerators at the energy frontier and on tabletops," plenary presentation at the European Physical Society Division of Plasma Physics Meeting, London, July 2, 2004.

51. "Progress on plasma accelerators: from the energy frontier to tabletops," Physics Colloquium, Argonne National Laboratory, December 17, 2004.

52. "Physics of Very Short Wavelength Acceleration," RF05, Kalamata, Greece, June 14, 2005.

53. "Plasma Accelerators Race to 10 GeV and Beyond," Opening Plenary Talk, American Physical Society, Division of Plasma Physics annual meeting, Denver, CO, November 2005.

54. "Beyond 10 GeV: Results, Plans and Critical Issues," Plenary presentation at the 7th Int'l Workshop on Laser and Plasma Accelerators, Taipei, December 16, 2005.

55. "USC's Federated Model of Information Technology Services," 1st Meeting of CIO's of Asian Pacific Rim Universities, Los Angeles, March 23, 2007.

56. "High Energy Density Physics with Ultra-Relativistic Beams," Ron Davidson Symposium, Princeton University, June 12, 2007.

57. "Plasma Accelerators: Pushing the Physics Frontier," Cornell Laboratory for Experimental Particle Physics Seminar, September 21, 2007.

58. "Hot, Flat, and Crowded, panel discussion with Mr. Tom Friedman," Duke University, September 26, 2008.

59. "Surfing on Plasma Waves: Can we hang ten all the way to the energy frontier?" The Fermilab Lecture Series & Fermilab Users' Organization, Illinois, June 3, 2009.

60. Bob Siemann Memorial Symposium, "Bob Siemann and the Plasma Wakefield Accelerator Collaboration at SLAC," SLAC National Accelerator Laboratory, Menlo Park, California, July 7, 2009.

61. "Re-Aligning Engineering in the Age of Grand Challenges," presentation to the Professional Engineers of North Carolina, NC, November 9, 2010.

62. "Summary of the ASEE Global Symposium on Engineering Education and the Global Economy," American Society of Engineering Educators 1st Global Forum, San Antonio, TX June 10, 2012.

63. Southeast/Mid-Atlantic Biomedical Engineering Career Conference. Keynote Speaker, "Preparing the Meet the Grand Challenges in Engineering for the 21st Century." Washington, DC, October 25, 2013.

64. ASME International Mechanical Engineering Education Leadership Summit. "NAE Grand Challenge Scholars Program". San Juan, Puerto Rico, March 13, 2014.

65. ASEE Engineering Deans Institute meeting, "NAE Grand Challenge Scholars Program", Scottsdale, AZ, April 6-8, 2014.

66. NAE, Educating Engineers to Meet the Grand Challenges Summit, Washington, DC, April 30-May 1, 2014.

67. ASEE, Broadening the Conversation on the Grand Challenges: Addressing the Contextual Dimensions of Technological Innovation", Indianapolis, Indiana, June 16-17, 2014.

68. Time Capsule to Mars Mission Event, National Press Club, Washington, DC, June 23, 2014.

69. AAES Meeting, The Grand Challenges for Engineering in the 21st Century, Reston, VA, November 5, 2014.

70. American Physical Society 67th Annual Gaseous Electronics Conference, The Grand Challenges for Engineering in the 21st Century, Raleigh, NC, November 6, 2014.

71. World Engineering Education Forum, "Toward a Global Grand Challenges Scholars Program" session moderator, Dubai, United Arab Emirates, December 3-6, 2014.

72. INAE-NAE Joint Symposium – Engineering Education in the 21st Century, Issues Related to Grand Challenges, "The Power of Grand Challenges – Motivation and Principles of the GCSP panel session moderator, Washington, DC, December 18-19, 2014.

73. NAE Grand Challenge Scholars Program: Response to the Grand Challenges from Higher Education," Keynote address at National Academy of Engineering Annual Meeting, Washington DC, October 4, 2015.

STUDENTS SUPERVISED

Postdocs

- Patrick Muggli, currently at Max Planck Institute
- C.Y. Zhang

PhD Students

- C. H. Lai
- T.C. Chiou
- Jean Yoshii
- Seung Lee
- Suzhi Deng
- Bing Feng
- Erdem Oz, 1st academic position at Princeton University
- Reza Gholizadeh
- Ali Z. Ghalam
- Efthymios Kallos, current academic position at University of Patras, Greece
- Xiaodong Wang
- Aakash Sahai, currently a postdoc at Imperial College

MS Students

- J. L. Hsu

- Nick Spence

Undergraduate Research Students

- Ben Hui
- Reed Maeda
- Tim Peters
- Ryan Kinter

PhD Students with substantial co-advising role

- K.R. Chen
- Ron L. Williams
- J.J. Su
- Scott Wilks
- Y.T. Yan
- Dilruba Sultana
- Renato Fedele
- Ronglin Liou

PUBLICATIONS

-1983-

1. T. Katsouleas and J.M. Dawson: "Unlimited Electron Acceleration in Laser-Driven Plasma Waves," Phys. Rev. Lett.; **51**, 392 (1983) (4 pages) — RESEARCH ARTICLE

2. T. Katsouleas and J.M. Dawson: "A Plasma Wave Accelerator - Surfatron I," IEEE Trans. on Nucl. Sci. **NS-30**; 3241 (1983) (3 pages) — RESEARCH ARTICLE

3. J.M. Dawson, V.K. Decyk, R.W. Huff, I. Jechart, T. Katsouleas, J.N. Leboeuf, B. Lembege, R.M. Martinez. Y. Ohsawa, and S.T. Ratliff: "Damping of Large-Amplitude Waves Propagating Perpendicular to the Magnetic Field," Phys. Rev. Lett.; **50**, 1455 (1983) (4 pages). — RESEARCH ARTICLE

4. T. Katsouleas, C. Joshi, W. Mori, J.M. Dawson, and F.F. Chen: "Prospects of the Surfatron Laser Plasma Accelerator," Proc. of the 12th Int. Conf. on High Energy Accelerators; Fermilab (1983) (3 pages). — RESEARCH ARTICLE

-1984-

5. C. Joshi, W.B. Mori, T. Katsouleas, J.M. Dawson, J.M. Kindel, and D.W. Forslund: "Ultra-High Gradient Particle Acceleration by Intense Laser-Driven Plasma Density Waves," Nature; **311**, 525 (1984) (9 pages). — REVIEW ARTICLE

-1985-

6. P. Chen, J.M. Dawson, R. Huff, and T. Katsouleas: “Acceleration of Electrons by the Interaction of a Bunched Electron Beam with a Plasma,” Phys. Rev. Lett.; **54**, 693 (1985) (4 pages). — RESEARCH ARTICLE

7. T. Katsouleas, J.M. Dawson, D. Sultana, and Y. T. Yan: “A Side-Injected-Laser Plasma Accelerator,” IEEE Trans. Nucl. Sci. **NS-32**; No. 5, 3554 (1985) (3 pages). — RESEARCH ARTICLE

8. T. Katsouleas, et al.: “Plasma Accelerators,” AIP Conf. Proc.; No. **130**, C. Joshi and T. Katsouleas: editors, (AIP, NY, 1985) (36 pages). — RESEARCH ARTICLE

9. C. Joshi and T. Katsouleas: editors, “Laser Acceleration of Particles,” AIP Conf. Proc. No. **130** (AIP, NY, 1985) (612 pages). — EDITED BOOK

-1986-

10. D. Sentman, J.N. Leboeuf, T. Katsouleas, R.W. Huff, and Dawson: "Electrostatic Instabilities of Velocity Space Shell Distributions in Magnetized Plasmas," Phys. Fluids; **29** (8), 2569 (1986) (9 pages). — RESEARCH ARTICLE

11. T. Katsouleas: “Physical Mechanisms in the Plasma Wakefield Accelerator," Phys. Rev. A; **33**, 2026 (1986) (9 pages). — RESEARCH ARTICLE

12. R. Fedele, U. De Angelis, and T. Katsouleas: "Generation of Radial Fields in the Beat-Wave Accelerator for Gaussian Pump Profiles," Phys. Rev. A; **33** (6), 4412 (1986) (3 pages). — RESEARCH ARTICLE

13. C. Darrow, D. Umstader, T. Katsouleas, W.B. Mori, C.E. Clayton, and C. Joshi: "Saturation of Beat Excited Plasma Waves by Electrostatic Mode Coupling," Phys. Rev. Lett; **56**, 2629 (1986) (4 pages). — RESEARCH ARTICLE

14. T. Katsouleas: "Laser Acceleration of Particles," SPIE Proc.; Vol. 664, pp. 2-11 (Quebec, Canada; 1986) (10 pages). — INVITED REVIEW PAPER

15. T. Katsouleas, C. Joshi, and W.B. Mori: “Comment on 'Free-Electron Laser and Laser Electron Acceleration Based on the Megagauss Magnetic Fields in Laser-Produced Plasmas," Phys. Rev. Lett.; **57**, 1960 (1986) (57 pages). — COMMENT

-1987-

16. C. Joshi, T. Katsouleas, J.M. Dawson, Y. T. Yan, J. Slater: “Plasma Wave Wigglers for Free Electron Lasers,” IEEE J. Quantum Elec.; **QE-23**, (9), 1571 (1987) (7 pages). — RESEARCH ARTICLE

17. T. Katsouleas, S. Wilks, P. Chen, J.M. Dawson, and J.J. Su: “Beam Loading in Plasma Accelerators,” Part. Accel.; **22**, 81 (1987) (18 pages). — RESEARCH ARTICLE

18.	C. Darrow, W.B. Mori, T. Katsouleas, C. Joshi, D. Umstadter, and C.E. Clayton: "Electrostatic Mode Coupling of Beat Excited Plasma Waves," IEEE Trans. Plasma Sci.; **PS-15**, No. 2 (1987) (24 pages).	RESEARCH ARTICLE
19.	J.J. Su, T. Katsouleas, J.M. Dawson, P. Chen, M. Jones, and R. Keinigs: "Stability of the Driving Beam in the Plasma" Wakefield, IEEE Trans. Plasma Sci.; **PS-15**, No. 2 (1987) (7 pages).	RESEARCH ARTICLE
20.	S. Wilks, T. Katsouleas, J.M. Dawson, P. Chen, and J.J. Su: "Beam Loading in Plasma Waves," IEEE Trans. Plasma Sci.; **PS-15**, No.2 (1987) (8 pages).	RESEARCH ARTICLE
21.	P. Chen, J.J. Su, T. Katsouleas: S. Wilks, and J.M. Dawson, "Plasma Focusing for High Energy Beams," IEEE Trans. Plasma Sci.; **PS-15**, No. 2 (1987) (8 pages).	RESEARCH ARTICLE
22.	IEEE Trans. Plasma Science: Special Issue on Plasma-Based High Energy Accelerators; Thomas Katsouleas, Guest Editor, April 1987 (3 pages).	EDITED JOURNAL (INTRODUCTION)
23.	C. Joshi, T. Katsouleas, J.M. Dawson, Y. T. Yan, and F.F. Chen: "Plasma Wigglers for FEL's," Proc. 1987 IEEE Part. Accel. Conf; March 16-19, 1987, Washington, D.C. (IEEE Cat. No. 87CH2387-9) pp. 199-201 (3 pages).	RESEARCH ARTICLE
24.	C. Joshi, T. Katsouleas, C. E. Clayton, W.B. Mori, and J.M. Kindel: "Experimental, Theoretical and Computational Studies of the Plasma Beat Wave Accelerator at UCLA," Proc. of the Symposium on Advanced Accelerator Concepts; Aug. 21-27, 1986, Madison, WI, ed. by F. Mills, (AIP Conf. Proc. No. 156, New York, 1987) p. 74-104 (30 pages).	RESEARCH ARTICLE
25.	T. Katsouleas, J.M. Dawson, W.B. Mori, J.J. Su, and S. Wilks: The Workshop on New Developments in Particle Acceleration Techniques; Orsay, France, June 29-July 4, 1987; ed. by S. Turner (CERN 87-11, ECFA 87/110, 12 Oct. 1987), pp. 401-410 (10 pages).	RESEARCH ARTICLE
26.	I. Jechart, T. Katsouleas, and J.M. Dawson: "Anomalous Thermal Relaxaton of a Two-Dimensional Magnetized Plasma," Phys. Fluids; **30**, 65 (1987) (8 pages).	RESEARCH ARTICLE
27.	T. Katsouleas and R. Evans: "Summary of the Working Group on Plasma Accelerators," Proc. of the Workshop on New Developments in Particle Acceleration Techniques; Orsay, France, June 29-July 4, 1987; ed. by S. Turner (CERN 87-11, ECFA 87-110, 12 Oct. 1987) (6 pages).	CONFERENCE PROCEEDING

28. Y.T. Yan, C.J. McKinstrie, T. Katsouleas, and J.M. Dawson: "Counter-Streaming Electron-Beam Beat-Wave Accelerators," Phys. Rev. A; **36**, 5455 (1987). — RESEARCH ARTICLE

-1988-

29. T. Katsouleas and W.B. Mori: "Wavebreaking Amplitude of Relativistic Oscillations in a Thermal Plasma," Phys. Rev. Lett.; **61**, 90 (1988) (4 pages). — RESEARCH ARTICLE

30. T. Katsouleas, J.J. Su, and J.M. Dawson: "Plasma Lens Work at UCLA," Proc. European Particle Accelerator Conference; Rome, Italy (June 1988) p. 428 (3 pages). — CONFERENCE PROCEEDING

31. T. Katsouleas, J.J. Su, and J.M. Dawson: "Underdense Plasma Lenses for Focusing Particle Beams," Proc. 1988_Linear Accelerator Conference; CEBAF, Williamsburg, VA (Oct. 3-7, 1988); (3 pages). — CONFERENCE PROCEEDING

-1989-

32. T. Katsouleas, J.J. Su, C. Joshi, W.B. Mori, J.M. Dawson, and S. Wilks: "A Compact 100 MeV Accelerator Based on Plasma Wakefields," SPIE Conf. Proc. OE/LASE '89; Los Angeles, CA (Jan. 16-20, 1989); p. 428, (3 pages). — INVITED PAPER

33. T. Katsouleas and J.M. Dawson: "Plasma Acceleration of Particle Beams," AIP Conf. Proceedings 184, Physics of Particle Accelerators; ed. M. Month and M. Dienes, p. 1798 (AIP, New York, 1989) (30 pages). — CONFERENCE PROCEEDING

34. S.C. Wilks, J.M. Dawson, W.B. Mori, T. Katsouleas: and M.E. Jones: "A Photon Accelerator," Phys. Rev. Lett. **62**, 2600, (1989) (4 pages). — RESEARCH ARTICLE

35. W.B. Mori, T. Katsouleas, and J.J. Su: "Computer Simulations of Disruption," Proc. of 1989 Particle Accelerator Conference; Chicago, IL, March 20-23, 1989 (3 pages). — CONFERENCE PROCEEDING

36. T. Katsouleas: "Plasma Wakefield Accelerators," Proc. of 2nd All-Union Workshop on New Accel. Methods; Yerevan, Armenia, USSR; October 10-14, 1989 (17 pages). — CONFERENCE PROCEEDING

37. T. Katsouleas, J.J. Su, S. Wilks, W.B. Mori, and J.M. Dawson: "The Role of Plasmas in Future Accelerators," Proc. of HEACC89: Tsukuba, Japan; August 22-26, 1989 (10 pages). — CONFERENCE PROCEEDING

38. W.B. Mori, J.J. Su, and T. Katsouleas: "Plasma Physics at the Final Focus," Proc. of HEACC89; Tsukuba, Japan; August 22-26, 1989. (7 pages). — CONFERENCE PROCEEDING

39. C. Darrow, M.D. Perry, F. Patterson, E.M. Campbell, T. Katsouleas, and W.B. Mori: "High Brightness Laser Development at LLNL and Possible Applications to the Laser Wakefield Problem," AIP Conf. Proc. 193, Advanced Accelerator Concepts; ed. C. Joshi, p. 50 (AIP, NY, 1989). (6 pages). — CONFERENCE PROCEEDING

40. T. Katsouleas, W.B. Mori, and C. Darrow: "Laser Wake Field Acceleration with Highly Relativistic Pumps," AIP Conf. Proc. 193, Advanced Accelerator Concepts; ed. C. Joshi, p. 165 (AIP, NY, 1989). (7 pages). — CONFERENCE PROCEEDING

-1990-

41. R.L. Williams, C.E. Clayton, C. Joshi, T. Katsouleas, W.B. Mori, "Studies of Relativistic Wave-Particle Interactions in Plasma-Based Collective Accelerators," Laser and Particle Beams **8** (3), 427 (1990). (23 pages). — RESEARCH ARTICLE

42. J.J. Su, T. Katsouleas, J.M. Dawson, and R. Fedele: "Plasma Lenses for Focusing Particle Beams," Phys. Rev. A; **41**, 3321 (1990). (11 pages). — RESEARCH ARTICLE

43. T. Katsouleas, J.J. Su, W.B. Mori, and J.M. Dawson: "Plasma Physics at the Final Focus of High Energy Colliders," Phys. Fluids B **2** (6), 1384 (1990). (6 pages). — INVITED PAPER

44. R.L. Williams, C.E. Clayton, C. Joshi, T. Katsouleas, and W.B. Mori: "Theory and Experiments on the Generation of Spontaneous Emission Using a Plasma Wave Undulator: A Progress Report," Proc. of SPIE OE/LASE 1990; Los Angeles, CA; January 14-19, 1990. (12 pages). — CONFERENCE PROCEEDING

45. T. Katsouleas, W.B. Mori, J.M. Dawson, and S. Wilks: "Physics of Plasmas with Short Pulse Lasers," Proc. of SPIE OE /LASE '90; Los Angeles, CA; January 14-19, 1990. (9 pages). — CONFERENCE PROCEEDING

46. W.B. Mori and T. Katsouleas: "Wavebreaking of Longitudinal Plasma Oscillations," Physica Scripta **T30**, 127 (1990). (7 pages). — RESEARCH ARTICLE

47. T. Katsouleas: "Beat Heating of the Ionosphere with High Power RF Pumps," Radio Science (1990). (4 pages). — RESEARCH ARTICLE

48. K.R. Chen, T. Katsouleas, and J.M. Dawson: "On the Amplification Mechanism of the Ion-Channel Laser," IEEE Trans. Plasma Sci. **18** (5), — RESEARCH ARTICLE

837 (1990). (5 pages).

49. W.B. Mori and T. Katsouleas, “2-Dimensional Studies of the Laser Wakefield Accelerator,” Proc. of 2nd EPAC, Nice, France; June 12-16, 1990. (3 pages). — CONFERENCE PROCEEDING

50. R.L. Williams, C.E. Clayton, C. Joshi, T. Katsouleas, “Motion of Relativistic Electrons Through Transverse Relativistic Plasma Waves,” Rev. Sci. Instrum **61** (10) 3037 (1990). (3 pages). — RESEARCH ARTICLE

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