

Resume: TOSHIKI TAJIMA

PERSONAL: contact number: 562-371-7249
 Birthdate: January 18, 1948
 US citizen, married, two children

OCCUPATION: Norman Rostoker Chair Professorship, University of California at Irvine (from July 1, 2013)

Deputy Director, International Center for Zetta- Exawatt Science and Technology (Gerard Mourou, Director), Ecole Polytechnique, Route de Saclay, F-91128 Palaiseau, France

Chief Science Officer, Tri Alpha Energy, 19631 Pauling, Foothill Ranch, CA 92610

Visiting Senior Principal Investigator, RIKEN, Wako, Japan

FIELDS OF EXPERTISE: High Field Science, Plasma Physics, Advanced Accelerator Physics

EDUCATION: University of Tokyo, Tokyo, Japan
 B.S. in Physics 1971
 M.S. in Physics 1973

University of California, Irvine
 Ph.D. in Physics 1975

CAREER: UNIVERSITY OF CALIFORNIA, LOS ANGELES
 Assistant and Associate Research Physicist, 1976-1980

THE UNIVERSITY OF TEXAS AT AUSTIN: 1980-2001
 Assistant, Associate, Full Professor of Physics, and
 The Jane and Roland Blumberg Professor in Physics, 1980-2001
 (also, Professor of Computational and Applied Math)

Lawrence Livermore National Laboratory, University of California: 1998-2001
 Special Assistant to the Associate Director

Stanford Linear Accelerator Center, Stanford University: 2000-2002
 Special Project

Japan Atomic Energy Research Institute (later, Japan Atomic Energy Agency):
 2002-2008
 Director General: Kansai Photon Science Institute, and
 Deputy Director General: Quantum Beam Science Directorate
 also Director : Photo Medical Research Center (2007-2008)

KEK High Energy Accelerator Laboratory, Tsukuba: 2008-
Specially Appointed Professorship; Guest Professor

Japan Atomic Energy Agency: 2008-2012
Specially Appointed Researcher; Guest Researcher

Ludwig Maximilian University: 2008-2011
Chair Professor, Munich Advanced Centre Fellow

MEMBER: SSC Laboratory, 1989-1993
Lawrence Berkeley Laboratory, University of California, Berkeley,
(Affiliated) 1995-2000
Department of Applied Science, University of California at Davis, 1999-2000

HONORS: (primary)
Fellow, American Physical Society (1988) (for laser acceleration)
Farrington Daniels Award (2005) (for laser driven particle therapy)
Suwa Prize (2006) (laser acceleration)
Nishina Memorial Prize (2006) (laser acceleration)
The Blaise Pascal Chair awarded, Ecole Polytechnique (2009) (high field science)
Einstein Professorship of Chinese Academy of Science (2013) (high field science)
Enrico Fermi Prize (2015) (laser acceleration)
Academician, Russian Academy of Sciences (2016) (foreign member)
S. Chandrasekhar Prize (2018) (laser acceleration)
APS Robert Wilson Prize (2019) (wakefield accelerator)
EPS H. Alfvén Prize (2019) (laser acceleration)
OSA Charles Townes Award (2020) (laser wakefield acceleration)
OSA Fellow (2020)
(others)
Fellow, Japan Society for the Promotion of Science
Member, National Research Council (Commission H) of the National Academy of Science (global magnetospheric dynamics)
Robert W. Hamilton Award (1997, University Cooperative Society) (plasma astrophysics)
JAERI Excellence Prize (1999) (high field science simulation)
Fellow, JAEA (2008) (photo-medical research)
JAEA President's Award (2008) (relativistic mirror)
Achievement Prize, Laser Society of Japan (2012) (laser engineering)
UCI Distinguished Alumni Award for Outstanding Faculty Achievement (2024)

MEMBERSHIPS: Physical Society of Japan
Beta Alpha Phi
American Physical Society
American Geophysical Union
American Astronomical Society

Laser Society of Japan
 Optical Society of America (Optica)
 Sigma Xi

COMMITTEE SERVICE (some of):

Chairman, International Conference on Laser 1983 (San Francisco)
 Management Committee, Joint Institute for Fusion Theory (1984-1998)
 International Conference on Supercomputing co-organizer (1985)
 Steering Committee, Texas High Energy Physics Committee (1989-1993)
 Fellowship Committee, American Physical Society (1999,2001, 2017)
 American Physical Society, GPAP Vice Chair (2016-)
 Science and Technology Council, Laser Directorate, Lawrence Livermore
 National Laboratory (1999)
 Executive Committee, American Physical Society, Plasma Astrophysics (1999-
 2001)
 Laser Society of Japan, Steering Member and Director of 2005 Organizers
 International ‘Laser Physics 2005’, Co-Chair
 Trilateral Committee for Intense Lasers (Japan-China-Korea), Co-Chair (2005-
 2008)
 Chair, Beam Physics Division, Physical Society of Japan (2004-2008)
 Chair, Beam Physics Council of Japan (2004-2008)
 International Committee on Ultrahigh Intensity Lasers, Co-Chair (2004-2008);
 Chairman (2008-2016)
 Deputy Chair, Accelerator Society of Japan (2008-2010)
 Max Born Institute, Scientific Advisory Board (2006-2015)
 Extreme Light Infrastructure, Scientific Advisory Committee, Chairman (2008-
 2011)
 International Linear Collider Global Design Effort, Accelerator Advisory Panel
 (2009-)
 Institute Lumiere Extreme, Scientific Advisory Board
 Visiting Committee to the High Commissioner of French CEA (2015-2018)
 Extreme Light Infrastructure-Nuclear Pillar, International Science Advisory
 Board, Chairman (2011-2019); member (2019-)
 Establishment of the Norman Rostoker Distinguished Lecturer Award (2014):
 C. Barty (2014), G. Mourou (2015), F. Tamanoi (2016), W. Horton
 (2017), X.Q. Yan (2019), D. Strickland (2022), J. C. Kieffer (2023)
 Editorial Board, PTEP (Progress of Theoretical and Experimental Physics)
 (2014-)
 US Department of Energy Exascale Computing Project Industrial Council (2017-
 2024)
 Shanghai Coherent Light Source Facility SEL (Station of Extreme Light)
 International Review Committee (2017)
 American Physical Society, GPAP (Plasma Astrophysics), Vice Chair (2016-
 2017), Chair-elect (2017-2018). Chair (2018-2019)
 US-Japan Compact Tori Coordinating Committee US Chair (2017-)
 NIFS-TAE Collaboration Committee (2021-)

 Colloquium Committee (UCI Physics, 2014-)

COSI (Convergence Optical Science Initiative) Principal Investigator (appointed and funded by Vice Chancellor, 2014)
 Frederick Reines Committee Chair for invitation of Prof. Strickland (UCI Physics, 2019-2022)
 Award Committee (UCI physics, 2020-)
 PPP Committee Chair (VCR, UCI, 2019-)
 Reactor Operation Committee (UCI Physical Sciences, 2015-)
 SLAC FACET-II advanced accelerator E336 Project (USDoE co-PI, 2020-)
 SIOM International Advisory Committee (2020-)
 Co-Chair, Workshop on Beam Acceleration in Crystals and Nanostructures (Fermilab, June, 2019)
 Co-Chair, Uspekhi Forum of Climate Change and Global Energy Issues (Rus. Acad. Sci., Jan. 19, 2021); also Co-Editor of the Special Volume on Uspekhi "Climate Change and Global Energy Issues (with Pres. A. Sergeev, 2022)
 IUPAP Commission 16, Member (2021-2024), as under US Academy of Sciences, following IUPAP Member as the Chair of IUPAP Working Group (ICUIL) (2008-2016)
 PTET Editorial Member
 Government of Hungary-TAE collaborative Committee chair (2019-)
 NAS USLC/IUPAP (US Liaison Committee with IUPAP of National Academy of Science), Member (2022-2024)
 UCI Vice Chancellor for Research's ad hoc committee Chair for National User Facility (2022-)
 Exascale Computing Project (USDoE) IAC Member (2016-2024); Roundtable Member (2024-)

GRADUATE STUDENTS

(degrees conferred)

THE UNIVERSITY OF TEXAS AT AUSTIN

26 Ph.D. students (R. Sydora, J. Geary, E. Zaidmann, M. LeBrun, T. Kurki-Suonio, G. Bust, A. McAllister, S. Cable, R. Kinney, Jim Koga, J. Cobb, B. Chen, D. Barnett, D. Fisher, G. Tarkenton, G. Furnish, D. Wolf, W. Nystrom, J. Daniel, M. Ottinger, B. Rau, W. Chou, X. Chen, C. Lai, K. Noguchi, S. Cheshkov) supervised;

8 MSc students (T. Fujinami, C. Haswell, K. Lee, Z. Lin, U. Dittmann, R. Jones, F. Breitling, F. Raischel) supervised.

Ludwig Maximilian University

5 PhD students co-supervised (dissertation committee) (S. Rykovanov, K. Schmid, M. Fuchs, A. Henig, A. Buck)

University of California at Irvine

7 PhD students (D. Farinella, Y. W. Hwang, B. Nicks, S. Hakimi, J. Tanner, G. Huxtable, E. Barraza) supervised;

1MS student (P.C. Yeh) supervised.

2 Senior Thesis students (C. Kim, V. Flores); 1 Honors student (V. Flores)

Intern students supervised: C. Lau, C. Scott, John Koga, Lavernia, Jr, V. Klumper, G. Huxtable, G. Player

Norman Rostoker Graduate Scholarship (G. Player, 2021-)
 Helped contributed to the Applied Physics Program at UCI
 (including guidance of J. Barrett toward BS in Applied Phys.2022)
 Student Mr. G. Huxtable awarded APS GPAP Graduate Scholarship on
 his APS presentation paper with me (APS GPAP, Fall 2019); E.
 Barraza was awarded KPSI (Japan) Exchange Scholarship (2023)

TEACHING: The University of Texas at Austin, Department of Physics,
 Graduate and Undergraduate Courses
 University of California at Davis, Department of Applied Science,
 Graduate Courses
 Ludwig Maximilian University of Munich, Faculty of Physics,
 Graduate Courses (a term project by students was published in
 Phys. Rev. STAB (2011))
 University of California at Irvine
 Graduate and Undergraduate Courses
 Southern Cal Tri-Campus (UCI, UCLA, and UCSD) graduate teaching
 initiative in PHY249 (“Nonlinear Plasma Physics”, Winter, 2019,
 Zoom-videoed)
 PHY249 (“Physics of Fusion Reactors”, Spring, 2024)
 Quadra-Campus (UCI, UCLA, UCSD, UC Riverside) graduate courses
 PHY249 (“Plasma Astrophysics”, Spring, 2020, Zoomed)
 PHY249 (“Plasma Accelerator Physics”, Fall, 2021, Zoomed)
 PHY213B (“Electromagnetic Theory”, Spring, 2021, Spring 2022)

CONVERGENCE

ACTIVITIES: Applied Physics Program development (2013-)
 Developments of Academic-Industrial Liaison: bridging collaboration
 and, technical and personnel exchanges (helping manage of
 scientists (including: S. Dettrick, V. Matvienko, I. Isakov, S.
 Korepanov, S. Suyakov, S. Golubev, M. Kaur, D.
 Kobayashi, A. Korepanov, T. Matsumoto, A. Muchnikov, K.
 Pirogov, A. Tkachev, M. Tuszewski, S. Vdovichev, V. Vekselman,
 I. Karnavskiy, V. Pilard, S. Kamio, Y. Shimabukuro, Y. Fujiwara, D.
 Esaulov, Y. Ohshima, O. Belozarov)
 US DoE PPP (Public-Private Partnership) (2019-)
 Developments of UCI contracts from TAE to Profs. Z. Lin and P. Taborek
 Bridging UCI officers with those of TAE (Chancellor, Provost, VC,
 Dean) also with Universities of Ecole Polytechnique, Nihon, Kyoto,
 Szeged
 Principal Investigator, UCI (Norman Rostoker Graduate Fellowships
 2016-)
 Co-Principal Investigator, SLAC E336 Project (PI Dr. S. Corde, 2022-)
 Collaborative Activities:
 Nihon University (under Prof. T. Asai.): students exchange (F.
 Tanaka, T. Matsumoto, R. Hayata)
 National Institute for Fusion Science (NIFS; under Prof. M.
 Osakabe)

**VOLUNTARY
ACTIVITIES:**

University Extension lecturer
Toast Master International (member, Founder's District)
Students Association lecturer
Helping Students Chapter of American Nuclear Society
Poem Waka
JACL