# Resume: TOSHIKI TAJIMA

PERSONAL:

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, 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 (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. Alfven 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)

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 for Ultra Intense Lasers, Co-Chair (2006-2008); 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-)
Editorial Board, PTEP (Progress of Theoretical and Experimental Physics) (2014-)
US Department of Energy Exascale Computing Project Industrial Council (2017-)
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 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, 2020)
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), following IUPAP Member as the Chair of IUPAP Working Group (ICUIL) (2008-2016)
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-)

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
5 PhD students (D. Farinella, Y. W. Hwang, B. Nicks, S. Hakimi, J. Tanner);
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, A. Lavernia, V. Klumper, G. Huxtable, G. Player
Norman Rostoker Graduate Scholarship (G. Player, 2021-)
Student Mr. G. Huxtable awarded APS GPAP Graduate Scholarship on his APS presentation paper with me (APS GPAP, Fall 2019)

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
Tri-Campus (UCI, UCLA, and UCSD) graduate teaching initiative in
PHY249 ("Nonlinear Plasma Physics", Winter, 2019, Zoom-videoed)
Quadra-Campus (UCI, UCLA, UCSD, UC Riverside) graduate initiative
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 corps 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)
US DoE PPP (Public-Private Partnership) (2019-)
Developments of UCI contracts from TAE to Profs. Z. Lin and P. Taborek
Bridging UCI officers and those of TAE (Chancellor, Provost, VC, Dean) with Universities of Ecole Polytechnique, Nihon, Kyoto, Szeged
Principal Investigator, UCI (Norman Rostoker Graduate Fellowship, 2016-)
Co-Principal Investigator, SLAC E336 Project (PI Dr. S. Corde, 2022- )

VOLUNTARY ACTIVITIES:

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