Stanford

Sami Gamal-Eldin Tantawi

Professor of Particle Physics and Astrophysics

Curriculum Vitae available Online

Bio

BIO

For over a decade I have advocated for dedicated research efforts on the basic physics of room temperature high gradient structures and new initiatives for the associated RF systems. This required demanding multidisciplinary collaboration to harness limited resources. The basic elements of the research needed to be inclusive to address not only the fundamentals of accelerator structures but also the fundamentals of associated technologies such as RF manipulation and novel microwave power sources. These basic research efforts were not bundled with specific developments for an application or a general program. The emerging technologies promise a broad, transformational impact.

With this underlying philosophy in mind, in 2006 the US High Gradient Research Collaboration for which I am the spokesman was formed. SLAC is the host of this collaboration, which comprises MIT, ANL, University of Maryland and University of Colorado, NRL and a host of SBIR companies. This led to the revitalization of this research area worldwide. The international collaborative effort grew to include KEK in Japan, INFN, Frascati in Italy, the Cockcroft Institute in the UK, and the CLIC team at CERN.

This effort led to a new understanding of the geometrical effects affecting high gradient operations. The collaborative work led to new advances in understanding the gradient limits of photonic band gap structures. Now we have a new optimization methodology for accelerator structure geometries and ongoing research on alternate and novel materials. These efforts doubled the usable gradient in normal conducting high gradient linacs to more than 100 MV/m, thus revitalizing the spread of the technology to other applications including compact Inverse Compton Scattering gamma-ray sources for national security applications, and compact proton linacs for cancer therapy.

ACADEMIC APPOINTMENTS

- Professor, Particle Physics and Astrophysics
- Member, Stanford Cancer Institute

ADMINISTRATIVE APPOINTMENTS

- Chief Scientist, Accelerator Technology Research Division, SLAC National Accelerator laboratory, (2014-2021)
- Professor, Particle Physics and Astrophysics Department, (2012- present)
- Group Leader/Accelerator Technology Research Department Head, Stanford Linear Accelerator Center, (2006-2012)
- Associate Professor with Tenure, Physics and Astrophysics Department, (2005-2012)
- Associate Professor, Physics and Astrophysics Department, (2002-2005)
- High Power RF Group Leader., Stanford Linear Accelerator Center, Accelerator Research Department A, (1999-2006)

HONORS AND AWARDS

- Fellow, , American Physical Society (2005)
- Prize for achievements in accelerator physics and technology, US Particle Accelerator School (2003)

Publications

PUBLICATIONS

- **Status and future plans for C³ R&D** *JOURNAL OF INSTRUMENTATION*
  Nanni, E. A., Breidenbach, M., Li, Z., Vernieri, C., Wang, F., White, G., Bai, M., Belomestnykh, S., Bhat, P., Barklow, T., Berg, W. J., Borzenets, V., Byrd, et al
  2023; 18 (9)
- **Shielding Analysis of a Preclinical Bremsstrahlung X-ray FLASH Radiotherapy System within a Clinical Radiation Therapy Vault.** *Health physics*
  Rosenstrom, A., Santana-Leitner, M., Rokni, S., Shumail, M., Tantawi, S., Kwofie, J., Dewji, S., Loo, B. W.
  2023
- **XCC: an X-ray FEL-based ???? Compton collider Higgs factory** *JOURNAL OF INSTRUMENTATION*
  Barklow, T., Emma, C., Huang, Z., Naji, A., Nanni, E., Schwartzman, A., Tantawi, S., White, G.
  2023; 18 (7)
- **Frontiers in the Application of RF Vacuum Electronics.** *IEEE transactions on electron devices*
  Armstrong, C. M., Snively, E. C., Shumail, M., Nantista, C., Li, Z., Tantawi, S., Loo, B. W., Temkin, R. J., Griffin, R. G., Feng, J., Dionisio, R., Mentgen, F., Ayllon, et al
  2023; 70 (6): 2643-2655
- **High efficiency, low cost, RF sources for accelerators and colliders** *JOURNAL OF INSTRUMENTATION*
  Ives, R. L., Read, M., Bui, T., Marsden, D., Collins, G., Freund, H., Ho, R., Higgins, L., Walker, C., Conant, J., Chase, B., Reid, J., Kroc, et al
  2023; 18 (5)
- **Transformative Technology for FLASH Radiation Therapy.** *Applied sciences (Basel, Switzerland)*
  Schulte, R., Johnstone, C., Boucher, S., Esarey, E., Geddes, C. G., Kravchenko, M., Kutsaev, S., Loo, B. W., Méot, F., Mustapha, B., Nakamura, K., Nanni, E. A., Obst-Huebl, et al
  2023; 13 (8)
- **Transformative Technology for FLASH Radiation Therapy** *APPLIED SCIENCES-BASEL*
  Schulte, R., Johnstone, C., Boucher, S., Esarey, E., Geddes, C. R., Kravchenko, M., Kutsaev, S., Loo, B. W., Meot, F., Mustapha, B., Nakamura, K., Nanni, E. A., Obst-Huebl, et al
  2023; 13 (8)
- **Frontiers in the Application of RF Vacuum Electronics** *IEEE TRANSACTIONS ON ELECTRON DEVICES*
  Armstrong, C. M., Snively, E. C., Shumail, M., Nantista, C., Li, Z., Tantawi, S., Loo, B. W., Temkin, R. J., Griffin, R. G., Feng, J., Dionisio, R., Mentgen, F., Ayllon, et al
  2023
- **Monte Carlo simulation of shielding designs for a cabinet form factor preclinical MV-energy photon FLASH radiotherapy system.** *Medical physics*
  Rosenstrom, A., Leitner, M. S., Rokni, S. H., Shumail, M., Tantawi, S., Dewji, S., Jr, B. W.
  2023
- **A “Cool” route to the Higgs boson and beyond. The Cool Copper Collider** *JINST - Journal of Instrumentation*
  Vernieri, C., Nanni, E., Dasu, S., Peskin, M., Ntounis, D., et al
  2023; 18 (07)
- **High gradient off-axis coupled C-band Cu and CuAg accelerating structures** *APPLIED PHYSICS LETTERS*
  Schneider, M., Dolgashev, V., Lewellen, J. W., Tantawi, S. G., Nanni, E. A., Zuboraj, M., Fleming, R., Gorelov, D., Middendorf, M., Simakov, E. I.
  2022; 121 (25)
- **Design, fabrication, and tuning of a THz-driven electron gun** *PHYSICAL REVIEW ACCELERATORS AND BEAMS*
  Lewis, S. M., Merrick, J., Othman, M. K., Haase, A., Tantawi, S., Nanni, E. A.
  2022; 25 (12)

- **Bayesian optimisation to design a novel X-ray shaping device.** *Medical physics*
  Whelan, B., Trovati, S., Wang, J., Fahrig, R., Maxim, P. G., Hanuka, A., Shumail, M., Tantawi, S., Merrick, J., Perl, J., Keall, P., Jr, B. W.
  2022
- **High field hybrid photoinjector electron source for advanced light source applications** *PHYSICAL REVIEW ACCELERATORS AND BEAMS*
  Faillace, L., Agustsson, R., Behtouei, M., Bosco, F., Bruhwiler, D., Camacho, O., Carillo, M., Fukasawa, A., Gadjev, Giribono, A., Giuliano, L., Kutsaev, S., Majernik, N., et al
  2022; 25 (6)
- **Bayesian Optimization of a Novel Intensity Modulated X-Ray Source**
  Whelan, B., Keall, P., Perl, J., Wang, J., Trovati, S., Tantawi, S., Fahrig, R., Maxim, P., Shumail, M., Loo, B.
  WILEY.2022: E320
- **Variational Self-Consistent Theory for Beam-Loaded Cavities** *PHYSICAL REVIEW APPLIED*
  Naji, A., Tantawi, S.
  2021; 16 (4)
- **Experimental demonstration of particle acceleration with normal conducting accelerating structure at cryogenic temperature** *PHYSICAL REVIEW ACCELERATORS AND BEAMS*
  Nasr, M., Nanni, E., Breidenbach, M., Weathersby, S., Oriunno, M., Tantawi, S.
  2021; 24 (9)
- **High-gradient rf tests of welded X-band accelerating cavities** *PHYSICAL REVIEW ACCELERATORS AND BEAMS*
  Dolgashev, V. A., Faillace, L., Spataro, B., Tantawi, S., Bonifazi, R.
  2021; 24 (8)
- **A proton beam energy modulator for rapid proton therapy.** *The Review of scientific instruments*
  Lu, X., Li, Z., Dolgashev, V., Bowden, G., Sy, A., Tantawi, S., Nanni, E. A.
  2021; 92 (2): 024705
- **Design and demonstration of a distributed-coupling linear accelerator structure** *PHYSICAL REVIEW ACCELERATORS AND BEAMS*
  Tantawi, S., Nasr, M., Li, Z., Limborg, C., Borchard, P.
  2020; 23 (9)
- **An ultra-compact x-ray free-electron laser** *NEW JOURNAL OF PHYSICS*
  Rosenzweig, J. B., Majernik, N., Robles, R. R., Andonian, G., Camacho, O., Fukasawa, A., Kogar, A., Lawler, G., Miao, J., Musumeci, P., Naranjo, B., Sakai, Y., Candler, et al
  2020; 22 (9)
- **Experimental demonstration of externally driven millimeter-wave particle accelerator structure** *APPLIED PHYSICS LETTERS*
  Othman, M. K., Picard, J., Schaub, S., Dolgashev, V. A., Lewis, S. M., Neilson, J., Haase, A., Jawla, S., Spataro, B., Temkin, R. J., Tantawi, S., Nanni, E. A.
  2020; 117 (7)
- **Axion dark matter detection by superconducting resonant frequency conversion** *JOURNAL OF HIGH ENERGY PHYSICS*
  Berlin, A., D'Agnolo, R., Ellis, S. R., Nantista, C., Neilson, J., Schuster, P., Tantawi, S., Toro, N., Zhou, K.
  2020
- **Novel High-Power Microwave Circulator Employing Circularly Polarized Waves** *IEEE TRANSACTIONS ON PLASMA SCIENCE*
  Franzi, M. A., Tantawi, S., Dolgashev, V., Jongewaar, E., Eichner, J.
  2020; 48 (6): 1984–92
- **Initial Steps Towards A Clinical FLASH Radiotherapy System: Pediatric Whole Brain Irradiation with 40 MeV Electrons**
  Breitkreutz, D., Shumail, M., Bush, K., Tantawi, S., Maxim, P., Loo, B.
  WILEY.2020: E799
- **Initial Steps Towards a Clinical FLASH Radiotherapy System: Pediatric Whole Brain Irradiation with 40 MeV Electrons at FLASH Dose Rates.** *Radiation research*
  Breitkreutz, D. Y., Shumail, M. n., Bush, K. K., Tantawi, S. G., Maxim, P. G., Loo, B. W.
  2020

- **Modular High Power RF Sources for Compact Linear Accelerator Systems**
  Weatherford, B., Kemp, M., Lu, X., Merrick, J., Nanni, E., Neilson, J., Sy, A., Tantawi, S., IEEE
  IEEE.2020: 55-56

- **A THz-Driven Field Emission Electron Gun**
  Lewis, S. M., Merrick, J., Othman, M. K., Haase, A., Tantawi, S., Nanni, E. A., IEEE
  IEEE.2020

- **High Gradient and of Breakdown Measurements in a Millimeter-Wave Accelerating Cavity**
  Othman, M. K., Picard, J., Schaub, S., Dolgashev, V. A., Lewis, S., Spataro, B., Temkin, R. J., Tantawi, S., Nanni, E. A., IEEE
  IEEE.2020

- **Development of a millimeter-period rf undulator** *PHYSICAL REVIEW ACCELERATORS AND BEAMS*
  Toufexis, F., Tantawi, S. G.
  2019; 22 (12)

- **PHASER: A platform for clinical translation of FLASH cancer radiotherapy.** *Radiotherapy and oncology : journal of the European Society for Therapeutic Radiology and Oncology*
  Maxim, P. G., Tantawi, S. G., Loo, B. W.
  2019

- **Next generation high brightness electron beams from ultrahigh field cryogenic rf photocathode sources** *PHYSICAL REVIEW ACCELERATORS AND BEAMS*
  Rosenzweig, J. B., Cahill, A., Dolgashev, Emma, C., Fukasawa, A., Li, R., Limborg, C., Maxson, J., Musumeci, P., Nause, A., Pakter, R., Pompili, R., Roussel, R., et al
  2019; 22 (2)

- **Copper Reconsidered: Material Innovations to Transform Vacuum Electronics**
  Gamzina, D., Kozina, M., Mehta, A., Nanni, E. A., Tantawi, S., Welander, P. B., Horn, T., Ledford, C., IEEE
  IEEE.2019

- **A Classical Field Theory Formulation for the Numerical Solution of Time Harmonic Electromagnetic Fields** *IEEE JOURNAL ON MULTISCALE AND MULTIPHYSICS COMPUTATIONAL TECHNIQUES*
  Gold, A., Tantawi, S.
  2019; 4: 245-259

- **High-Gradient Test Results of W-Band Accelerator Structures**
  Othman, M. K., Picard, J., Schaub, S., Dolgashev, V. A., Jawla, S., Spataro, B., Temkin, R. J., Tantawi, S., Nanni, E. A., IEEE
  IEEE.2019

- **Ultra-high brightness electron beams from very-high field cryogenic radiofrequency photocathode sources**
  Rosenzweig, J. B., Cahill, A., Carlsten, B., Castorina, G., Croia, M., Emma, C., Fukusawa, A., Spataro, B., Alesini, D., Dolgashev, V., Ferrario, M., Lawler, G., Li, et al
  ELSEVIER SCIENCE BV.2018: 224–28

- **Efficient dual space source interpolation method for the numerical solution of self-consistent static beam-wave interactions** *PHYSICAL REVIEW ACCELERATORS AND BEAMS*
  Gold, A., Tantawi, S.
  2018; 21 (11)

- **Advances in high gradient normal conducting accelerator structures** *NUCLEAR INSTRUMENTS & METHODS IN PHYSICS RESEARCH SECTION A-ACCELERATORS SPECTROMETERS DETECTORS AND ASSOCIATED EQUIPMENT*
  Simakov, E. I., Dolgashev, V. A., Tantawi, S. G.
  2018; 907: 221–30

- **SLAC Microresonator Radio Frequency (SMuRF) Electronics for Read Out of Frequency-Division-Multiplexed Cryogenic Sensors**
  Kernasovskiy, S. A., Kuenstner, S. E., Karpel, E., Ahmed, Z., Van Winkle, D. D., Smith, S., Dusatko, J., Frisch, J. C., Chaudhuri, S., Cho, H. M., Dober, B. J., Henderson, S. W., Hilton, et al
  SPRINGER/PLENUM PUBLISHERS.2018: 570–77

- **High gradient experiments with X-band cryogenic copper accelerating cavities** *PHYSICAL REVIEW ACCELERATORS AND BEAMS*

Cahill, A. D., Rosenzweig, J. B., Dolgashev, V. A., Tantawi, S. G., Weathersby, S.
2018; 21 (10)

- **Measurements of electron beam deflection and rf breakdown rate from a surface wave guided in metallic mm-wave accelerating structures** *PHYSICAL REVIEW ACCELERATORS AND BEAMS*
  Dal Forno, M., Dolgashev, V., Bowden, G., Clarke, C., Hogan, M., McCormick, D., Novokhatski, A., O'Shea, B., Spataro, B., Weathersby, S., Tantawi, S. G.
  2018; 21 (9)

- **rf losses in a high gradient cryogenic copper cavity** *PHYSICAL REVIEW ACCELERATORS AND BEAMS*
  Cahill, A. D., Rosenzweig, J. B., Dolgashev, V. A., Li, Z., Tantawi, S. G., Weathersby, S.
  2018; 21 (6)

- **Results from mm-Wave Accelerating Structure High-Gradient Tests**
  Nanni, E. A., Dolgashev, V., Jawla, S., Neilson, J., Othman, M., Picard, J., Schaub, S., Spataro, B., Tantawi, S., Temkin, R. J., IEEE
  IEEE.2018

- **Development for a supercompact X-band pulse compression system and its application at SLAC** *PHYSICAL REVIEW ACCELERATORS AND BEAMS*
  Wang, J. W., Tantawi, S. G., Xu, C., Franzi, M., Krejcik, P., Bowden, G., Condamoor, S., Ding, Y., Dolgashev, V., Eichner, J., Haase, A., Lewandowski, J. R., Xiao, et al
  2017; 20 (11)

- **RF design for the TOPGUN photogun: A cryogenic normal conducting copper electron gun** *NUCLEAR INSTRUMENTS & METHODS IN PHYSICS RESEARCH SECTION A-ACCELERATORS SPECTROMETERS DETECTORS AND ASSOCIATED EQUIPMENT*
  Cahill, A. D., Fukasawa, A., Pakter, R., Rosenzweig, J. B., Dolgashev, V. A., Limborg-Deprey, C., Tantawi, S., Spataro, B., Castorina, G.
  2017; 865: 105–8

- **High gradient tests of metallic mm-wave accelerating structures** *NUCLEAR INSTRUMENTS & METHODS IN PHYSICS RESEARCH SECTION A-ACCELERATORS SPECTROMETERS DETECTORS AND ASSOCIATED EQUIPMENT*
  Dal Forno, M., Dolgashev, V., Bowden, G., Clarke, C., Hogan, M., McCormick, D., Novokhatski, A., O'Shea, B., Spataro, B., Weathersby, S., Tantawi, S. G.
  2017; 864: 12–28

- **Experimental demonstration of a 5th harmonic mm-wave frequency multiplying vacuum tube** *APPLIED PHYSICS LETTERS*
  Toufexis, F., Tantawi, S. G., Jensen, A., Dolgashev, V. A., Haase, A., Fazio, M. V., Borchard, P.
  2017; 110 (26)

- **Fabrication and radio frequency test of large-area MgB2 films on niobium substrates** *SUPERCONDUCTOR SCIENCE & TECHNOLOGY*
  Ni, Z., Guo, X., Welander, P. B., Yang, C., Franzi, M., Tantawi, S., Feng, Q., Liu, K.
  2017; 30 (4)

- **Growth of magnesium diboride films on 2 inch diameter copper discs by hybrid physical-chemical vapor deposition** *SUPERCONDUCTOR SCIENCE & TECHNOLOGY*
  Withanage, W. K., Xi, X. X., Nassiri, A., Lee, N., Wolak, M. A., Tan, T., Welander, P. B., Franzi, M., Tantawi, S., Kustom, R. L.
  2017; 30 (4)

- **Prototyping high-gradient mm-wave accelerating structures**
  Nanni, E. A., Dolgashev, V. A., Haase, A., Neilson, J., Tantawi, S., Schaub, S. C., Temkin, R. J., Spataro, B., IOP
  IOP PUBLISHING LTD.2017

- **Compact Linac-Driven Light Sources Utilizing mm-period RF Undulators**
  Toufexis, F., Dolgashev, V. A., Limborg-Deprey, C., Tantawi, S. G., Khounsary, A. M., Pareschi, G.
  SPIE-INT SOC OPTICAL ENGINEERING.2017

- **High Gradient mm-Wave Metallic Accelerating Structures**
  Dal Forno, M., Dolgashev, V., Bowden, G., Clarke, C., Hogan, M., McCormick, D., Nanni, E. A., Neilson, J., Novokhatski, A., O'Shea, B., Spataro, B., Weathersby, S., Tantawi, et al
  AMER INST PHYSICS.2017

- **First High Power Results from the 57.12 GHz 5th Harmonic Frequency Multiplier**
  Toufexis, F., Tantawi, S. G., Jensen, A., Dolgashev, V. A., Haase, A., Fazio, M., Borchard, P., IEEE
  IEEE.2017

- **rf breakdown measurements in electron beam driven 200 GHz copper and copper-silver accelerating structures** *PHYSICAL REVIEW ACCELERATORS AND BEAMS*
  Dal Forno, M., Dolgashev, V., Bowden, G., Clarke, C., Hogan, M., McCormick, D., Novokhatski, A., O'Shea, B., Spataro, B., Weathersby, S., Tantawi, S. G.
  2016; 19 (11)

- **X-band accelerator structures: On going R&D at the INFN**
  Gatti, G., Marcelli, A., Spataro, B., Dolgashev, V., Lewandowski, J., Tantawi, S. G., Yeremian, A. D., Higashi, Y., Rosenzweig, J., Sarti, S., Caliendo, C., Castorina, G., Cibin, et al
  ELSEVIER.2016: 206–12

- **Theory of electromagnetic insertion devices and the corresponding synchrotron radiation** *PHYSICAL REVIEW ACCELERATORS AND BEAMS*
  Shumail, M., Tantawi, S. G.
  2016; 19 (7)

- **Compact rf polarizer and its application to pulse compression systems** *PHYSICAL REVIEW ACCELERATORS AND BEAMS*
  Franzi, M., Wang, J., Dolgashev, V., Tantawi, S.
  2016; 19 (6)

- **Conceptual design of X band waveguide dual circular polarizer** *PHYSICAL REVIEW ACCELERATORS AND BEAMS*
  Xu, C., Tantawi, S., Wang, J.
  2016; 19 (6)

- **Experimental measurements of rf breakdowns and deflecting gradients in mm-wave metallic accelerating structures** *PHYSICAL REVIEW ACCELERATORS AND BEAMS*
  Dal Forno, M., Dolgashev, V., Bowden, G., Clarke, C., Hogan, M., McCormick, D., Novokhatski, A., Spataro, B., Weathersby, S., Tantawi, S. G.
  2016; 19 (5)

- **High power tests of an electroforming cavity operating at 11.424 GHz** *JOURNAL OF INSTRUMENTATION*
  Dolgashev, V. A., Gatti, G., Higashi, Y., Leonardi, O., Lewandowski, J. R., Marcelli, A., Rosenzweig, J., Spataro, B., Tantawi, S. G., Yeremian, D. A.
  2016; 11

- **Conceptual design of a sapphire loaded coupler for superconducting radio-frequency 1.3 GHz cavities** *PHYSICAL REVIEW ACCELERATORS AND BEAMS*
  Xu, C., Tantawi, S.
  2016; 19 (2)

- **rf breakdown tests of mm-wave metallic accelerating structures** *Physical Review Accelerators and Beams*
  Dal Forno, M., Dolgashev, V., Bowden, G., Clarke, C., Hogan, M., McCormick, D., Novokhatski, A., Spataro, B., Weathersby, S., Tantawi, S. G.
  2016; 19 (1)

- **Progress on Design of Radial Klystrons**
  Dal Forno, M., Tantawi, S. G., Ruth, R. D., Jensen, A., IEEE
  IEEE.2016

- **A New Compact High-Power Microwave Phase Shifter** *IEEE TRANSACTIONS ON MICROWAVE THEORY AND TECHNIQUES*
  Chang, C., Guo, L., Tantawi, S. G., Liu, Y., Li, J., Chen, C., Huang, W.
  2015; 63 (6): 1875-1882

- **Comparison of film measurements and Monte Carlo simulations of dose delivered with very high-energy electron beams in a polystyrene phantom** *MEDICAL PHYSICS*
  Bazalova-Carter, M., Liu, M., Palma, B., Dunning, M., McCormick, D., Hemsing, E., Nelson, J., Jobe, K., Colby, E., Koong, A. C., Tantawi, S., Dolgashev, V., Maxim, et al
  2015; 42 (4): 1606-1613

- **Characterization of thick conducting molybdenum films: Enhanced conductivity via thermal annealing** *SURFACE & COATINGS TECHNOLOGY*
  Marcelli, A., Spataro, B., Sarti, S., Dolgashev, V. A., Tantawi, S., Yeremian, D. A., Higashi, Y., Parodi, R., Notargiacomo, A., Xu, J., Cappuccio, G., Gatti, G., Cibin, et al
  2015; 261: 391–97

- **Design and analysis of a radial X-band klystron**
  Dal Forno, M., Tantawi, S. G., Ruth, R. D., Jensen, A., IEEE

IEEE.2015

- **X-Band Multi-Beam Klystron Design and Progress Report**
  Jensen, A., Neilson, J., Tantawi, S., IEEE
  IEEE.2015

- **Dielectric laser accelerators** *REVIEWS OF MODERN PHYSICS*
  England, R. J., Noble, R. J., Bane, K., Dowell, D. H., Ng, C., Spencer, J. E., Tantawi, S., Wu, Z., Byer, R. L., Peralta, E., Soong, K., Chang, C., Montazeri, et al
  2014; 86 (4): 1337-1389

- **Compact x-ray source based on burst-mode inverse Compton scattering at 100 kHz** *PHYSICAL REVIEW SPECIAL TOPICS-ACCELERATORS AND BEAMS*
  Graves, W. S., Bessuille, J., Brown, P., Carbajo, S., Dolgashev, V., Hong, K., Ihloff, E., Khaykovich, B., Lin, H., Murari, K., Nanni, E. A., Resta, G., Tantawi, et al
  2014; 17 (12)

- **Coupling power into accelerating mode of a three-dimensional silicon woodpile photonic band-gap waveguide** *PHYSICAL REVIEW SPECIAL TOPICS-ACCELERATORS AND BEAMS*
  Wu, Z., England, R., Ng, C., Cowan, B., McGuinness, C., Lee, C., Qi, M., Tantawi, S.
  2014; 17 (8)

- **Experimental Demonstration of a Tunable Microwave Undulator** *PHYSICAL REVIEW LETTERS*
  Tantawi, S., Shumail, M., Neilson, J., Bowden, G., Chang, C., Hemsing, E., Dunning, M.
  2014; 112 (16)

- **High Power S-band Window Optimized to Minimize Electric and Magnetic Field on the Surface**
  Yeremian, A. D., Dolgashev, V. A., Tantawi, S. G., IEEE
  IEEE.2014: 459–60

- **Results of High Power Tests of Dual Mode Accelerating Structure**
  Dolgashev, V. A., Tantawi, S. G., Yeremian, A. D., Weathersby, S. P., Lewandowski, J. R., IEEE
  IEEE.2014: 401

- **High-gain X-ray free electron laser by beat-wave terahertz undulator** *PHYSICS OF PLASMAS*
  Chang, C., Hei, D., Pellegrin, C., Tantawi, S.
  2013; 20 (12)

- **Molybdenum sputtering film characterization for high gradient accelerating structures** *CHINESE PHYSICS C*
  Bini, S., Spataro, B., Marcelli, A., Sarti, S., Dolgashev, V. A., Tantawi, S., Yeremian, A. D., Higashi, Y., Grimaldi, M. G., Romano, L., Ruffino, F., Parodi, R., Cibin, et al
  2013; 37 (9)

- **High power breakdown testing of a photonic band-gap accelerator structure with elliptical rods** *PHYSICAL REVIEW SPECIAL TOPICS-ACCELERATORS AND BEAMS*
  Munroe, B. J., Cook, A. M., Shapiro, M. A., Temkin, R. J., Dolgashev, V. A., Laurent, L. L., Lewandowski, J. R., Yeremian, A., Tantawi, S. G., Marsh, R. A.
  2013; 16 (1)

- **NOVEL COMPACT WAVEGUIDE DUAL CIRCULAR POLARIZER** *PROGRESS IN ELECTROMAGNETICS RESEARCH-PIER*
  Chang, C., Tantawi, S., Church, S., Neilson, J., Larkoski, P. V.
  2013; 136: 1-16

- **Structural and morphological characterization of Mo coatings for high gradient accelerating structures**
  Xu, Y., Spataro, B., Sarti, S., Dolgashev, V. A., Tantawi, S., Yeremian, A. D., Higashi, Y., Grimaldi, M. G., Romano, L., Ruffino, F., Parodi, R., Caliendo, C., Notargiacomo, et al
  IOP PUBLISHING LTD.2013

- **Electron dynamics and transverse-kick elimination in a high-field short-period helical microwave undulator** *APPLIED PHYSICS LETTERS*
  Chang, C., Shumail, M., Tantawi, S., Neilson, J., Pellegrini, C.
  2012; 101 (16)

- **Development of X-band accelerating structures for high gradients** *CHINESE PHYSICS C*
  Bini, S., Chimenti, V., Marcelli, A., Palumbo, L., Spataro, B., Dolgashev, V. A., Tantawi, S., Yeremian, A. D., Higashi, Y., Grimaldi, M. G., Romano, L., Ruffino, F., Parodi, et al

2012; 36 (7): 639–47

- **Technology developments for a large-format heterodyne MMIC array at W-band** *INTERNATIONAL JOURNAL OF MICROWAVE AND WIRELESS TECHNOLOGIES*
  Sieth, M., Church, S., Lau, J. M., Voll, P., Gaier, T., Kangaslahti, P., Samoska, L., Soria, M., Cleary, K., Gawande, R., Readhead, A. C., Reeves, R., Harris, et al
  2012; 4 (3): 299-307

- **Monte Carlo Simulations and Experimental Validation of Rapid Dose Delivery with Very High-Energy Electron Beams**
  Bazalova, M., Maxim, P., Tantawi, S., Colby, E., Koong, A., Loo, B. W.
  AMER ASSOC PHYSICISTS MEDICINE AMER INST PHYSICS.2012: 3944

- **A G-band cryogenic MMIC heterodyne receiver module for astronomical applications** *INTERNATIONAL JOURNAL OF MICROWAVE AND WIRELESS TECHNOLOGIES*
  Voll, P., Samoska, L., Church, S., Lau, J. M., Sieth, M., Gaier, T., Kangaslahti, P., Soria, M., Tantawi, S., Van Winkle, D.
  2012; 4 (3): 283-289

- **A coaxial 2D-periodic perforated directional coupler** *RADIOPHYSICS AND QUANTUM ELECTRONICS*
  Danilov, Y., Petelin, M. I., Tantawi, S.
  2012; 54 (11): 731–36

- **Disk-Loaded RF Waveguide Matching Techniques Applied to Silicon Woodpile Accelerator**
  Wu, Z., England, J., Ng, C., Tantawi, S., Zgadzaj, R., Gaul, E., Downer, M. C.
  AMER INST PHYSICS.2012: 535–40

- **STUDIES ON THIN FILM MgB2 FOR APPLICATIONS TO RF STRUCTURES FOR PARTICLE ACCELERATORS**
  Tajima, T., Haberkorn, N. F., Civale, L., Schulze, R. K., Inoue, H., Guo, J., Dolgashev, V. A., Martin, D. W., Tantawi, S. G., Yoneda, C. G., Moeckly, B. H., Yung, C., Proslier, et al
  AMER INST PHYSICS.2012: 297–304

- **The GALAXIE All-Optical FEL Project**
  Rosenzweig, J. B., Arab, E., Andonian, G., Cahill, A., Fitzmorris, K., Fukusawa, A., Hoang, P., Jovanovic, I., Marcus, G., Marinelli, A., Murokh, A., Musumeci, P., Naranjo, et al
  AMER INST PHYSICS.2012: 493–98

- **Beam Dynamics Studies of a Helical X-Band RF Undulator**
  Shumail, M., Bowden, G., Chang, C., Neilson, J., Tantawi, S., Zgadzaj, R., Gaul, E., Downer, M. C.
  AMER INST PHYSICS.2012: 752–56

- **THEORY AND EXPERIMENT OF A COMPACT WAVEGUIDE DUAL CIRCULAR POLARIZER** *PROGRESS IN ELECTROMAGNETICS RESEARCH-PIER*
  Chang, C., Church, S., Tantawi, S., Voll, P., Sieth, M., Devaraj, K.
  2012; 131: 211-225

- **X-band active-passive rf pulse compressor with plasma switches** *PHYSICAL REVIEW SPECIAL TOPICS-ACCELERATORS AND BEAMS*
  Vikharev, A. L., Ivanov, O. A., Gorbachev, A. M., Lobaev, M. A., Isaev, V. A., Tantawi, S. G., Lewandowski, J. R., Hirshfield, J. L.
  2011; 14 (12)

- **Progress on scanning field emission microscope development for surface observation**
  Higashi, Y., Higo, T., Matsumoto, S., Yokoyama, K., Zhang Xiaowei, Dolgashev, V., Tantawi, S., Spataro, B.
  ELSEVIER SCIENCE BV.2011: 156–59

- **Demonstration of the high RF power production feasibility in the CLIC power extraction and transfer structure [PETS]**
  Cappelletti, A., Dolgashev, V., Lewandoski, J., Tantawi, S., Weathersby, S., Zelinski, J.
  ELSEVIER SCIENCE BV.2011: 78–81

- **High-power comparison among brazed, clamped and electroformed X-band cavities**
  Spataro, B., Alesini, D., Chimenti, V., Dolgashev, V., Higashi, Y., Migliorati, M., Mostacci, A., Parodi, R., Tantawi, S. G., Yeremian, A. D.
  ELSEVIER SCIENCE BV.2011: 88–93

- **Technological issues and high gradient test results on X-band molybdenum accelerating structures**
  Spataro, B., Alesini, D., Chimenti, V., Dolgashev, V., Haase, A., Tantawi, S. G., Higashi, Y., Marrelli, C., Mostacci, A., Parodi, R., Yeremian, A. D.

ELSEVIER SCIENCE BV.2011: 114–21

- **VELOCIRAPTOR: An X-band photoinjector and linear accelerator for the production of Mono-Energetic gamma-rays** *NUCLEAR INSTRUMENTS & METHODS IN PHYSICS RESEARCH SECTION A-ACCELERATORS SPECTROMETERS DETECTORS AND ASSOCIATED EQUIPMENT*
  Anderson, S. G., ALBERT, F., Bayramian, A. J., Beer, G., Bonanno, R. E., Cross, R. R., Deis, G., Ebbers, C. A., Gibson, D. J., Hartemann, F. V., Houck, T. L., Marsh, R. A., McNabb, et al
  2011; 657 (1): 140-149
- **Design of RF feed system and cavities for standing-wave accelerator structure**
  Neilson, J., Tantawi, S., Dolgashev, V.
  ELSEVIER.2011: 52–54
- **The effects of magnetic field on single-surface resonant multipactor** *JOURNAL OF APPLIED PHYSICS*
  Chang, C., Verboncoeur, J., Tantawi, S., Jing, C.
  2011; 110 (6)
- **Experimental study of rf pulsed heating** *PHYSICAL REVIEW SPECIAL TOPICS-ACCELERATORS AND BEAMS*
  Laurent, L., Tantawi, S., Dolgashev, V., Nantista, C., Higashi, Y., Aicheler, M., Heikkinen, S., Wuensch, W.
  2011; 14 (4)
- **X-band photonic band-gap accelerator structure breakdown experiment** *PHYSICAL REVIEW SPECIAL TOPICS-ACCELERATORS AND BEAMS*
  Marsh, R. A., Shapiro, M. A., Temkin, R. J., Dolgashev, V. A., Laurent, L. L., Lewandowski, J. R., Yeremian, A., Tantawi, S. G.
  2011; 14 (2)
- **Technology developments for a scalable heterodyne MMIC array at W-band**
  Sieth, M., Church, S., Lau, J. M., Voll, P., Gaier, T., Kangaslahti, P., Samoska, L., Soria, M., Cleary, K., Gawande, R., Readhead, A. S., Reeves, R., Harris, et al
  IEEE.2011: 527–30
- **A G-Band Cryogenic MMIC Heterodyne Receiver Module for Astronomical Applications**
  Voll, P., Samoska, L., Church, S., Lau, J. M., Sieth, M., Gaier, T., Kangaslahti, P., Soria, M., Tantawi, S., Van Winkle, D., IEEE
  IEEE.2011: 523–26
- **Geometric dependence of radio-frequency breakdown in normal conducting accelerating structures** *APPLIED PHYSICS LETTERS*
  Dolgashev, V., Tantawi, S., Higashi, Y., Spataro, B.
  2010; 97 (17)
- **Progress Toward Externally Powered X-Band Dielectric-Loaded Accelerating Structures** *IEEE TRANSACTIONS ON PLASMA SCIENCE*
  Jing, C., Gai, W., Power, J. G., Konecny, R., Liu, W., Gold, S. H., Kinkead, A. K., Tantawi, S. G., Dolgashev, V., Kanareykin, A.
  2010; 38 (6): 1354–60
- **Development of MMIC receivers for cosmic microwave background interferometry** *Conference on Millimeter, Submillimeter, and Far-Infrared Detectors and Instrumentation for Astronomy V*
  Sieth, M., Lau, J. M., Voll, P., Church, S., Kangaslahti, P., Samoska, L., Soria, M., Gaier, T., Van Winkle, D., Neilson, J., Tantawi, S., Cleary, K., Readhead, et al
  SPIE-INT SOC OPTICAL ENGINEERING.2010
- **RF Critical Field Measurement of MgB2 Thin Films Coated on Nb**
  Tajima, T., Eremeev, G., Zou, G., Dolgashev, V., Martin, D., Nantista, C., Tantawi, S., Yoneda, C., Moeckly, B. H., Campisi, I., IOP
  IOP PUBLISHING LTD.2010
- **Research and Development for Ultra-High Gradient Accelerator Structures**
  Tantawi, S. G., Dolgashev, V., Higashi, Y., Spataro, B., Gold, S. H., Nusinovich, G. S.
  AMER INST PHYSICS.2010: 29-+
- **Design of RF Feed System for Standing-Wave Accelerator Structures**
  Neilson, J., Tantawi, S., Dolgashev, V., Gold, S. H., Nusinovich, G. S.
  AMER INST PHYSICS.2010: 463–66
- **Cryogenic RF Material Testing with a High-Q Copper Cavity** *14th Workshop on Advanced Accelerator Concepts*
  Guo, J., Tantawi, S., Martin, D., Yoneda, C.
  AMER INST PHYSICS.2010: 330–335

- **Development of a 150 GHz MMIC module prototype for large-scale CMB radiation experiments** *Conference on Millimeter, Submillimeter, and Far-Infrared Detectors and Instrumentation for Astronomy V*
  Voll, P., Lau, J. M., Sieth, M., Church, S. E., Samoska, L. A., Kangaslahti, P. P., Soria, M., Gaier, T. C., Van Winkle, D., Tantawi, S.
  SPIE-INT SOC OPTICAL ENGINEERING.2010
- **An Analytical Design and Analysis Method for a High-Power Circular to Rectangular Waveguide Mode Converter and Its Applications** *IEEE TRANSACTIONS ON MICROWAVE THEORY AND TECHNIQUES*
  Yeddulla, M., Tantawi, S., Guo, J., Dolgashev, V.
  2009; 57 (6): 1516–25
- **MgB2 for application to RF cavities for accelerators** *Applied Superconductivity Conference*
  Tajima, T., Canabal, A., Zhao, Y., Romanenko, A., Moeckly, B. H., Nantista, C. D., Tantawi, S., Phillips, L., Iwashita, Y., Campisi, I. E.
  IEEE-INST ELECTRICAL ELECTRONICS ENGINEERS INC.2007: 1330–33
- **Active RF pulse compression using electrically controlled semiconductor switches**
  Guoo, J., Tantawi, S., IEEE
  IEEE.2007: 4189–91
- **Superconducting materials testing with a high-Q copper FR cavity**
  Tantawi, S. G., Dolgashev, V., Bowden, G., Lewandowski, J., Nantista, C. D., Canabal, A., Tajima, T., Campisi, I. E., IEEE
  IEEE.2007: 4126-+
- **High power tests of normal conducting single-cell structures**
  Dolgashev, V. A., Tantawi, S. G., Nantista, C. D., Higashi, Y., Higo, T., IEEE
  IEEE.2007: 4186-+
- **Development of a dielectric-loaded test accelerator**
  Gold, S. H., Kinkead, A. K., Gai, W., Power, J. G., Konecny, R., Long, J., Jing, C., Tantawi, S. G., Nantista, C. D., IEEE
  IEEE.2007: 2455-+
- **Analysis of a compact circular TE(0,1) - rectangular TE(0,2) waveguide mode converter**
  Yeddulla, M., Tantawi, S., IEEE
  IEEE.2007: 1157–59
- **Active RF pulse compression using an electrically controlled semiconductor switch** *NEW JOURNAL OF PHYSICS*
  Guo, J., Tantawi, S.
  2006; 8
- **rf distribution system for a set of standing-wave accelerator structures** *PHYSICAL REVIEW SPECIAL TOPICS-ACCELERATORS AND BEAMS*
  Tantawi, S. G.
  2006; 9 (11)
- **Development of ultra-fast silicon switches for active X-band high power RF compression systems** *7th Workshop on High Energy Density and High Power RF*
  Guo, J. Q., Tantawi, S.
  AMER INST PHYSICS.2006: 454–462
- **Experiments on active RF pulse compressors using plasma switches**
  Vikharev, A. L., Ivanov, O. A., Gorbachev, A. M., Isaev, V. A., Kuzikov, S. V., Koldanov, V. A., Lobaev, M. A., Gold, S. H., Kinkead, A. K., Nezhevenko, O. A., Hirshfield, J. L., Tantawi, S., Nantista, et al
  AMER INST PHYSICS.2006: 463-+
- **Design of a compact, multi-megawatt circular TE01 mode converter**
  Dolgashev, V. A., Tantawi, S. G., Nantista, C. D., Abe, D. K., Nusinovich, G. S.
  AMER INST PHYSICS.2006: 431-+
- **Selective coupling using patterns of perforations between modes of oversized structures**
  Petelin, M., Tantawi, S., Danilov, Y., Abe, D. K., Nusinovich, G. S.
  AMER INST PHYSICS.2006: 416-+
- **High-power multimode X-band rf pulse compression system for future linear colliders** *PHYSICAL REVIEW SPECIAL TOPICS-ACCELERATORS AND BEAMS*

Tantawi, S. G., Nantista, C. D., Dolgashev, V. A., Pearson, C., Nelson, J., Jobe, K., Chan, J., Fant, K., Frisch, J., Atkinson, D.
2005; 8 (4)

- **Test bed for superconducting materials**
  Nantista, C., Tantawi, S., Weisend, J., Siemann, R., Dolgashev, Campisi, IEEE
  IEEE.2005: 4370–72
- **High gradient performance of NLC/GLC X-band accelerating structures**
  Dobert, S., Adolphsen, C., Bowden, G., Burke, D., Chan, J., Dolgashev, Frisch, J., Jobe, K., Jones, R., Lewandowski, J., Kirby, R., Li, Z., McCormick, D., et al
  IEEE.2005: 1299–1301
- **Distributed Bragg coupler for optical all-dielectric electron accelerator**
  Zhang, Z., Tantawi, S., Ruth, R., IEEE
  IEEE.2005: 2721–23
- **Low-field accelerator structure couplers and design techniques** *PHYSICAL REVIEW SPECIAL TOPICS-ACCELERATORS AND BEAMS*
  Nantista, C., Tantawi, S., Dolgashev
  2004; 7 (7)
- **Multimoded reflective delay lines and their application to resonant delay line rf pulse compression systems** *PHYSICAL REVIEW SPECIAL TOPICS-ACCELERATORS AND BEAMS*
  Tantawi, S. G.
  2004; 7 (3)
- **A novel circular TE01-mode bend for ultra-high-power applications** *JOURNAL OF ELECTROMAGNETIC WAVES AND APPLICATIONS*
  Tantawi, S. G.
  2004; 18 (12): 1679–87
- **Status of x-band standing wave structure studies at SLAC** *20th Biennial Particle Accelerator Conference*
  Dolgashev, V. A., Adolphsen, C., Burke, D. L., Bowden, G., Jones, R. M., Lewandowski, J., Li, Z., Loewen, R., Miller, R. H., Ng, C., Pearson, C., Ruth, R. D., Tantawi, et al
  IEEE.2003: 1264–1266
- **Effect of RF parameters on breakdown limits in high-vacuum X-band structures**
  Dolgashev, V. A., Tantawi, S. G., Gold, S. H., Nusinovich, G. S.
  AMER INST PHYSICS.2003: 151–65
- **Recent advances in RF pulse compressor systems at SLAC**
  Tantawi, S. G., Nantista, C. D., Gold, S. H., Nusinovich, G. S.
  AMER INST PHYSICS.2003: 172–86
- **High power tests of a multimode X-band RF distribution system**
  Tantawi, S., Nantista, C., Chew, J., Lucas, P., Webber, S.
  IEEE.2003: 482–86
- **Transverse impedance bench measurements in NLC/JLC accelerating structures**
  Baboi, N., Bowden, G. B., Jones, R. M., Tantawi, S. G., Lewandowski, Chew, J., Lucas, P., Webber, S.
  IEEE.2003: 1261–63
- **Novel accelerator structure couplers**
  Nantista, C. D., Dolgashev, V. A., Tantawi, S. G., Chew, J., Lucas, P., Webber, S.
  IEEE.2003: 1276–78
- **Circuit and scattering matrix analysis of the wire measurement method of beam impedance in accelerating structures**
  Jones, R. M., Baboi, N., Tantawi, S. G., Kroll, N. M., Chew, J., Lucas, P., Webber, S.
  IEEE.2003: 1270–72
- **Measurements of the suitability of large rock salt formations for radio detection of high-energy neutrinos** *NUCLEAR INSTRUMENTS & METHODS IN PHYSICS RESEARCH SECTION A-ACCELERATORS SPECTROMETERS DETECTORS AND ASSOCIATED EQUIPMENT*
  Gorham, P., Saltzberg, D., Odian, A., Williams, D., Besson, D., Frichter, G., Tantawi, S.
  2002; 490 (3): 476–91

- **Development of high power X-band semiconductor microwave switch for pulse compression systems of future linear colliders** *PHYSICAL REVIEW SPECIAL TOPICS-ACCELERATORS AND BEAMS*
  Tamura, F., Tantawi, S. G.
  2002; 5 (6)
- **Design and cold testing of a compact TE01 omicron to TE20 square mode converter** *IEEE TRANSACTIONS ON PLASMA SCIENCE*
  Spassovsky, Gouveia, E. S., Tantawi, S. G., Hogan, B. P., Lawson, W., Granatstein, V. L.
  2002; 30 (3): 787–93
- **Multimoded rf delay line distribution system for the Next Linear Collider** *PHYSICAL REVIEW SPECIAL TOPICS-ACCELERATORS AND BEAMS*
  Tantawi, S. G., Nantista, C., Kroll, N., Li, Z., Miller, R., Ruth, R., Wilson, P., Neilson, J.
  2002; 5 (3)
- **Active and passive RF components for high-power systems**
  Tantawi, S. G., Nantista, C. D., Carlsten, B. E.
  AMER INST PHYSICS.2002: 83–100
- **RF breakdown in high vacuum multimegawatt x-band structures**
  Dolgashev, V. A., Tantawi, S. G., Carlsten, B. E.
  AMER INST PHYSICS.2002: 77–82
- **The development of a diamond switch for RF pulse compression systems** *IEEE TRANSACTIONS ON PLASMA SCIENCE*
  Xu, X. X., Schein, J., Qi, N. S., Prasad, R. R., Krishnan, M., Fumihiko, T., Tantawi, S. G.
  2001; 29 (1): 85-92
- **Multi-moded passive RF pulse compression development at SLAC**
  Nantista, C. D., Tantawi, S. G., Colestock, P. L., Kelley, S.
  AMER INST PHYSICS.2001: 702–11
- **Switched matrix accelerator** *REVIEW OF SCIENTIFIC INSTRUMENTS*
  Whittum, D. H., Tantawi, S. G.
  2001; 72 (1): 73–91
- **A compact, planar, eight-port waveguide power divider/combiner: The cross potent superhybrid** *IEEE MICROWAVE AND GUIDED WAVE LETTERS*
  Nantista, C. D., Tantawi, S. G.
  2000; 10 (12): 520–22
- **Multi-megawatt X-band semiconductor microwave switches**
  Tamura, F., Tantawi, S. G., Perkins, T.
  IEEE.2000: 1731–34
- **The generation of 400-MW RF pulses at X-band using resonant delay lines**
  Tantawi, S. G., Loewen, R. J., Nantista, C. D., Vlieks, A. E.
  IEEE-INST ELECTRICAL ELECTRONICS ENGINEERS INC.1999: 2539–46
- **A multi-moded RF Delay Line Distribution System for the next linear collider**
  Tantawi, S. G., Bowden, G., Farkas, Z. D., Irwin, J., Ko, K., Kroll, N., Lavine, T., Li, Z., Loewen, R., Miller, R., Nantista, C., Ruth, R. D., Rifkin, et al
  AMER INST PHYSICS.1999: 967–74
- **The generation of 400 MW RF pulses at X-band using resonant delay lines**
  Tantawi, S. G., Vlieks, A. E., Loewen, R. J., Matloubian, M., Ponti, E.
  IEEE.1999: 345–48
- **The design and analysis of multi-megawatt distributed single pole double throw (SPDT) microwave switches**
  Tantawi, S. G., Lawson, W., Bellamy, C., Brosius, D. F.
  AMER INST PHYSICS.1999: 959–66
- **The design and analysis of multi-megawatt distributed single pole double throw (SPDT) microwave switches**
  Tantawi, S. G., Phillips, R. M.
  AMER INST PHYSICS.1999: 296–303

- **An all-metal high power circularly polarized X-band RF load** *17th Particle Accelerator Conference*
  Fowkes, W. R., Jongewaard, E. N., Loewen, R. J., Tantawi, S. G., Vlieks, A. E.
  IEEE.1998: 3189–3191

- **The next linear collider test accelerator's rf pulse compression and transmission systems** *17th Particle Accelerator Conference*
  Tantawi, S. G., Adolphsen, C., Holmes, S., LAVINE, T., Loewen, R. J., Nantista, C., Pearson, C., Pope, R., Rifkin, J., Ruth, R. D., Vlieks, A. E.
  IEEE.1998: 3192–3194

- **RF systems for the NLCTA** *17th Particle Accelerator Conference*
  Wang, J. W., Adolphsen, C., Atkinson, R., BAUMGARTNER, W., Eichner, J., Fuller, R. W., Gold, S. L., Hanna, S. M., Holmes, S. G., KOONTZ, R. F., LAVINE, T. L., Loewen, R. J., Miller, et al
  IEEE.1998: 3042–3044

- **Results from the SLAC NLC Test Accelerator** *17th Particle Accelerator Conference*
  Ruth, R. D., Adolphsen, C., Allison, S., Atkinson, R., BAUMGARTNER, W., Bong, P., Brown, V., Browne, M., Caryotakis, G., CASSEL, R., Cisneros, G., Clark, S. L., Constant, et al
  IEEE.1998: 439–443

- **Upgrade of the SLAC SLED-II pulse compression system based on recent high power tests** *17th Particle Accelerator Conference*
  Vlieks, A. E., Fowkes, W. R., Loewen, R. J., Tantawi, S. G.
  IEEE.1998: 3195–3197

- **Active high-power RF pulse compression using optically switched resonant delay lines** *IEEE TRANSACTIONS ON MICROWAVE THEORY AND TECHNIQUES*
  Tantawi, S. G., Ruth, R. D., Vlieks, A. E., Zolotorev, M.
  1997; 45 (8): 1486–92

- **Active high power rf pulse compression using optically switched resonant delay lines**
  Tantawi, S. G., Ruth, R. D., Vlieks, A. E., Zolotorev, M., Chattopadhyay, S., McCullough, J., Dahl, P.
  AIP PRESS.1997: 813–21

- **The next linear collider test accelerator's rf pulse compression and transmission systems**
  Tantawi, S. G., Vlieks, A. E., Fant, K., Lavine, T., Loewen, R. J., Pearson, C., Pope, R., Rifkin, J., Ruth, R. D., Chattopadhyay, S., McCullough, J., Dahl, P.
  AIP PRESS.1997: 805–12

- **Active radio frequency pulse compression using switched resonant delay lines** *NUCLEAR INSTRUMENTS & METHODS IN PHYSICS RESEARCH SECTION A-ACCELERATORS SPECTROMETERS DETECTORS AND ASSOCIATED EQUIPMENT*
  Tantawi, S. G., Ruth, R. D., Vlieks, A. E.
  1996; 370 (2-3): 297-302

- **Status and results from the Next Linear Collider Test Accelerator** *XVIII International Linear Accelerator Conference*
  Ruth, R. D., Adolphsen, C., Allison, S., Akemoto, M., Atkinson, R., BAUMGARTNER, W., Bong, P., Brown, V., Browne, M., Caryotakis, G., CASSEL, R., Cisneros, G., Clark, et al
  C E R N.1996: 641–43

- **Reduced field TE(01) X-band traveling wave window** *16th Biennial Particle Accelerator Conference*
  Fowkes, W. R., Callin, R. S., Tantawi, S. G., WRIGHT, E. L.
  IEEE.1996: 1587–1589

- **X-band high power dry load for NLCTA**
  Ko, K., Hoag, H., Lee, T., Tantawi, S., IEEE
  I E E E.1996: 1726–28

- **High gradient experiments on NLCTA accelerator structures** *XVIII International Linear Accelerator Conference*
  Wang, J. W., Eichner, J. P., Fant, K. H., HOAG, H. A., KOONTZ, R. F., LAVINE, T., LOEW, G. A., Loewen, R. J., MENEGAT, A., Miller, R. H., Nantista, C. D., Pearson, C., Ruth, et al
  C E R N.1996: 656–58

- **Design of a 50-MW-klystron at X-band**
  WRIGHT, E., CALLIN, R., CARYOTAKIS, G., EPPLEY, K., FANT, K., FOWKES, R., GOLD, S., KOONTZ, R., MILLER, R., PEARSON, C., PHILLIPS, R., TANTAWI, S., VLIEKS, et al

AIP PRESS.1995: 58–66

- **NUMERICAL DESIGN AND ANALYSIS OF A COMPACT TE(10) TO TE(01) MODE TRANSDUCER**
  TANTAWI, S., KO, K., KROLL, N., Ryne, R.
  AIP PRESS.1994: 99–106

- **ACCELERATOR AND RF SYSTEM-DEVELOPMENT FOR NLC** *1993 Particle Accelerator Conference*
  Vlieks, A. E., CALLIN, R., DERUYTER, H., Early, R., FANT, K. S., FARKAS, Z. D., Fowkes, W. R., Galloway, C., HOAG, H. A., Koontz, R., LOEW, G. A., LAVINE, T. L., MENEGAT, et al
  I E E E.1993: 620–622

- **APPLICATIONS AND COMPARISONS OF METHODS OF COMPUTING THE S-MATRIX OF 2-PORTS**
  JONES, R. M., KROLL, N. M., KO, K., TANTAWI, S., YU, D. U., Corneliussen, S. T., Carlton, L.
  I E E E.1993: 936–38

- **MODE-SELECTIVE DIRECTIONAL COUPLER FOR NLC**
  TANTAWI, S. G., Corneliussen, S. T., Carlton, L.
  I E E E.1993: 1130–32

- **FLOWER-PETAL MODE CONVERTER FOR NLC**
  HOAG, H. A., TANTAWI, S. G., CALLIN, R., DERUYTER, H., FARKAS, Z. D., KO, K., KROLL, N., LAVINE, T. L., MENEGAT, A., VLIEKS, A. E., Corneliussen, S. T., Carlton, L.
  I E E E.1993: 1121–23

- **HIGH-POWER RF PULSE-COMPRESSION WITH SLED-II AT SLAC** *1993 Particle Accelerator Conference*
  Nantista, C., FARKAS, Z. D., Kroll, M., LAVINE, T. L., MENEGET, A.
  I E E E.1993: 1196–1198

- **THE NEXT LINEAR COLLIDER TEST ACCELERATOR** *1993 Particle Accelerator Conference*
  Ruth, R. D., Adolphsen, C., Bane, K., Boyce, R. F., Burke, D. L., CALLIN, R., Caryotakis, G., CASSEL, R., Clark, S. L., DERUYTER, H., Fant, K., Fuller, R., Heifets, et al
  I E E E.1993: 543–545

- **DEVELOPMENT OF MULTIMEGAWATT KLYSTRONS FOR LINEAR COLLIDERS**
  CARYOTAKIS, G., CALLIN, R., EPPLEY, K., LEE, T., FANT, K., FOWKES, R., HOAG, H., PEARSON, C., PHILLIPS, R., TANTAWI, S., VLIEKS, A., WRIGHT, E., Corneliussen, et al
  I E E E.1993: 1106–8

- **INTERPRETATION OF MULTIFREQUENCY COMPLEX RESISTIVITY DATA FOR A LAYERED EARTH MODEL** *IEEE TRANSACTIONS ON GEOSCIENCE AND REMOTE SENSING*
  MAHMOUD, S. F., TANTAWI, S. G., WAIT
  1988; 26 (4): 399–408