

UNIVERSITY OF PENNSYLVANIA - PERELMAN SCHOOL OF MEDICINE  
Curriculum Vitae

Date: 08/20/2019

Scott D. Metzler, PhD

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Philadelphia, PA 19104 USA

If you are not a U.S. citizen or holder of a permanent visa, please indicate the type of visa you have:  
none (U.S. citizen)

Education:

1992	BS	Pennsylvania State University
1996	PhD	University of Pennsylvania

Postgraduate Training and Fellowship Appointments:

1997-2000	Postdoctoral Scholar, California Institute of Technology
2000	Senior Postdoctoral Scholar, California Institute of Technology, Pasadena
2000-2002	Research Associate, Duke University Medical Center

Military Service:

[none]

Faculty Appointments:

2002-2004	Research Assistant Professor, Duke University Medical Center
2004-2007	Research Assistant Professor of Radiology, University of Pennsylvania School of Medicine
2007-2019	Research Associate Professor of Radiology, University of Pennsylvania School of Medicine
2019-present	Research Professor of Radiology, University of Pennsylvania School of Medicine

Hospital and/or Administrative Appointments:

2013-present	CT Technology Chief, Department of Radiology, University of Pennsylvania
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Other Appointments:

[none]

Specialty Certification:

None

Licensure:

-Present	None
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Awards, Honors and Membership in Honorary Societies:

1988	Pennsylvania State University Scholars' Program Scholarship/Braddock Science Scholarship - full academic merit scholarship
1992	Phi Beta Kappa
1992	NSF Graduate Fellowship Competition honorable mention
1992	Sigma Pi Sigma National Physics Honor Society
1993	NSF Graduate Fellowship Competition honorable mention
2002	First Place Award -Young Investigator Competition (Society of Nuclear Medicine, Computer and Instrumentation Council). Abstract #34: Improving Pinhole SPECT Sampling Through Spiral Orbits
2004	2004 Society of Nuclear Medicine Co-Image of the Year. Selected by Dr. Henry Wagner, M.D. 99mTc MDP Whole-Body Mouse Imaging: Helical Versus Circular Orbit Pinhole SPECT; 2004 Annual Meeting of the Society of Nuclear Medicine, Philadelphia, PA

Memberships in Professional and Scientific Societies and Other Professional Activities:International:

2002-2006	Institute of the Electrical and Electronics Engineers (Member)
2006-Present	Institute of the Electrical and Electronics Engineers (Senior Member)
2011-Present	Society of Nuclear Medicine and Molecular Imaging (Vice President Elect, Computer and Instrumentation Council, 2013-2014 Vice President, Computer and Instrumentation Council, 2014-2015 President, Computer and Instrumentation Council, 2015-2016 Vice Chair for Instrumentation and Data Analysis, Scientific Program Committee, 2015-2018)

National:

2009-2011	Special Emphasis Panel ZRG1, Center for Scientific Review, National Institutes of Health (Reviewer, November, 2009; Reviewer, October, 2011 (Phone/mail))
2010	Radioimaging Instrumentation Study Panel, Department of Energy (Reviewer)
2011-2012	Biomedical Imaging Technology Study Section B (BMIT-B), Center for Scientific Review, National Institutes of Health (Reviewer, November 2011 Reviewer, June 2012)
2014-Present	American Association of Physicists in Medicine (Member)
2017	Biomedical Imaging Technology Study Section A (BMIT-A), Center for Scientific Review, National Institutes of Health (Reviewer June, 2017; Reviewer October, 2017)

Editorial Positions:

2000-2017	Reviewer, IEEE Transactions on Nuclear Science
2001-Present	Reviewer, IEEE Transactions on Medical Imaging
2001-Present	Reviewer, Physics and Medicine in Biology
2002-Present	Reviewer, Journal of Nuclear Medicine
2006-Present	Associate Editor, IEEE Transactions on Nuclear Science
2009-Present	Reviewer, Nuclear Instrumentation and Methods in Physics Research
2012-Present	Reviewer, Medical Physics
2016-Present	Associate Editor, IEEE Transactions on Radiation and Plasma Medical Sciences

Academic and Institutional Committees:

2013-Present	Member, Center for Advanced Computed Tomography Studies (CACTIS) Committee.
2014-2015	Member, Search Committee, AC-track Assistant Professor, Nuclear Medicine and Clinical Molecular Imaging.
2015-2017	Member, Search Committee, Nuclear Cardiology Director, Departments of Radiology and Cardiology.
2016-Present	Member, Radiation Research Safety Committee (RRSC)
2016-Present	Member, Biomedical Engineering Graduate Group
2016	Member, Search Committee, AC-track Assistant Professor, Nuclear Medicine and Clinical Molecular Imaging.

Major Academic and Clinical Teaching Responsibilities:

2005-Present	"Counting Statistics," given annually to Radiology Residents
2005-2015	"Instrumentation for Small Animal Imaging," given annually for Radiology Residents
2005-present	"Laboratory Instruments in Nuclear Medicine," given annually to Radiology Residents
2007-Present	Emission Tomography Laboratory, offered annually to MD-PhD candidates, graduate students in Biomedical engineering and physics.
2015-Present	"Computed Tomography, Part 1: Acquisition and Reconstruction," given annually to Radiology Residents
2015-Present	"Computed Tomography, Part 2: Image Quality and Dose," given annually to Radiology Residents
2015-Present	"Computed Tomography, Part 3: Artifacts," given annually to Radiology Residents
2015-present	"Advances in SPECT Imaging," given annual to Nuclear Medicine Fellows

Lectures by Invitation (Last 5 years):

Jan, 2014	"Collimated PET with Supersampling," University of Massachusetts Medical Center, Worcester, MA.
Feb, 2014	"Novel Collimator Approaches for High Resolution Imaging in PET and SPECT," University of Chicago, Chicago, IL.
Mar, 2014	"Novel Approaches for Clinical and Pre-Clinical Imaging in PET and SPECT," Wright State University, Dayton, OH.
Sep, 2014	"Novel Collimator Approaches for High Resolution Imaging in PET and SPECT," Gent University, Gent, Netherlands.
Nov, 2014	"Dual-Resolution SPECT Imaging with a Rectangular Pinhole Collimator Tubes: System Integration and Prototype Scout-Tube Imaging," Accepted and presented at IEEE Nuclear Science Symposium and Medical Imaging Conference, Seattle, WA.
Nov, 2015	"A Novel Collimator Approach for High Resolution PET," Yale University, New Haven, CT.
Apr, 2016	"A Novel Collimator Approach for High Resolution PET," Nuclear Medicine/Molecular Imaging Seminar, Gordon Center for Medical Imaging, Massachusetts General Hospital, Boston, MA
Apr, 2016	"A Novel Collimator Approach for High Resolution PET," Joint Program in Nuclear Medicine, Harvard Medical School, Department of Radiology, Beth Israel Deaconess Medical Center, Brigham and Women's Hospital, Children's Hospital Boston, Dana Farber Cancer Institute, Massachusetts General Hospital, VA Boston Healthcare System, Boston, MA
Jun, 2017	"Collimator Design for a Dedicated Human Cardiac SPECT System with High Resolution Detectors," Society of Nuclear Medicine, Denver, CO
Nov, 2018	"First Imaging Data with C-SPECT: A Dedicated Human Cardiac SPECT Imager," IEEE Nuclear Science Symposium and Medical Imaging Conference, Sydney, Australia
Jul, 2019	"Adaptive Imaging: Review of techniques and update on state-of-the-art (Nuclear Medicine)", American Association of Physicists in Medicine (AAPM) Annual Meeting, San Antonio, TX, USA
Aug, 2019	"Future Challenges of SPECT Imaging," Modern Challenges in Imaging: In the Footsteps of Allan MacLeod Cormack On the Fortieth Anniversary of his Nobel Prize, Tufts University, Medford, MA.

#### Organizing Roles in Scientific Meetings:

Nov, 2002	Conference Record Guest Editor, 2002 IEEE Nuclear Science Symposium and Medical Imaging Conference Norfolk, VA
Oct, 2003	Conference Record Guest Editor, 2003 IEEE Nuclear Science Symposium and Medical Imaging Conference Portland, OR

- Nov, 2013 Assistant Program Chair, 2013 IEEE Nuclear Science Symposium and Medical Imaging Conference  
Seoul, Korea
- Nov, 2014 Assistant Program Chair, 2014 IEEE Nuclear Science Symposium and Medical Imaging Conference  
Seattle, WA
- Jun, 2015 Computer and Instrumentation Council Program Committee, 2015 Society of Nuclear Medicine and Molecular Imaging Annual Meeting  
Baltimore, MD
- Nov, 2015 Assistant Program Chair, 2015 IEEE Nuclear Science Symposium and Medical Imaging Conference  
San Diego, CA
- Jun, 2016 Vice Chair for Instrumentation and Data Analysis, Scientific Program Committee, 2016 Society of Nuclear Medicine and Molecular Imaging Annual Meeting  
San Diego, CA
- Jun, 2016 Computer and Instrumentation Council Program Committee, 2016 Society of Nuclear Medicine and Molecular Imaging Annual Meeting  
San Diego, CA
- Nov, 2016 Assistant Program Chair, 2016 IEEE Nuclear Science Symposium and Medical Imaging Conference  
Strasbourg, France
- Jun, 2017 Vice Chair for Instrumentation and Data Analysis, Scientific Programming Committee, 2017 Society of Nuclear Medicine and Molecular Imaging Annual Meeting  
Denver, CO
- Oct, 2017 Assistant Program Chair, 2017 IEEE Nuclear Science Symposium and Medical Imaging Conference  
Atlanta, GA, USA
- Jun, 2018 General Chair, 15th International Meeting on Fully Three-Dimensional Image Reconstruction in Radiology and Nuclear Medicine  
Philadelphia, PA
- Jun, 2018 Vice Chair for Instrumentation and Data Analysis, Scientific Program Committee, 2018 Society of Nuclear Medicine and Molecular Imaging Annual Meeting  
Philadelphia, PA
- Nov, 2018 Assistant Program Chair, 2018 IEEE Nuclear Science Symposium and Medical Imaging Conference  
Sydney, Australia
- Nov, 2019 Assistant Program Chair, 2019 IEEE Nuclear Science Symposium and Medical Imaging Conference  
Manchester, England

Bibliography:Research Publications, peer reviewed (print or other media):

1. F Abe et al. (S.D. Metzler and 435 other authors; full list available online at Web of Science ([www.isiknowledge.com](http://www.isiknowledge.com))): The CDF Collaboration. Observation of Top-Quark Production in P P-bar Collisions With the Collider Detector at Fermilab. Phys Rev Lett 74(14): 2626-31, April 1995.
2. F. Abe, et al (S.D. Metzler and 433 other authors; full list available online at Web of Science ([www.isiknowledge.com](http://www.isiknowledge.com))): The CDF Collaboration. Identification of Top Quarks Using Kinematic Variables. Phys Rev D 52(5): R2605-09, September 1995.
3. F. Abe, et al (S.D. Metzler and 437 other authors; full list available online at Web of Science ([www.isiknowledge.com](http://www.isiknowledge.com))): The CDF Collaboration. Study of T(T)over-bar Production in P (P)over-bar Collisions Using Total Transverse Energy. Phys Rev Lett 75(22): 3997-4002, November 1995.
4. F. Abe, et al (S.D. Metzler and 439 other authors; full list available online at Web of Science ([www.isiknowledge.com](http://www.isiknowledge.com))): The CDF Collaboration. Search for Gluino and Squark Cascade Decays at the Fermilab Tevatron Collider. Phys Rev Lett 76(12): 2006-10, March 1996.
5. F. Abe, et al (S.D. Metzler and 440 other authors; full list available online at Web of Science ([www.isiknowledge.com](http://www.isiknowledge.com))): The CDF Collaboration. Measurement of the B- and anti-B0 Meson Lifetimes Using Semileptonic Decays. Phys Rev Lett 76(24): 4462-67, June 1996.
6. F. Abe, et al (S.D. Metzler and 440 other authors; full list available online at Web of Science ([www.isiknowledge.com](http://www.isiknowledge.com))): The CDF Collaboration. Search for Flavor-Changing Neutral Current B Meson Decays in p anti-p Collisions at  $s^{**}(1/2) = 1.8$  TeV. Phys Rev Lett 76(25): 4675-80, June 1996.
7. F. Abe, et al (S.D. Metzler and 445 other authors; full list available online at Web of Science ([www.isiknowledge.com](http://www.isiknowledge.com))): The CDF Collaboration. Search for Chargino-Neutralino Production in p anti-p Collisions at  $s^{**}(1/2) = 1.8$  TeV. Phys Rev Lett 76(23): 4307-11, June 1996.
8. F. Abe, et al (S.D. Metzler and 442 other authors; full list available online at Web of Science ([www.isiknowledge.com](http://www.isiknowledge.com))).: The CDF Collaboration. Search for Charged Higgs Boson Decays of the Top Quark Using Hadronic Tau Decays. Phys Rev D 54(1): 735-742, July 1996.
9. F. Abe, et al (S.D. Metzler and 443 other authors; full list available online at Web of Science ([www.isiknowledge.com](http://www.isiknowledge.com))): The CDF Collaboration. Inclusive Jet Cross Section in p anti-p Collisions at  $s^{**}(1/2) = 1.8$  TeV. Phys Rev Lett 77(3): 438-443, July 1996.

10. F. Abe, et al (S.D. Metzler and 444 other authors; full list available online at Web of Science ([www.isiknowledge.com](http://www.isiknowledge.com))): The CDF Collaboration. Properties of Jets in Z Boson Events from 1.8 TeV p anti-p Collisions. Phys Rev Lett 77(3): 448-453, July 1996.
11. F. Abe et al (S.D. Metzler and 446 other authors; full list available online at Web of Science ([www.isiknowledge.com](http://www.isiknowledge.com))): The CDF Collaboration. Measurement of the Lambda0(b) Lifetime Using Lambda0(b) --> Lambda+(c) l- anti-nu. Phys Rev Lett 77(8): 1439-43, August 1996.
12. F. Abe et al (S.D. Metzler and 443 other authors; full list available online at Web of Science ([www.isiknowledge.com](http://www.isiknowledge.com))): The CDF Collaboration. Forward-Backward Charge Asymmetry of Electron Pairs Above the Z(0) Pole. Phys Rev Lett 77(13): 2616-21, September 1996.
13. F. Abe et al. (S.D. Metzler and 447 other authors; full list available online at Web of Science ([www.isiknowledge.com](http://www.isiknowledge.com))): The CDF Collaboration. Measurement of the Lifetime of the B0(s) Meson Using the Exclusive Mode B0(s) --> J/psi phi. Phys Rev Lett 77(10): 1945-49, September 1996.
14. F. Abe et al. (S.D. Metzler and 449 other authors; full list available online at Web of Science ([www.isiknowledge.com](http://www.isiknowledge.com))).: The CDF Collaboration. Further Properties of High-Mass Multijet Events at the Fermilab Proton-Antiproton Collider. Phys Rev D 54(7): 4221-23, October 1996.
15. F. Abe et al (S.D. Metzler and 450 other authors; full list available online at Web of Science ([www.isiknowledge.com](http://www.isiknowledge.com))): The CDF Collaboration. Ratios of Bottom Meson Branching Fractions Involving J/Psi Mesons and Determinations of b-quark Fragmentation. Phys Rev D 54(11): 6596-6609, December 1996.
16. F. Abe et al (S.D. Metzler and 454 other authors; full list available online at Web of Science ([www.isiknowledge.com](http://www.isiknowledge.com))): The CDF Collaboration. Measurement of the Branching Fraction B(b+(u) --> J/psi pi+) and Search for B+(c) --> J/psi pi+ Phys Rev Lett 77(26): 5176-81, December 1996.
17. F. Abe et al (S.D. Metzler and 455 other authors; full list available online at Web of Science ([www.isiknowledge.com](http://www.isiknowledge.com))): The CDF Collaboration. Measurement of the gamma + D\*+- Cross Section in p anti-p Collisions at s\*\*(1/2) = 1.8 TeV. Phys Rev Lett 77(25): 5005-10, December 1996.
18. F. Abe et al (S.D. Metzler and 456 other authors; full list available online at Web of Science ([www.isiknowledge.com](http://www.isiknowledge.com))): The CDF Collaboration. Measurement of Dijet Angular Distributions by the Collider Detector at Fermilab. Phys Rev Lett 77(27): 5336-41, December 1996.

19. (S.D. Metzler and 445 other authors; full list available online at Web of Science ([www.isiknowledge.com](http://www.isiknowledge.com))): The CDF Collaboration. Observation of  $\Lambda^0(b) \rightarrow J/\psi \Lambda$  at the Fermilab Proton-Antiproton Collider. Phys Rev D 55(3): 1142-52, February 1997.
20. F. Abe et al (S.D. Metzler and 452 other authors; full list available online at Web of Science ([www.isiknowledge.com](http://www.isiknowledge.com))): The CDF Collaboration: Measurement of  $b\bar{b}$  production correlations  $B\text{-}0(B\text{-}\bar{0})$  mixing, and a limit on  $\epsilon(B)$  in  $p\bar{p}$  collisions at  $\sqrt{s}=1.8$  TeV Phys Rev D 55(5): 2546-58, March 1997.
21. F. Abe et al (S.D. Metzler and 459 other authors; full list available online at Web of Science ([www.isiknowledge.com](http://www.isiknowledge.com))): The CDF Collaboration: Observation of diffractive W-boson production at the Fermilab tevatron Phys Rev Lett 78(14): 2698-2703, April 1997.
22. F. Abe et al (S.D. Metzler and 460 other authors; full list available online at Web of Science ([www.isiknowledge.com](http://www.isiknowledge.com))): The CDF Collaboration. Search for Third Generation Leptoquarks in  $p$  anti- $p$  Collisions at  $\sqrt{s}=1.8$  TeV. Phys Rev Lett 78(15): 2906-11, April 1997.
23. F. Abe et al (S.D. Metzler and 463 other authors; full list available online at Web of Science ([www.isiknowledge.com](http://www.isiknowledge.com))): The CDF Collaboration. Search for New Particles Decaying to Dijets at CDF. Phys Rev D 55(9): R5263-R5268, May 1997.
24. F. Abe et al (S.D. Metzler and 457 other authors; full list available online at Web of Science ([www.isiknowledge.com](http://www.isiknowledge.com))): The CDF Collaboration. Measurement of Dijet Angular Distributions by the Collider Detector at Fermilab. Phys Rev Lett 78(22): 4307-08, June 1997.
25. F. Abe et al (S.D. Metzler and 461 other authors; full list available online at Web of Science ([www.isiknowledge.com](http://www.isiknowledge.com))): The CDF Collaboration. Evidence of  $W^+W^-$  Production in  $p$  anti- $p$  Collisions at  $\sqrt{s}=1.8$  TeV. Phys Rev Lett 78(24): 4536-40, June 1997.
26. F. Abe et al (S.D. Metzler and 460 other authors; full list available online at Web of Science ([www.isiknowledge.com](http://www.isiknowledge.com))): The CDF Collaboration. Measurement of Double Parton Scattering in  $p$  anti- $p$  Collisions at  $\sqrt{s}=1.8$  TeV. Phys Rev Lett 79(4): 584-89, July 1997.
27. F. Abe et al (S.D. Metzler and 461 other authors; full list available online at Web of Science ([www.isiknowledge.com](http://www.isiknowledge.com))): The CDF Collaboration.  $J/\psi$  and  $\psi(2S)$  Production in  $p$  anti- $p$  Collisions at  $\sqrt{s}=1.8$  TeV. Phys Rev Lett 79(4): 572-577, July 1997.



28. F. Abe et al (S.D. Metzler and 462 other authors; full list available online at Web of Science ([www.isiknowledge.com](http://www.isiknowledge.com))): The CDF Collaboration. Search for Charged Higgs Boson Decays of Top Quark Using Hadronic Decays of the Tau Lepton. Phys Rev Lett 79(3): 357-362, July 1997.
29. F. Abe et al (S.D. Metzler and 464 other authors; full list available online at Web of Science ([www.isiknowledge.com](http://www.isiknowledge.com))): The CDF Collaboration. Production of J/psi Mesons from Chi(c) Meson Decays in p anti-p Collisions at  $s^{1/2} = 1.8$  TeV. Phys Rev Lett 79(4): 578-83, July 1997.
30. F. Abe et al (S.D. Metzler and 464 other authors; full list available online at Web of Science ([www.isiknowledge.com](http://www.isiknowledge.com))): The CDF Collaboration. Search for Gluinos and Squarks at the Fermilab Tevatron Collider. Phys Rev D 56(3): R1357-R1362, August 1997.
31. F. Abe et al (S.D. Metzler and 461 other authors; full list available online at Web of Science ([www.isiknowledge.com](http://www.isiknowledge.com))): The CDF Collaboration. Search for New Gauge Bosons Decaying into Dileptons in p anti-p Collisions at  $s^{1/2} = 1.8$  TeV. Phys Rev Lett 79(12): 2192-97, September 1997.
32. F. Abe et al (S.D. Metzler and 462 other authors; full list available online at Web of Science ([www.isiknowledge.com](http://www.isiknowledge.com))): The CDF Collaboration. Properties of Six-jet Events with Large Six-jet Mass at the Fermilab Proton-Antiproton Collider. Phys Rev D 56(5): 2532-43, September 1997.
33. F. Abe et al (S.D. Metzler and 464 other authors; full list available online at Web of Science ([www.isiknowledge.com](http://www.isiknowledge.com))): The CDF Collaboration. First Observation of the All Hadronic Decay of tt-bar Pairs. Phys Rev Lett 79(11): 1992-97, September 1997.
34. F. Abe et al (S.D. Metzler and 465 other authors; full list available online at Web of Science ([www.isiknowledge.com](http://www.isiknowledge.com))): The CDF Collaboration. Limits on Quark-Lepton Compositeness Scales from Dileptons Produced in 1.8 TeV p anti-p Collisions. Phys Rev Lett 79(12): 2198-2203, September 1997.
35. F. Abe et al (S.D. Metzler and 460 other authors; full list available online at Web of Science ([www.isiknowledge.com](http://www.isiknowledge.com))): The CDF Collaboration. Measurement of Diffractive Dijet Production at the Fermilab Tevatron. Phys Rev Lett 79(14): 2636-41, October 1997.
36. F. Abe et al (S.D. Metzler and 463 other authors; full list available online at Web of Science ([www.isiknowledge.com](http://www.isiknowledge.com))): The CDF Collaboration. Double Parton Scattering in p anti-p Collisions at  $s^{1/2} = 1.8$  TeV. Phys Rev D 56(7): 3811-32, October 1997.

37. F. Abe et al (S.D. Metzler and 461 other authors; full list available online at Web of Science ([www.isiknowledge.com](http://www.isiknowledge.com))): The CDF Collaboration. The mu tau and e tau Decays of Top Quark Pairs Produced in p anti-p Collisions at  $s^{**}(1/2) = 1.8$  TeV. Phys Rev Lett 79(19): 3585-90, November 1997.
38. F. Abe et al (S.D. Metzler and 465 other authors; full list available online at Web of Science ([www.isiknowledge.com](http://www.isiknowledge.com))): The CDF Collaboration. Search for New Particles Decaying into b anti-b and Produced in Association with W Bosons Decaying into e nu and mu nu at the Tevatron. Phys Rev Lett 79(20): 3819-24, November 1997.
39. F. Abe et al (S.D. Metzler and 476 other authors; full list available online at Web of Science ([www.isiknowledge.com](http://www.isiknowledge.com))): The CDF Collaboration. Properties of Jets in W Boson Events from 1.8 TeV p anti-p Collisions. Phys Rev Lett 79(4): 4760-68, December 1997.
40. F. Abe et al (S.D. Metzler and 478 other authors; full list available online at Web of Science ([www.isiknowledge.com](http://www.isiknowledge.com))): The CDF Collaboration. Search for First Generation Leptoquark Pair Production in p anti-p Collisions at  $s^{**}(1/2) = 1.8$  TeV. Phys Rev Lett 79(22): 4327-33, December 1997.
41. F. Abe et al (S.D. Metzler and 462 other authors; full list available online at Web of Science ([www.isiknowledge.com](http://www.isiknowledge.com))): The CDF Collaboration. Properties of Photon Plus Two-jet Events in P P-bar Collisions at  $s^{**}(1/2) = 1.8$  TeV. Phys Rev D 57(1): 67-77, January 1998.
42. F. Abe et al (S.D. Metzler and 476 other authors; full list available online at Web of Science ([www.isiknowledge.com](http://www.isiknowledge.com))): The CDF Collaboration. Dijet Production by Color-Singlet Exchange at the Fermilab Tevatron. Phys Rev Lett 80(6): 1156-1161, February 1998.
43. F. Abe et al (S.D. Metzler and 433 other authors; full list available online at Web of Science ([www.isiknowledge.com](http://www.isiknowledge.com))): The CDF Collaboration. Measurement of the t anti-t Production Cross Section in p anti-p Collisions at  $s^{**}(1/2) = 1.8$  TeV. Phys Rev Lett 80(13): 2773-78, March 1998.
44. F. Abe et al (S.D. Metzler and 435 other authors; full list available online at Web of Science ([www.isiknowledge.com](http://www.isiknowledge.com))): The CDF Collaboration. Measurement of the B0 anti-B0 Oscillation Frequency Using pi-B Meson Charge-Flavor Correlations in p anti-p Collisions at  $s^{**}(1/2) = 1.8$  TeV. Phys Rev Lett 80(10): 2057-62, March 1998.
45. F. Abe et al (S.D. Metzler and 441 other authors; full list available online at Web of Science ([www.isiknowledge.com](http://www.isiknowledge.com))): The CDF Collaboration. Measurement of the Top Quark Mass. Phys Rev Lett 80(13): 2767-72, March 1998.

46. F. Abe et al (S.D. Metzler and 442 other authors; full list available online at Web of Science ([www.isiknowledge.com](http://www.isiknowledge.com))): The CDF Collaboration. Measurement of the Top Quark Mass and  $t$  anti- $t$  Production Cross Section from Dilepton Events at the Collider Detector at Fermilab. Phys Rev Lett 80(13): 2779-84, March 1998.
47. F. Abe et al (S.D. Metzler and 469 other authors; full list available online at Web of Science ([www.isiknowledge.com](http://www.isiknowledge.com))): The CDF Collaboration. Search for Flavor-Changing Neutral Current Decays of the Top Quark in  $p$  anti- $p$  Collisions at  $s^{**}(1/2) = 1.8$  TeV. Phys Rev Lett 80(12): 2525-30, March 1998.
48. F. Abe et al (S.D. Metzler and 430 other authors; full list available online at Web of Science ([www.isiknowledge.com](http://www.isiknowledge.com))): The CDF Collaboration. Search for the Decays  $B_0(d) \rightarrow \mu^+ \mu^-$  and  $B_0(s) \rightarrow \mu^+ \mu^-$  in  $p$  anti- $p$  Collisions at  $s^{**}(1/2) = 1.8$  TeV. Phys Rev D 57(7): R3811-R3816, April 1998.
49. F. Abe et al (S.D. Metzler and 441 other authors; full list available online at Web of Science ([www.isiknowledge.com](http://www.isiknowledge.com))): The CDF Collaboration. Measurement of the Differential Cross Section for Events with Large Total Transverse Energy in  $p$  anti- $p$  Collisions at  $s^{**}(1/2) = 1.8$  TeV. Phys Rev Lett 80(16): 3461-66, April 1998.
50. F. Abe et al (S.D. Metzler and 443 other authors; full list available online at Web of Science ([www.isiknowledge.com](http://www.isiknowledge.com))): The CDF Collaboration. Measurement of  $B$  Hadron Lifetimes Using  $J/\psi$  Final States at CDF. Phys Rev D 57(9): 5382-5401, May 1998.
51. F. Abe et al (S.D. Metzler and 436 other authors; full list available online at Web of Science ([www.isiknowledge.com](http://www.isiknowledge.com))): The CDF Collaboration. Observation of Hadronic  $W$  Decays in  $t$   $\bar{t}$  Events with the Collider Detector at Fermilab. Phys Rev Lett 80(26): 5720-25, June 1998.
52. F. Abe et al (S.D. Metzler and 442 other authors; full list available online at Web of Science ([www.isiknowledge.com](http://www.isiknowledge.com))): The CDF Collaboration. Search for Chargino-Neutralino Associated Production at the Fermilab Tevatron Collider. Phys Rev Lett 80(24): 5275-80, June 1998.
53. F. Abe et al (S.D. Metzler and 441 other authors; full list available online at Web of Science ([www.isiknowledge.com](http://www.isiknowledge.com))): The CDF Collaboration. Measurement of the  $\sigma(W^+ \geq 1 \text{ jet})/\sigma(W)$  Cross Section Ratio from  $p$  anti- $p$  Collisions at  $s^{**}(1/2) = 1.8$  TeV. Phys Rev Lett 81(7): 1367-72, August 1998.
54. F. Abe et al (S.D. Metzler and 444 other authors; full list available online at Web of Science ([www.isiknowledge.com](http://www.isiknowledge.com))): The CDF Collaboration. Search for the Rare  $W^{+/-} \rightarrow \pi^{+/-} \gamma$  in proton-antiproton collisions at  $s^{**}(1/2) = 1.8$  TeV. Phys Rev D 58(3): Art. No. 031101, August 1998.

55. F. Abe et al (S.D. Metzler and 444 other authors; full list available online at Web of Science ([www.isiknowledge.com](http://www.isiknowledge.com))): The CDF Collaboration. Searches for New Physics in Diphoton Events in p anti-p Collisions at  $s^{1/2} = 1.8$  TeV. Phys Rev Lett 81(9): 1791-96, August 1998.
56. F. Abe et al (S.D. Metzler and 441 other authors; full list available online at Web of Science ([www.isiknowledge.com](http://www.isiknowledge.com))): The CDF Collaboration. Observation of the B(c) Meson in p anti-p Collisions at  $s^{1/2} = 1.8$  TeV. Phys Rev Lett 81(12): 2432-37, September 1998.
57. F. Abe et al (S.D. Metzler and 453 other authors; full list available online at Web of Science ([www.isiknowledge.com](http://www.isiknowledge.com))): The CDF Collaboration. Search for Long-Lived Parents of Z0 Bosons in p anti-p Collisions at  $s^{1/2} = 1.8$  TeV. Phys Rev D (Rapid Communications) 58(5): Art. No. 051102 September 1998.
58. F. Abe et al (S.D. Metzler and 442 other authors; full list available online at Web of Science ([www.isiknowledge.com](http://www.isiknowledge.com))): The CDF Collaboration. Observation of  $B^+ \rightarrow \psi(2S) K^+$  and  $B^0 \rightarrow \psi(2S) K^*(892)^0$  Decays and Measurements of B-meson Branching Fractions into J/psi and psi(2S) Final States. Phys Rev D 58(7): Art. No. 072001 October 1998.
59. F. Abe et al (S.D. Metzler and 442 other authors; full list available online at Web of Science ([www.isiknowledge.com](http://www.isiknowledge.com))): The CDF Collaboration. Search for the Rare Decay  $W^+ \rightarrow D^{*+}(s) \gamma$  in p anti-p Collisions at  $s^{1/2} = 1.8$  TeV. Phys Rev D 58(9): Art. No. 091101 November 1998.
60. F. Abe et al (S.D. Metzler and 443 other authors; full list available online at Web of Science ([www.isiknowledge.com](http://www.isiknowledge.com))): The CDF Collaboration. Measurement of the B- and anti-B0 Meson Lifetimes using Semileptonic Decays. Phys Rev D 58(9): Art. No. 092002, November 1998.
61. F. Abe et al (S.D. Metzler and 444 other authors; full list available online at Web of Science ([www.isiknowledge.com](http://www.isiknowledge.com))): The CDF Collaboration. Search for Second Generation Leptoquarks in the Dimuon Plus Dijet Channel of p anti-p Collisions at  $s^{1/2} = 1.8$  TeV. Phys Rev Lett 81(22): 4806-11, November 1998.
62. F. Abe et al (S.D. Metzler and 441 other authors; full list available online at Web of Science ([www.isiknowledge.com](http://www.isiknowledge.com))): The CDF Collaboration. Measurement of the Lepton Charge Asymmetry in W-boson Decays Produced in p anti-p Collisions. Phys Rev Lett 81(26): 5754-59, December 1998.
63. F. Abe et al (S.D. Metzler and 441 other authors; full list available online at Web of Science ([www.isiknowledge.com](http://www.isiknowledge.com))): The CDF Collaboration. Observation of B(c) Mesons in p anti-p Collisions at  $s^{1/2} = 1.8$  TeV. Phys Rev D 58(11): Art. # 112004 December 1998.

64. F. Abe et al (S.D. Metzler and 445 other authors; full list available online at Web of Science ([www.isiknowledge.com](http://www.isiknowledge.com))): The CDF Collaboration. Measurement of the CP-Violation Parameter  $\sin(2\beta)$  in  $B_0(d)$  anti- $B_0(d) \rightarrow J/\psi K_0(s)$  Decays. Phys Rev Lett 81(25): 5513-18, December 1998.
65. F. Abe et al (S.D. Metzler and 446 other authors; full list available online at Web of Science ([www.isiknowledge.com](http://www.isiknowledge.com))): The CDF Collaboration. Search for Higgs Bosons Produced in Association with a Vector Boson in  $p$  anti- $p$  Collisions at  $s^{1/2} = 1.8$  TeV. Phys Rev Lett 81(26): 5748-53, December 1998.
66. F. Abe et al (S.D. Metzler and 446 other authors; full list available online at Web of Science ([www.isiknowledge.com](http://www.isiknowledge.com))): The CDF Collaboration. Events with a Rapidity Gap between Jets in  $p$  anti- $p$  Collisions at  $s^{1/2} = 630$  GeV. Phys Rev Lett 81(24): 5278-83, December 1998.
67. F. Abe et al (S.D. Metzler and 449 other authors; full list available online at Web of Science ([www.isiknowledge.com](http://www.isiknowledge.com))): The CDF Collaboration. Search for the Decays  $B_0(s)$ ,  $B_0(d) \rightarrow e^+ \mu^-$  and Pati-Salam Leptoquarks. Phys Rev Lett 81(26): 5742-47, December 1998.
68. F. Abe et al (S.D. Metzler and 449 other authors; full list available online at Web of Science ([www.isiknowledge.com](http://www.isiknowledge.com))): The CDF Collaboration. Measurement of the Top Quark Mass with the Collider Detector. Phys Rev Lett 82(2): 271-76, January 1999.
69. F. Abe et al (S.D. Metzler and 436 other authors; full list available online at Web of Science ([www.isiknowledge.com](http://www.isiknowledge.com))): The CDF Collaboration. Measurement of the  $B_0(s)$  Meson Lifetime Using Semileptonic Decays. Phys Rev D 59(3): Art. # 032004 February 1999.
70. F. Abe et al (S.D. Metzler and 445 other authors; full list available online at Web of Science ([www.isiknowledge.com](http://www.isiknowledge.com))): The CDF Collaboration. Measurement of the  $B_0(d)$  anti- $B_0(d)$  Flavor Oscillation Frequency and Study of Same Side Flavor Tagging of B Mesons in  $p$  anti- $p$  Collisions. Phys Rev D 59(3): Art. # 032001 February 1999.
71. F. Abe et al (S.D. Metzler and 441 other authors; full list available online at Web of Science ([www.isiknowledge.com](http://www.isiknowledge.com))): The CDF Collaboration. Measurement of  $Z_0$  and Drell-Yan Production Cross Section Using Dimuons in  $p$  anti- $p$  Collisions at  $s^{1/2} = 1.8$  TeV. Phys Rev D 59(5): Art. No. 052002 March 1999.
72. F. Abe et al (S.D. Metzler and 449 other authors; full list available online at Web of Science ([www.isiknowledge.com](http://www.isiknowledge.com))): The CDF Collaboration. Search for New Particles Decaying to  $b$  anti- $b$  in  $p$  anti- $p$  Collisions at  $s^{1/2} = 1.8$  TeV. Phys Rev Lett 82(10): 2038-43, March 1999.

73. F. Abe et al (S.D. Metzler and 449 other authors; full list available online at Web of Science ([www.isiknowledge.com](http://www.isiknowledge.com))): The CDF Collaboration: Measurement of the Top Quark Mass with the Collider Detector at Fermilab. Phys Rev Lett 82(13): 2808-09, March 1999.
74. F. Abe et al (S.D. Metzler and 450 other authors; full list available online at Web of Science ([www.isiknowledge.com](http://www.isiknowledge.com))): The CDF Collaboration. Search for Third-Generation Leptoquarks from Technicolor Models in p anti-p Collisions at  $s^{1/2} = 1.8$  TeV. Phys Rev Lett 82(16): 3206-11, April 1999.
75. F. Abe et al (S.D. Metzler and 450 other authors; full list available online at Web of Science ([www.isiknowledge.com](http://www.isiknowledge.com))): The CDF Collaboration. Kinematics of t anti-t Events at CDF. Phys Rev D 59(9): Art. No. 092001, May 1999.
76. F. Abe et al (S.D. Metzler and 450 other authors; full list available online at Web of Science ([www.isiknowledge.com](http://www.isiknowledge.com))): The CDF Collaboration. Searches for New Physics in Diphoton Events in p anti-p Collisions at  $s^{1/2} = 1.8$  TeV. Phys Rev D 59(9): Art. No. 092002, May 1999.
77. F. Abe et al (S.D. Metzler and 454 other authors; full list available online at Web of Science ([www.isiknowledge.com](http://www.isiknowledge.com))): The CDF Collaboration. Search for B<sub>0</sub>(s) anti-B<sub>0</sub>(s) Oscillations Using the Semileptonic Decay B<sub>0</sub>(s) → φ l<sup>+</sup> X(ν). Phys Rev Lett 82(18): 3576-80, May 1999.
78. F. Abe et al (S.D. Metzler and 450 other authors; full list available online at Web of Science ([www.isiknowledge.com](http://www.isiknowledge.com))): The CDF Collaboration. Search for R-parity Violating Supersymmetry using Like-Sign Dielectrons in p anti-p Collisions at  $s^{1/2} = 1.8$  TeV. Phys Rev Lett 83(11): 2133-38, September 1999.
79. F. Abe et al (S.D. Metzler and 455 other authors; full list available online at Web of Science ([www.isiknowledge.com](http://www.isiknowledge.com))): The CDF Collaboration. Measurement of the B<sub>0</sub>(d) B<sub>0</sub>-d Oscillation Frequency Using Dimuon Data in p anti-p Collisions at  $s^{1/2} = 1.8$  TeV. Phys Rev D 60(5): Art. No. 051101, September 1999.
80. F. Abe et al (S.D. Metzler and 450 other authors; full list available online at Web of Science ([www.isiknowledge.com](http://www.isiknowledge.com))): The CDF Collaboration. Search for a Technicolor ω(t) Particle in Events with a Photon and a b-quark Jet at CDF. Phys Rev Lett 83(16): 3124-29, October 1999.
81. F. Abe et al (S.D. Metzler and 453 other authors; full list available online at Web of Science ([www.isiknowledge.com](http://www.isiknowledge.com))): The CDF Collaboration. Measurement of B<sub>0</sub> anti-B<sub>0</sub> Flavor Oscillations Using Jet-Charge and Lepton Flavor Tagging in p anti-p Collisions at  $s^{1/2} = 1.8$  TeV. Phys Rev D 60(7): Art. No. 072003, October 1999.

82. F. Abe et al (S.D. Metzler and 452 other authors; full list available online at Web of Science ([www.isiknowledge.com](http://www.isiknowledge.com))): The CDF Collaboration. A Measurement of b Quark Fragmentation Fractions in the Production of Strange and Light B Mesons in p anti-p Collisions at  $s^{*(1/2)} = 1.8$  TeV. Phys Rev D 60(9): Art. No. 092005, November 1999.
83. F. Abe et al (S.D. Metzler and 449 other authors; full list available online at Web of Science ([www.isiknowledge.com](http://www.isiknowledge.com))): The CDF Collaboration. Measurement of bb-bar Rapidity Correlations in p anti-p Collisions at  $s^{*(1/2)} = 1.8$  TeV. Phys Rev D 61(3): Art. No. 032001, February 2000.
84. G.P. Dubois-Felsmann, E. Chen, Y. Kolomensky, S. Metzler, A. Samuel, and S. Yang: Flexible Processing Framework for Online Event Data and Software Triggering. IEEE Trans Nucl Sci 47(2): 353-7, April 2000.
85. F. Abe et al (S.D. Metzler and 454 other authors; full list available online at Web of Science ([www.isiknowledge.com](http://www.isiknowledge.com))): The CDF Collaboration. Search for a W' Boson via the Decay Mode W' --> mu nu(mu) in 1.8 TeV p anti-p Collisions. Phys Rev Lett 84(25): 5716-21, June 2000.
86. B. Aubert et al (S.D. Metzler and 742 other authors; full list available online at Web of Science ([www.isiknowledge.com](http://www.isiknowledge.com))): The BaBar Collaboration Measurement of CP-violating Asymmetries in B-0 Decays to CP Eigenstates. Phys Rev Lett 86(12): 2515-22, March 2001.
87. B. Aubert et al (S.D. Metzler and 619 other authors; full list available online at Web of Science ([www.isiknowledge.com](http://www.isiknowledge.com))): The BaBar Collaboration Observation of CP violation in the B-0 meson system. Phys Rev Lett 87(9): Art. No. 091801, August 2001.
88. S.D. Metzler, J.E. Bowsher, M.F. Smith, R.J. Jaszczak: Analytic Determination of Pinhole Collimator Sensitivity with Penetration. IEEE Trans Med Imag 20(8): 730-41, August 2001.
89. B. Aubert et al (S.D. Metzler and 624 other authors; full list available online at Web of Science ([www.isiknowledge.com](http://www.isiknowledge.com))): The BaBar Collaboration Measurement of the Decays B--> phi K and B-->phi K\* Phys Rev Lett 87(15): Art. No. 151801, October 2001.
90. B. Aubert et al (S.D. Metzler and 626 other authors; full list available online at Web of Science ([www.isiknowledge.com](http://www.isiknowledge.com))): The BaBar Collaboration Measurement of branching fractions and search for CP-violating charge asymmetries in charmless two-body B decays into pions and kaons. Phys Rev Lett 87(15): Art. No. 151802 October 2001.

91. B. Aubert et al (S.D. Metzler and 627 other authors; full list available online at Web of Science ([www.isiknowledge.com](http://www.isiknowledge.com))): The BaBar Collaboration Measurement of  $J/\psi$  production in continuum  $e^{(+)}e^{(-)}$  annihilations near  $\sqrt{s}=10.6$  GeV. Phys Rev Lett 87(16): Art. No. 162002, October 2001.
92. B. Aubert et al (S.D. Metzler and 607 other authors; full list available online at Web of Science ([www.isiknowledge.com](http://www.isiknowledge.com))): The BaBar Collaboration Measurement of the  $B^0$  and  $B^+$  meson lifetimes with fully reconstructed hadronic final states. Phys Rev Lett 87(20): Art. No. 201803, November 2001.
93. B. Aubert et al (S.D. Metzler and 608 other authors; full list available online at Web of Science ([www.isiknowledge.com](http://www.isiknowledge.com))): The BaBar Collaboration Measurements of the branching fractions of exclusive charmless B meson decays with  $\eta'$  or  $\omega$  mesons. Phys Rev Lett 87(22): Art. No. 221802, November 2001.
94. B. Aubert et al (S.D. Metzler and 609 other authors; full list available online at Web of Science ([www.isiknowledge.com](http://www.isiknowledge.com))): The BaBar Collaboration Measurement of the  $B \rightarrow J/\psi K^*(892)$  decay amplitudes. Phys Rev Lett 87(24): Art. No. 241801, December 2001.
95. B. Aubert et al (S.D. Metzler and 612 other authors; full list available online at Web of Science ([www.isiknowledge.com](http://www.isiknowledge.com))): The BaBar Collaboration Search for the decay  $B^0 \rightarrow \gamma \gamma$ . Phys Rev Lett 87(24): Art. No. 241803, December 2001.
96. B. Aubert et al (S.D. Metzler and 580 other authors; full list available online at Web of Science ([www.isiknowledge.com](http://www.isiknowledge.com))): The BaBar Collaboration Measurement of the branching fractions for  $\psi(2S) \rightarrow e^{(+)}e^{(-)}$  and  $\psi(2S) \rightarrow \mu^{(+)}\mu^{(-)}$ . Phys Rev D 65(3): Art. No. 031101, February 2002.
97. B. Aubert et al (S.D. Metzler and 609 other authors; full list available online at Web of Science ([www.isiknowledge.com](http://www.isiknowledge.com))): The BaBar Collaboration Measurement of branching fractions for exclusive B decays to charmonium final states. Phys Rev D 65(3): Art. No. 032001, February 2002.
98. B. Aubert et al (S.D. Metzler and 822 other authors; full list available online at Web of Science ([www.isiknowledge.com](http://www.isiknowledge.com))): The BaBar Collaboration The BABAR detector. Nucl Instrum Meth A 479(16): 1-116, February 2002.
99. Metzler SD, Bowsher JE, Tornai MP, Pieper BC, Peter J, Jaszczak RJ: SPECT Breast Imaging Combining Horizontal and Vertical Axes of Rotation. IEEE Trans Nucl Sci 49(1): 31-36, February 2002.



100. B. Aubert et al (S.D. Metzler and 580 other authors; full list available online at Web of Science ([www.isiknowledge.com](http://www.isiknowledge.com))): The BaBar Collaboration Direct CP violation searches in charmless hadronic B meson decays. Phys Rev D 65(5): Art. No. 051101, March 2002.
101. B. Aubert et al (S.D. Metzler and 582 other authors; full list available online at Web of Science ([www.isiknowledge.com](http://www.isiknowledge.com))): The BaBar Collaboration Study of CP-violating asymmetries in  $B^0 \rightarrow \pi^+ \pi^-$ ,  $K^+ \pi^-$  decays. Phys Rev D 65(5): Art. No. 051502 March 2002.
102. B. Aubert et al (S.D. Metzler and 619 other authors; full list available online at Web of Science ([www.isiknowledge.com](http://www.isiknowledge.com))): The BaBar Collaboration Measurement of  $B \rightarrow K^* \gamma$  branching fractions and charge asymmetries. Phys Rev Lett 88(10): Art. No. 101805, March 2002.
103. B. Aubert et al (S.D. Metzler and 549 other authors; full list available online at Web of Science ([www.isiknowledge.com](http://www.isiknowledge.com))): The BaBar Collaboration Study of  $B^{+/-} \rightarrow J/\psi \pi^{+/-}$  and  $B^{+/-} \rightarrow J/\psi K^{+/-}$  decays: Measurement of the ratio of branching fractions and search for direct CP-violating charge asymmetries. Phys Rev D 65(9): Art. No. 091101, May 2002.
104. B. Aubert et al (S.D. Metzler and 582 other authors; full list available online at Web of Science ([www.isiknowledge.com](http://www.isiknowledge.com))): The BaBar Collaboration Measurement of  $D_s^+$  and  $D_s^{*+}$  production in B meson decays and from continuum  $e^+e^-$  annihilation at  $\sqrt{s}=10.6$  GeV. Phys Rev D 65(9): Art. No. 091104, May 2002.
105. B. Aubert et al (S.D. Metzler and 545 other authors; full list available online at Web of Science ([www.isiknowledge.com](http://www.isiknowledge.com))): The BaBar Collaboration Search for T and CP violation in  $B^0 - (\overline{B}^0)$  mixing with inclusive dilepton events. Phys Rev Lett 88(23): Art. No. 231801, June 2002.
106. B. Aubert et al (S.D. Metzler and 546 other authors; full list available online at Web of Science ([www.isiknowledge.com](http://www.isiknowledge.com))): The BaBar Collaboration Search for the rare decays  $B \rightarrow K l^+ l^-$  and  $B \rightarrow K^* l^+ l^-$ . Phys Rev Lett 88(24): Art. No. 241801, June 2002.
107. B. Aubert et al (S.D. Metzler and 550 other authors; full list available online at Web of Science ([www.isiknowledge.com](http://www.isiknowledge.com))): The BaBar Collaboration Measurement of  $B^0 - (\overline{B}^0)$  flavor oscillations in hadronic  $B^0$  decays. Phys Rev Lett 88(22): Art. No. 221802, June 2002.
108. B. Aubert et al (S.D. Metzler and other authors; full list available online at Web of Science ([www.isiknowledge.com](http://www.isiknowledge.com)))) The Babar Collaboration.: Measurement of the  $B^0 - (\overline{B}^0)$  oscillation frequency with inclusive dilepton events Phys Rev Lett 88(22): Art. No. 221803, June 2002.

109. M. Chen, J. Peter, R. J. Jaszczak, D.R. Gilland, J. E. Bowsher, M. P. Tornai and S. D. Metzler: Observer Studies of Cardiac Lesion Detectability with Triple-Head 360 Degree versus Dual-Head 180 Degree SPECT Acquisition Using Simulated Projection Data. IEEE Trans Nucl Sci 49(3): 655-660, June 2002.
110. B. Aubert et al (S.D. Metzler and 552 other authors; full list available online at Web of Science ([www.isiknowledge.com](http://www.isiknowledge.com))): The BaBar Collaboration Measurement of the B-0 lifetime with partially reconstructed B-0  $\rightarrow$  D(-)l(+) $\nu$ l decays. Phys Rev Lett 89(1): Art. No. 011802, July 2002.
111. B. Aubert et al (S.D. Metzler and 546 other authors; full list available online at Web of Science ([www.isiknowledge.com](http://www.isiknowledge.com))): The BaBar Collaboration Measurement of the branching fraction and CP content for the decay B-0  $\rightarrow$  D\*+D\*- Phys Rev Lett 89(6): Art. No. 061801, August 2002.
112. B. Aubert et al (S.D. Metzler and 551 other authors; full list available online at Web of Science ([www.isiknowledge.com](http://www.isiknowledge.com))): The BaBar Collaboration Study of Time-Dependent CP-Violating Asymmetries and Flavor Oscillations in Neutral B Decays at the Upsilon(4S). Phys Rev D 66(3): Art. No. 032003, August 2002.
113. S.D. Metzler, J.E. Bowsher, K.L. Greer, R.J. Jaszczak: Analytic Determination of the Pinhole Collimator's Point-Spread Function and RMS Resolution with Penetration. IEEE Trans Med Imag 21(8): 878-887, August 2002.
114. B. Aubert et al (S.D. Metzler and 552 other authors; full list available online at Web of Science ([www.isiknowledge.com](http://www.isiknowledge.com))): The BaBar Collaboration Measurement of the B-0 lifetime with partially reconstructed B-0  $\rightarrow$  D(\*-)l(+) $\nu$ l decays. Phys Rev Lett 89(16): Art. No. 169903, October 2002.
115. C. N. Archer, M. P. Tornai, J. E. Bowsher, S. D. Metzler, B. C. Pieper, and R. J. Jaszczak: Implementation and Initial Characterization of Acquisition Orbits with a Dedicated Emission Mammotomograph. IEEE Trans Nucl Sci 50(3): 413-20, June 2003.
116. Metzler SD, Bowsher JE, Jaszczak RJ: Geometrical Similarities of the Orlov and Tuy Sampling Criteria and a Numerical Algorithm for Assessing Sampling Completeness. IEEE Trans Nucl Sci 50(5): 1550-55, October 2003.
117. Metzler SD, Greer KL, Jaszczak RJ: Helical Pinhole SPECT for Small-Animal Imaging: A Method for Addressing Sampling Completeness. IEEE Trans Nucl Sci 50(5): 1575-83, October 2003.
118. R. Accorsi and S.D. Metzler: Analytic Determination of the Resolution-Equivalent Effective Diameter of a Pinhole Collimator. IEEE Trans Nucl Sci 23(6): 750-63, June 2004.

119. S.D. Metzler, K.L. Greer, K. Bobkov, and R.J. Jaszczak: Laser Alignment System for Helical Pinhole SPECT. IEEE Trans Nucl Sci 51(3): 603-10, June 2004.
120. D.A. Rizzieri, G. Akabani, M.R. Zalutsky, R.E. Coleman, S.D. Metzler, J.E. Bowsher, B. Toaso, E. Anderson, A. Lagoo, S. Clayton, C.N. Pegram, J.O. Moore, J.P. Gockerman, C. DeCastro, C. Gasparetto, N.J. Chao, and D.D. Bigner: Phase I Trial Study of <sup>131</sup>I-labeled Chimeric 81C6 Monoclonal Antibody for Treatment of Patients with non-Hodgkin's Lymphoma. Blood 104(3): 642-48, 2004.
121. Metzler SD., Greer KL., Jaszczak RJ: Determination of mechanical and electronic shifts for pinhole SPECT using a single point source. IEEE Trans Med Imag 24(3): 361-70, March 2005.
122. Akabani G., Reardon DA., Coleman RE., Wong TZ., Metzler SD., Bowsher JE., Barboriak DP., Provenzale JM., Greer KL., DeLong D., Friedman HS., Friedman AH., Zhao XG., Pegram CN., McLendon RE., Bigner DD., Zalutsky MR.: Dosimetry and radiographic analysis of <sup>131</sup>I-labeled anti-tenascin 81C6 murine monoclonal antibody in newly diagnosed patients with malignant gliomas: a phase II study. Journal of Nuclear Medicine 46(6): 1042-51, Jun 2005.
123. Metzler SD., Jaszczak RJ., Patil NH., Vemulapalli S., Akabani G., Chin BB.: Molecular imaging of small animals with a triple-head SPECT system using pinhole collimation. IEEE Trans Med Imag 24(7): 853-62, July 2005.
124. Metzler, SD; Patil, NH: Measuring the Variation in Radius of Rotation as a Function of Gantry Angle for Ultra-High-Resolution Pinhole SPECT. IEEE Trans Nucl Sci 52(5): 1236-42, October 2005.
125. Metzler, SD; Patil, NH; Accorsi, R: Simultaneous, Maximum-Likelihood Determination of Focal Length and Source Position for Point-Source Experiments with Pinhole Collimation. IEEE Trans Nucl Sci 52(5): 1348-52, October 2005.
126. Accorsi R, Metzler SD: Resolution-effective diameters for asymmetric-knife-edge pinhole collimators. IEEE Transactions on Medical Imaging 24(12): 1637-46, Dec 2005.
127. S.D. Metzler and R Accorsi: Resolution- versus sensitivity-effective diameter in pinhole collimation: experimental verification. Phys Med Biol 50(21): 5005-17, December 2005.
128. Metzler, SD; Jaszczak, RJ: Simultaneous, Multi-Head Calibration for Pinhole SPECT. IEEE Trans Nucl Sci 53(1): 113-120, February 2006.

129. Accorsi, R; Metzler, SD: Non-diverging analytic expression for the on-axis sensitivity of converging collimators: analytic derivation. Phys Med Biol 51(21): 5675-96, November 2006.
130. Accorsi, R; Metzler, SD : Non-diverging analytic expression for the on-axis sensitivity of converging collimators: experimental verification. Phys Med Biol 51(21): 5697-5705, November 2006.
131. Metzler, SD; Accorsi, R; Novak, JR; Ayan, AS; Jaszczak, RJ: On-axis sensitivity and resolution of a slit-slat collimator. J Nuc Med 47(11): 1884-90, November 2006.
132. Vemulapalli, S, Metzler, SD, Akabani, G, Petry, NA, Niehaus, NJ, Liu, XL, Patil, NH, Greer, KL, Jaszczak, RJ, Coleman, RE, Dong, C, Goldschmidt-Clermont, PJ, Chin, BB: Cell therapy in murine atherosclerosis: In vivo imaging with high-resolution helical SPECT. Radiology 242(1): 198-207, JAN 2007.
133. Metzler, SD, Jaszczak, RJ, Greer, KL, Bowsher, JE: Angular-dependent axial-shift correction for pinhole SPECT. Ieee Transactions On Nuclear Science 54(1): 124-129, FEB 2007.
134. Ter-Antonyan, R, Jaszczak, RJ, Bowsher, JE, Greer, KL, Metzler, SD: Brain SPECT simulation using half-cone-beam collimation and single-revolution helical-path acquisition. Ieee Transactions On Nuclear Science 54(3): 475-479, JUN 2007.
135. Scheuermann, JS, Metzler, SD: Measuring transverse shift parameters for pinhole SPECT using point sources at multiple radii of rotation. Ieee Transactions On Nuclear Science 54(5): 1525-1534, OCT 2007.
136. Chin, BB, Metzler, SD, Lemaire, A, Curcio, A, Vemulapalli, S, Greer, KL, Petry, NA, Turkington, TG, Coleman, RE, Rockman, H, Jaszczak, RJ: Left ventricular functional assessment in mice: Feasibility of high spatial and temporal resolution ECG-gated blood pool SPECT. Radiology 245(2): 440-448, NOV 2007.
137. Ayan, AS, Metzler, SD: Axial resolution of helical-orbit pinhole SPECT with synchronized and unsynchronized motion. Ieee Transactions On Nuclear Science 55(1): 524-530, FEB 2008.
138. Novak, JR, Ayan, AS, Accorsi, R, Metzler, SD: Verification of the sensitivity and resolution dependence on the incidence angle for slit-slat collimation. Physics In Medicine And Biology 53(4): 953-966, FEB 21 2008.

139. Accorsi, R, Novak, JR, Ayan, AS, Metzler, SD: Derivation and validation of a sensitivity formula for slit-slat collimation. Ieee Transactions On Medical Imaging 27(5): 709-722, MAY 2008.
140. Ter-Antonyan, R, Jaszczak, RJ, Bowsher, JE, Greer, KL, Metzler, SD: Quantitative Evaluation of Half-Cone-Beam Scan Paths in Triple-Camera Brain SPECT. Ieee Transactions On Nuclear Science 55(5): 2518-2526, OCT 2008.
141. Shokouhi, S, Metzler, SD, Wilson, DW, Peterson, TE: Multi-pinhole collimator design for small-object imaging with SiliSPECT: a high-resolution SPECT. Physics In Medicine And Biology 54(2): 207-225, JAN 21 2009.
142. Accorsi, R, Ayan, AS, Metzler, SD: Comparison of Circular and Polygonal Planar Orbits for Pinhole and Slit-Slat SPECT. Ieee Transactions On Nuclear Science 56(3): 694-703, JUN 2009.
143. Ter-Antonyan, R, Jaszczak, RJ, Greer, KL, Bowsher, JE, Metzler, SD, Coleman, RE: Combination of Converging Collimators for High-Sensitivity Brain SPECT. Journal Of Nuclear Medicine 50(9): 1548-1556, SEP 2009.
144. Ayan, AS, Metzler, SD, Accorsi, R: Analytic Derivation and Monte Carlo Validation of a Sensitivity Formula for Slit-Slit Collimation With Penetration. Ieee Transactions On Nuclear Science 57(1): 135-143, FEB 2010.
145. Metzler, SD, Accorsi, R, Ayan, AS, Jaszczak, RJ: Slit-Slat and Multi-Slit-Slat Collimator Design and Experimentally Acquired Phantom Images From a Rotating Prototype. Ieee Transactions On Nuclear Science 57(1): 125-134, FEB 2010.
146. Metzler, SD, Vemulapalli, S, Jaszczak, RJ, Akabani, G, Chin, BB: Feasibility of Whole-Body Functional Mouse Imaging Using Helical Pinhole SPECT. Molecular Imaging And Biology 12(1): 35-41, FEB 2010.
147. Shokouhi, S, Wilson, DW, Metzler, SD, Peterson, TE: Evaluation of image reconstruction for mouse brain imaging with synthetic collimation from highly multiplexed SiliSPECT projections. Physics In Medicine And Biology 55(17): 5151-5168, SEP 7 2010.
148. H. Jacobowitz and S.D. Metzler: Geometric Sensitivity of a Pinhole Collimator. Int. J. of Math and Math. Sciences Art. no. 915958: 18 pages, 2010.

149. Chin, Bennett B, Hjelemand, Anita, Rich, Jeremy, Song, Haijing, Lascola, Christopher, Storms, Robert, McLendon, Roger, Reiman, Robert, Greer, Kim L, Metzler, Scott D, McDougald, Darryl, Dai, Diana, Vaidyanathan, Ganesan: Synthesis and preliminary evaluation of n.c.a. iodoquine: a novel radiotracer with high uptake in cells with high ALDH1 expression. Current Radiopharmaceuticals 5(1): 47-58, January 2012.
150. D. Kau and S.D. Metzler: Finding Optimized Conditions of Slit-Slat and Multislit-Slat Collimation for Breast Imaging. IEEE Transactions on Nuclear Science 59(1): 62-69, February 2012.
151. Metzler, Scott D., Matej, Samuel, Karp, Joel S.: Resolution Enhancement in PET Reconstruction Using Collimation. IEEE Transactions on Nuclear Science 60(1): 65-75, February 2013.
152. B. Aubert et al. (S.D. Metzler and 1083 other authors; full list available online at Web of Science (www.isiknowledge.com)): The BABAR detector: Upgrades, operation and performance. Nucl. Instrum. Methods A 729: 615-701, November 2013.
153. A.J. Bevan et al. (S.D. Metzler and 2033 other authors; full list available online at Web of Science (www.isiwebknowledge.com)): The Physics of the B Factories. European Physical Journal C 74(11): 1-898, November 2014.
154. Li, Yusheng, Matej, Samuel, Metzler, Scott D.: Image reconstructions from super-sampled data sets with resolution modeling in PET imaging. medical physics 41(12): Art. No. 121912, December 2014.
155. Li, Yusheng, Matej, Samuel, Karp, Joel S., Metzler, Scott D.: LOR-interleaving image reconstruction for PET imaging with fractional-crystal collimation. Phys. Med. Biol. 60(2): 647-670, January 2015.
156. Li, Yusheng, Defrise, Michel, Metzler, Scott D., Matej, Samuel: Transmission-less attenuation estimation from time-of-flight PET histo-images using consistency equations. Phys. Med. Biol. 60(16): 6563-6583, August 2015.
157. D. Xia, S.C. Moore, M.-A. Park, M. Cervo, and S.D. Metzler: Investigation of Imaging Properties for Sub-millimeter Rectangular Pinholes. Med. Phys. 42(12): 6933-6944, December 2015.
158. Y. Li, S. Matej, and S.D. Metzler: A unified Fourier theory for time-of-flight PET data. Phys. Med. Biol. 61(2): 601-624, January 2016.
159. L.C. Johnson, S.C. Moore, and S.D. Metzler: Effect of Pinhole Shape on Projection Resolution. Phys. Med. Biol. 61(5): 2003-2016, March 2016.

160. Y. Li, M. Defrise, S. Matej, S.D. Metzler: Fourier rebinning and consistency equations for time-of-flight PET planograms. Inverse Problems 32(9): 1-33, September 2016.
161. M.C. Lyon, A. Sitek, S.D. Metzler, and S.C. Moore: Reconstruction of multiple-pinhole micro-SPECT data using origin ensembles. Medical Physics 43(10): 5475-5483, October 2016.
162. S.C. Moore, M.A. Park, Z. Liu, M.C. Lyon, L.C. Johnson, V.H. Lushear, J.G. Westberg, and S.D. Metzler: Design of a dual-resolution collimator for preclinical cardiac SPECT with a stationary triple-detector system. Medical Physics 43(12), December 2016.
163. Y. Li, S. Matej, J.S. Karp, and S.D. Metzler: Model-Based Normalization of a Fractional-Crystal Collimator for Small-Animal PET Imaging. IEEE TRPMS 1(3): 262-267, March 2017.
164. A. Bress, S. Metzler, C. Plastaras, C. Nguyen, J.M. Schuster, and B. Pukenas: "Scout No Scan" Technique Reduces Patient Radiation Exposure During CT-Guided Spine Biopsy. American Journal OF Roentgenology 209(5), November 2017.
165. Lindsay C. Johnson, Marie A. Guerraty, Stephen C. Moore, and Scott D. Metzler: Quantification of Myocardial Uptake Rate Constants in Dynamic Small-Animal SPECT using a Cardiac Phantom. Physics in Medicine and Biology 64(6): 065018, March 2019 Notes: Accepted.

Research Publications, peer-reviewed reviews:

1. Van Audenhaege, Karen, Van Holen, Roel, Vandenberghe, Stefaan, Vanhove, Christian, Metzler, Scott D., Moore, Stephen C.: Review of SPECT Collimator Selection, Optimization, and Fabrication for Clinical and Preclinical Imaging. Medical Physics 42(8): 4796-4813, August 2015.

Contributions to peer-reviewed research publications, participation cited but not by authorship:

[none]

Research Publications, non-peer reviewed:

1. The BaBar Computing Group. S. Metzler, G. Dubois-Felsmann, Y. Kolomensky, A. Samuel, S. Yang: Distributed Histogramming. Proceedings of Computing in High Energy Physics (CHEP) 1998 October 1998 Notes: Published in the conference proceedings and also an internal note at The California Institute of Technology (CALT-68-2197).

2. S. Metzler, A. Adesanya, S. Dasu, T. Glanzman, G. Grosdidier, A. Samuel, and G. Zioulas: The BaBar Computing Group. Production Experience with CORBA in the BaBar Experiment. Computing in High Energy Physics (CHEP) February 2000.
3. S. Metzler, E. Chen, G. Dubois-Felsmann, and P. Bright-Thomas: The BaBar Computing Group. Automated Data Quality Monitoring in the BABAR Online and Offline Systems. Computing in High Energy Physics (CHEP) February 2000.
4. S.D. Metzler, J.E. Bowsher, M.P. Tornai, B.C. Pieper, J. Peter, and R.J. Jaszczak: SPECT Breast Imaging Combining Horizontal and Vertical Axes of Rotation. IEEE Nuclear Science Symposium and Medical Imaging Conference October 2000.
5. S.D. Metzler, J.E. Bowsher, K.L. Greer, and R.J. Jaszczak: Analytic Determination of the Pinhole Collimator's Point-Spread Function and RMS Resolution with Penetration. IEEE Nuclear Science Symposium and Medical Imaging Conference November 2001.
6. S. D. Metzler, J. E. Bowsher, and R. J. Jaszczak: Computational Determination of Orlov Volumes. Proceedings of the Sixth International Meeting on Fully Three-Dimensional Image Reconstruction in Radiology and Nuclear Medicine, Pacific Grove, CA 2001.
7. S.D. Metzler, J.E. Bowsher, and R.J. Jaszczak: Geometrical Similarities of the Orlov and Tuy Sampling Criteria and a Numerical Algorithm for Assessing Sampling Completeness. IEEE Nuclear Science Symposium and Medical Imaging Conference November 2002.
8. S.D. Metzler, K.L. Greer, and R.J. Jaszczak: Laser Alignment System for Helical Pinhole SPECT. IEEE Nuclear Science Symposium and Medical Imaging Conference October 2003.
9. S. D. Metzler, J.E. Bowsher, and R. J. Jaszczak: An Improved Numerical Algorithm for Assessing Sampling Completeness. Contributed to The Seventh International Conference on Fully 3D Reconstruction in Radiology and Nuclear Medicine, San Malo, France 2003.
10. N.H. Patil and S.D. Metzler: Step and Shoot Versus Continuous Helical Pinhole SPECT for Improved Axial Resolution. Contributed to IEEE Nuclear Science Symposium and Medical Imaging Conference October 2004.
11. N.H. Patil, S.D. Metzler, J.E. Bowsher, and R.J. Jaszczak: Comparison of Cone Beam and Parallel Beam Collimation with the Heart on the Axis of Rotation for Human Cardiac SPECT Imaging. IEEE Nuclear Science Symposium and Medical Imaging Conference October 2004.



12. R. Accorsi and S.D. Metzler: Resolution-Equivalent Vs. Sensitivity-Equivalent Effective Diameter in Pinhole Collimation: Experimental Verification. IEEE Nuclear Science Symposium and Medical Imaging Conference October 2004.
13. S.D. Metzler and R.J. Jaszczak: Simultaneous Multi-Head Calibration for Pinhole SPECT. IEEE Nuclear Science Symposium and Medical Imaging Conference October 2004.
14. S.D. Metzler, N.H. Patil, and R. Accorsi: Simultaneous, Maximum-Likelihood Determination of Focal Length and Source Position for Point-Source Experiments with Pinhole Collimation. IEEE Nuclear Science Symposium and Medical Imaging Conference October 2004.
15. S.D. Metzler, R.J. Jaszczak, K.L. Greer, and J.E. Bowsher: Angular-Dependent Axial-Shift Correction for Pinhole SPECT. IEEE Nuclear Science Symposium and Medical Imaging Conference October 2005.
16. J.R. Novak, S.D. Metzler, R. Accorsi, A.S. Ayan, and R.J. Jaszczak: Experimental Measurement of Axial and Transaxial Resolutions of a Slit-Slat Collimator and Comparisons with Theoretical Expectations. Contributed to IEEE Nuclear Science Symposium and Medical Imaging Conference, San Diego, CA November 2006.
17. R. Accorsi, S.D. Metzler, J.R. Novak, A.S. Ayan, and R.J. Jaszczak: Analytical derivation and experimental verification of a sensitivity formula for slit-slat SPECT collimation. Contributed to IEEE Nuclear Science Symposium and Medical Imaging Conference, San Diego, CA November 2006.
18. R.J. Jaszczak, K.L. Greer, and J.E. Bowsher, S.D. Metzler, R. Ter-Antonyan, K.V. Bobkov: Helical-Path, Half-Cone-Beam Acquisition for SPECT Brain Imaging. Contributed to IEEE Nuclear Science Symposium and Medical Imaging Conference, San Diego, CA November 2006.
19. S.D. Metzler, A.S. Ayan, R. Accorsi, and J.R. Novak: Reconstruction of Phantom SPECT scans Acquired with a Slit-Slat Collimator. Contributed to IEEE Nuclear Science Symposium and Medical Imaging Conference, San Diego, CA November 2006.
20. J.R. Novak, R. Accorsi, A.S. Ayan, and S.D. Metzler: Iterative region-of-interest reconstruction of truncated projections with slit-slat collimation. Contributed to IEEE Nuclear Science Symposium and Medical Imaging Conference, Honolulu, HI November 2007.

21. R. Accorsi, A.S. Ayan, and S.D. Metzler: Comparison of Circular and Polygonal Planar Orbits for SPECT Scanning. Contributed to IEEE Nuclear Science Symposium and Medical Imaging Conference, Honolulu, HI November 2007.
22. R. Ter-Antonyan, R.J. Jaszczak, J.E. Bowsher, K.L. Greer, and S.D. Metzler: Quantitative Evaluation of Half-Cone-Beam Data Acquisition Trajectories in Triple-Camera Brain SPECT. Contributed to IEEE Nuclear Science Symposium and Medical Imaging Conference, Honolulu, HI November 2007.
23. R. Ter-Antonyan, R.J. Jaszczak, J.E. Bowsher, K.L. Greer, and S.D. Metzler: Half-Cone-Beam Data Sufficiency in Triple-Camera SPECT. Contributed to IEEE Nuclear Science Symposium and Medical Imaging Conference, Honolulu, HI November 2007.
24. S.D. Metzler, R. Accorsi, A.S. Ayan, J.R. Novak, R.M. Lewitt, and R.J. Jaszczak: Preliminary Assessment of Multislit-Slat Collimation for Cardiac SPECT. Contributed to IEEE Nuclear Science Symposium and Medical Imaging Conference, Honolulu, HI November 2007.
25. S.D. Metzler, R. Accorsi, A.S. Ayan, and Ronald J. Jaszczak: First Experimental Results from a Prototype Rotating Slit-Slat Collimator. Contributed to IEEE Nuclear Science Symposium and Medical Imaging Conference, Dresden, Germany October 2008.
26. S.D. Metzler, A.S. Ayan, R. Accorsi, S. Matej, J.S. Karp: PET Collimation to Improve Spatial Resolution and Sampling. Contributed to The Tenth International Conference on Fully 3D Reconstruction in Radiology and Nuclear Medicine, Beijing, China September 2009.
27. A.S. Ayan, R. Accorsi, J.S. Karp, and S.D. Metzler: Geant4 Evaluation of the Impact of Spatial Resolution Improvement on the Contrast Recovery Coefficient in a Small-Animal PET System with Collimation. Contributed to IEEE Nuclear Science Symposium and Medical Imaging Conference, Orlando, FL October 2009.
28. R. Ter-Antonyan, R.J. Jaszczak, J.E. Bowsher, K.L. Greer, and S.D. Metzler: Multi-Geometric Collimation for High Sensitivity Brain SPECT. Contributed to IEEE Nuclear Science Symposium and Medical Imaging Conference, Orlando, FL October 2009.
29. S.D. Metzler, S. Matej, and J.S. Karp: EM Reconstruction with Multiple Time. Contributed to IEEE Nuclear Science Symposium and Medical Imaging Conference, Knoxville, TN November 2010.

30. K. Van Audenhaege, R. Van Hoken, J.S. Karp, S.D. Metzler, and S. Vandenberghe: Design of a Static Full-Ring Multi-Pinhole Collimator for Brain SPECT. Contributed to IEEE Nuclear Science Symposium and Medical Imaging Conference, Valencia, Spain October 2011.
31. S.D. Metzler, S. Matej, and J.S. Karp: Resolution Enhancement in PET Reconstruction Using Collimation. Contributed to IEEE Nuclear Science Symposium and Medical Imaging Conference, Valencia, Spain October 2011.
32. S. Agarwal, S.D. Metzler, and J. Dey: Optimization of Detector Surface for Multi-Pinhole Cardiac SPECT: An NCAT Study. Contributed to IEEE Nuclear Science Symposium and Medical Imaging Conference, Anaheim, CA November 2012.
33. S.D. Metzler, S.C. Moore, M.-A. Park: Design of a New Small-Animal SPECT System Based on Rectangular Pinhole Aperture. Contributed to IEEE Nuclear Science Symposium and Medical Imaging Conference, Anaheim, CA November 2012.
34. X. Zheng and S.D. Metzler: Adaptive Optimization of Slit Width for a Slit-Slat Collimator. Contributed to IEEE Nuclear Science Symposium and Medical Imaging Conference, Anaheim, CA November 2012.
35. X. Zheng, and S.D. Metzler: Angular Viewing Time Optimization for Slit-Slat SPECT. Contributed to IEEE Nuclear Science Symposium and Medical Imaging Conference, Anaheim, CA November 2012.
36. Y. Li, S. Matej, J.S. Karp, and S.D. Metzler: System Design Considerations for Collimation in a Small-Animal PET Scanner. Contributed to IEEE Nuclear Science Symposium and Medical Imaging Conference, Anaheim, CA November 2012.
37. Y. Li, S. Matej, J.S. Karp, and S.D. Metzler: LOR-Interleaving Image Reconstruction for PET with Collimation. Contributed to IEEE Nuclear Science Symposium and Medical Imaging Conference, Anaheim, CA November 2012.
38. S.D. Metzler, Y. Li, J.S. Karp, and S. Matej: Super-Resolution PET Using Stepping of a Deliberately Misaligned Bed. Accepted and presented at The 12th International Meeting on Fully Three-Dimensional Image Reconstruction in Radiology and Nuclear Medicine, Lake Tahoe, CA June 2013.
39. D. Xia, M.-A. Park, S.C. Moore, and S.D. Metzler: Preliminary Investigation of Imaging Properties for Sub-Millimeter Square-Pinholes. Contributed to IEEE Nuclear Science Symposium and Medical Imaging Conference, Seoul, Korea November 2013.

40. J. Strologas, S.D. Metzler, X. Zheng, and W. Chang: Image-Quality Effects of System-Matrix-Formation Statistics in SPECT Iterative Reconstruction. Contributed to IEEE Nuclear Science Symposium and Medical Imaging Conference, Seoul, Korea November 2013.
41. J. Strologas, S.D. Metzler, X. Zheng, and W. Chang: Optimizing Collimator Resolution/Sensitivity in SPECT Iterative Reconstruction. Contributed to IEEE Nuclear Science Symposium and Medical Imaging Conference, Seoul, Korea November 2013.
42. S.C. Moore, M.-A. Park, D. Xia, and S.D. Metzler: Dual-Resolution MicroSPECT Mouse Imaging Using a Triple-Head SPECT System. Contributed to IEEE Nuclear Science Symposium and Medical Imaging Conference, Seoul, Korea November 2013.
43. Y. Li, S. Matej, J.S. Karp, and S.D. Metzler: Model-Based Normalization of a Fractional-Crystal Collimator Prototype for Small-Animal PET Imaging. Contributed to IEEE Nuclear Science Symposium and Medical Imaging Conference, Seoul, Korea November 2013.
44. Y. Li, S. Matej, and S.D. Metzler: Image Reconstructions from Super-Sampled Data Sets in PET Imaging. Contributed to IEEE Nuclear Science Symposium and Medical Imaging Conference, Seoul, Korea November 2013.
45. D. Xia, S.C. Moore, M.-A. Park, M. Cervo, and S.D. Metzler: Dual-Resolution SPECT Imaging with a Rectangular Pinhole Collimator Tubes: System Integration and Prototype Scout-Tube Imaging. Contributed to IEEE Nuclear Science Symposium and Medical Imaging Conference, Seattle, WA November 2014.
46. J. Strologas, S. Metzler, X. Zheng, M. Rozler, and W. Chang: Collimator Design for Cardiac SPECT with Iterative Reconstruction. Contributed to IEEE Nuclear Science Symposium and Medical Imaging Conference, Seattle, WA November 2014.
47. J. Strologas, S. Metzler, X. Zheng, M. Rozler, and W. Chang: Imaging with a Partial C-SPECT Laboratory Prototype: A Simulations Study. Contributed to IEEE Nuclear Science Symposium and Medical Imaging Conference, Seattle, WA November 2014.
48. M. Cervo, D. Xia, S.D. Metzler, and S.C. Moore: List-Mode Reconstruction of Multiple-Pinhole MicroSPECT Data Using Origin Ensembles. Contributed to IEEE Nuclear Science Symposium and Medical Imaging Conference, Seattle, WA November 2014.

49. M. Rozler, S. Poopalasingam, K. Popovic, R. Arseneau, J. Strologas, X. Zheng, S. Metzler, W. Chang: C-SPECT Cardiac SPECT/Tet System: First Results from a Partial Section. Contributed to IEEE Nuclear Science Symposium and Medical Imaging Conference, Seattle, WA November 2014.
50. S.D. Metzler, D. Xia, and S.C. Moore: Analytic Determination of Rectangular-Pinhole Sensitivity with Penetration. Contributed to IEEE Nuclear Science Symposium and Medical Imaging Conference, Seattle, WA November 2014.
51. Y. Li, S. Matej, J.S. Karp, and S.D. Metzler: Investigation of Super-Sampling Techniques with Blob-Based Super-Resolution Reconstructions for PET Imaging. Contributed to IEEE Nuclear Science Symposium and Medical Imaging Conference, Seattle, WA November 2014.
52. M. Cervo, A. Sitek, S. Metzler, and S.C. Moore: Reconstruction of Multiple-Pinhole MicroSPECT Data Using Origin Ensembles. Contributed to The 13th International Meeting on Fully Three-Dimensional Image Reconstruction in Radiology and Nuclear Medicine, Newport, RI June 2015.
53. S.C. Moore, M. Cervo, Jose' Manuel Udias, Joaquin L. Herraiz, and S. Metzler: An Iterative Method for Eliminating Artifacts from Multiplexed Data in Pinhole SPECT. Contributed to The 13th International Meeting on Fully Three-Dimensional Image Reconstruction in Radiology and Nuclear Medicine, Newport, RI June 2015.
54. Y. Li, M. Daube-Witherspoon, J. Karp, S Surti, S. Matej, and S. Metzler: Modulating Time-Activity Curves for Different Compartments in List-Mode Data. Contributed to The 13th International Meeting on Fully Three-Dimensional Image Reconstruction in Radiology and Nuclear Medicine, Newport, RI June 2015.
55. Y. Li, M. Defrise, S. Metzler, and S. Matej: Attenuation Estimation from time-of-flight PET histo-images using consistency equations. Contributed to The 13th International Meeting on Fully Three-Dimensional Image Reconstruction in Radiology and Nuclear Medicine, Newport, RI June 2015.
56. L.C. Johnson, S.C. Moore, and S.D. Metzler: Effects of Square-Pinhole Corner Roundedness on Projection Image Quality. Contributed to IEEE Nuclear Science Symposium and Medical Imaging Conference, San Diego, CA November 2015.
57. S.C. Moore, M. Cervo, and S.D. Metzler: Iterative Demultiplexing of Multiple-Pinhole SPECT Projection Data. Contributed to IEEE Nuclear Science Symposium and Medical Imaging Conference, San Diego, CA November 2015.

58. Y. Li, S. Matej, J.S. Karp, and S.D. Metzler: Implementation of Precise Bed Motion Control and Super-Sampling Acquisition in LaPET Scanner. Contributed to IEEE Nuclear Science Symposium and Medical Imaging Conference, San Diego, CA November 2015.
59. Y. Li, S. Matej, and S.D. Metzler: FORCE: Fourier Rebinning and Consistency Equations for Time-of-Flight PET. Contributed to IEEE Nuclear Science Symposium and Medical Imaging Conference, San Diego, CA November 2015.
60. M.E. Daube-Witherspoon, J.S. Karp, S. Matej, Y. Li, and S.D. Metzler: Estimating the Precision of Lesion Uptake Measurements. Proceedings of The 14th International Meeting on Fully Three-Dimensional Image Reconstruction in Radiology and Nuclear Medicine Page: 209-212, July 2017.
61. Y. Li, M.E. Daube-Witherspoon, S. Matej, and S.D. Metzler: Lesion Quantification Using the Local Impulse Response from Embedded Point Source. Proceedings of The 14th International Meeting on Fully Three-Dimensional Image Reconstruction in Radiology and Nuclear Medicine Page: 272-275, July 2017.
62. D. Stentz, P. Sankar, W. Chang, J. S. Karp, S. D. Metzler: Using Higher Energy Radioisotopes for Crystal Identification in a SPECT System Contributed to IEEE Nuclear Science Symposium and Medical Imaging Conference, Atlanta, GA October 2017.
63. L.C. Johnson, M. Guerraty, D. Matej, and S.D. Metzler: Cardiac Phantom for Improved Small-Animal SPECT Myocardial Blood Flow Quantification. Contributed to IEEE Nuclear Science Symposium and Medical Imaging Conference, Atlanta, GA October 2017.
64. Y. Li, M.E. Daube-Witherspoon, S. Matej, and S.D. Metzler: Developing an Expert System to Improve Lesion Quantification for Personalized PET Imaging. Contributed to IEEE Nuclear Science Symposium and Medical Imaging Conference, Atlanta, GA October 2017.
65. Y. Li, S. Matej, and S.D. Metzler: Axial Fourier Rebinning for Time-of-Flight PET. Contributed to IEEE Nuclear Science Symposium and Medical Imaging Conference, Atlanta, GA October 2017 Notes: Oral presentation.
66. Scott D. Metzler, Poopalasingam Sankar, Dale J. Stentz, Joel S. Karp, Lindsay C. Johnson, and Wei Chang: First Imaging Data with C-SPECT: A Dedicated Human Cardiac SPECT Imager. Proceedings of the 2018 IEEE Nuclear Science Symposium and Medical Imaging Conference 2019.

Abstracts (Last 3 years):

1. A. Bress, S.D. Metzler, C. Plastaras, B. Pukenas: Significant dose reduction during neurointerventional CT cases using table side parameter control. Accepted at American Society of Spine Radiology (ASSR) Annual Meeting, Bonita Springs, FL February 2016 Notes: Oral Presentation.
2. A. Bress, S.D. Metzler, C. Plastaras, and B. Pukenas: Significant dose reduction during neurointerventional CT cases using table side parameter control Submitted to American Society of Neuroradiology (ASNR) Annual Meeting, Washington D.C. June 2016 Notes: Oral Presentation.
3. L. Johnson, M. Guerraty, E. Blankemeyer, D. Mankoff, D. Rader, and S. Metzler: Small-animal SPECT dynamic cardiac imaging. Journal of Nuclear Medicine 57(122), June 2016 Notes: Accepted and presented at Society of Nuclear Medicine Annual Meeting, San Diego, CA, USA.
4. S.C. Moore, S.D. Metzler, A. Sitek: Subsampling Approaches for Generation of Single Lower-Count Image Estimates from Higher-Count Data Accepted and presented at the Society of Nuclear Medicine and Molecular Imaging Annual Meeting, San Diego, CA, USA June 2016.
5. L. C. Johnson, Z. Liu, M.-A. Park, S. C. Moore, S. D. Metzler: Design of a Dual-Resolution, Rectangular-Pinhole Collimator with Improved Projection Tiling for Small-Animal SPECT. Accepted and presented at IEEE Nuclear Science Symposium and Medical Imaging Conference, Strasbourg, France November 2016 Notes: Oral Presentation.
6. S. C. Moore, M. F. Kijewski, L. C. Johnson, S. D. Metzler: Whole-Body Preclinical SPECT Imaging: Scanning Without Multiplexing vs. Stationary Imaging with Multiplexing. Accepted and presented at IEEE Nuclear Science Symposium and Medical Imaging Conference, Strasbourg, France November 2016 Notes: Oral Presentation.
7. S. D. Metzler, M. E. Daube-Witherspoon, J. S. Karp, S. Matej: Implications of Bias-Correction on Mean-Squared Error for Optimizing Reconstruction. Accepted and presented at IEEE Nuclear Science Symposium and Medical Imaging Conference, Strasbourg, France November 2016.
8. Y. Li, S. Matej, S.D. Metzler: Parameter Optimization for Blob-Based Image Reconstruction with Generalized Kaiser-Bessel Radial Functions. Accepted and presented at IEEE Nuclear Science Symposium and Medical Imaging Conference, Strasbourg, France November 2016.
9. M.E. Daube-Witherspoon, J. S. Karp, S. Matej, Y. Li, and S.D. Metzler: Estimating the Precision of Lesion Uptake Measurements. The 2017 International Conference on Fully Three-Dimensional Image Reconstruction in Radiology and Nuclear Medicine. June 2017 Notes: Accepted and presented. Oral presentation.

10. S. Metzler and L.J. Meng: Collimator Design for a Dedicated Human Cardiac SPECT System with High Resolution Detectors Accepted and presented at the Society of Nuclear Medicine and Molecular Imaging Annual Meeting, Denver, CO, USA June 2017 Notes: Oral presentation.
11. Y. Li, M.E. Daube-Witherspoon, S. Matej, and Scott D. Metzler: Lesion Quantification Using the Local Impulse Response from Embedded Point Source. The 2017 International Conference on Fully Three-Dimensional Image Reconstruction in Radiology and Nuclear Medicine. June 2017 Notes: Accepted and presented.
12. D. Stentz, P. Sankar, W. Chang, J. S. Karp, S. D. Metzler: Using Higher Energy Radioisotopes for Crystal Identification in a SPECT System Accepted and presented at IEEE Nuclear Science Symposium and Medical Imaging Conference, Atlanta, GA October 2017.
13. D. Stentz, P. Sankar, W. Chang, J.S. Karp, S.D. Metzler: Using Higher Energy Radioisotopes for Crystal Identification in a SPECT System. Contributed to IEEE Nuclear Science Symposium and Medical Imaging Conference, Atlanta, GA October 2017.
14. L. C. Johnson, M. Guerraty, D. Matej, S. D. Metzler: Cardiac Phantom for Improved Small-Animal Dynamic SPECT Myocardial Blood Flow Quantification. Accepted and presented at IEEE Nuclear Science Symposium and Medical Imaging Conference, Atlanta, GA, USA October 2017 Notes: Oral presentation.
15. Y. Li, M. E. Daube-Witherspoon, S. Matej, S. D. Metzler: Developing an Expert System to Improve Lesion Quantification for Personalized PET Imaging. Contributed to IEEE Nuclear Science Symposium and Medical Imaging Conference, Atlanta, GA October 2017.
16. Y. Li, S. Matej, S. D. Metzler: Axial Fourier Rebinning for Time-of-Flight PET Contributed to IEEE Nuclear Science Symposium and Medical Imaging Conference, Atlanta, GA October 2017.
17. M.A. Guerraty, L.C. Johnson, E. Blankemeyer, T. Wang, D.A. Mankoff, S.D. Metzler, and D.J. Rader: Multimodality Blood Flow Imaging in Mice American Heart Association November 2017 Notes: Accepted and presented at the American Heart Association Annual Meeting, Anaheim, CA, USA.
18. D. Stentz, P. Sankar, R. Arseneau, W. Chang, J.S. Karp, and S.D. Metzler: Spatial and energy resolution measurements for C-SPECT. Accepted and presented at the Society of Nuclear Medicine and Molecular Imaging Annual Meeting, Philadelphia, PA, USA June 2018 Notes: Oral presentation.



19. E.M. Zannoni, J. Zhang, C. Ma, J. Ouyang, S.D. Metzler, and L.J. Meng : Design study for MRC-SPECT-C: A MR-compatible cardiac SPECT system for simultaneous SPECT/MR cardiac imaging. Accepted and presented at the Society of Nuclear Medicine and Molecular Imaging Annual Meeting, Philadelphia, PA, USA June 2018 Notes: Oral presentation.
20. P. Sankar, D. Stentz, S.C. Moore, W. Chang, J.S. Karp, and S.D. Metzler : Design and Engineering of Clinical C-SPECT Patient and Task Specific Slits for Optimizing Sensitivity Accepted and presented at the Society of Nuclear Medicine and Molecular Imaging Annual Meeting, Philadelphia, PA, USA June 2018.
21. Y. Li, M. Daube-Witherspoon, S. Matej, and S.D. Metzler: Axial Dependent SUV Variance with and without Knitting: implications for automated reconstruction optimization. Accepted and presented at the Society of Nuclear Medicine and Molecular Imaging Annual Meeting, Philadelphia, PA, USA June 2018.
22. S.C. Moore, V. Viswanath, S.D. Metzler, J.L. Herraiz, and J.S. Karp: Feasibility of simultaneous dual-radionuclide time-of-flight PET imaging with PennPET Explorer. Accepted and presented at the Total Body PET Workshop, Ghent, Belgium July 2018.
23. S.D. Metzler, P. Sankar, D. Stentz, J.S. Karp, and W. Chang: First Imaging Data with C-SPECT: A Dedicated Human Cardiac SPECT Imager. Contributed to IEEE Nuclear Science Symposium and Medical Imaging Conference, Sydney, Australia November 2018.
24. P. Sankar, D. Stentz, J. Lindsay, W. Chang, J. S. Karp, S. D. Metzler: Performance Evaluation of Resolution/ Sensitivity Variable Slats-stack Collimator of C-SPECT Cardiac Scanner. 2019 Society of Nuclear Medicine and Molecular Imaging Annual Meeting, Anaheim, CA, USA June 2019.
25. Paco E Bravo, Benjamin Fuchs, Abdel K Tahari, Matthew Thorpe, Julien Howard, Marie Guerraty, Scott D. Metzler, Daniel Pryma, Jake Dubroff, and Arman Rahmim: Quantitative renal PET imaging with Rubidium-82 can discriminate individuals with different degrees of renal impairment. 2019 Society of Nuclear Medicine and Molecular Imaging Annual Meeting, Anaheim, CA, USA June 2019.
26. Stephen C. Moore, Srilalan Krishnamoorthy, Eric Blankemeyer, Sean D. Carlin, Joel S. Karp, and Scott D. Metzler: Simultaneous micro-PET imaging of F-18 and I-124 with correction for triple-random coincidences. The 15th International Meeting on Fully Three-Dimensional Image Reconstruction in Radiology and Nuclear Medicine, Philadelphia, PA, USA June 2019.

27. T. Szczykutowicz, S. Metzler, R. Stafford, and M. Namias: Adaptive Imaging. Medical Physics 46(6): E478, June 2019.
28. D. Stentz, L.C. Johnson, P. Sankar, R. Arseneau, W. Chang, and S.D. Metzler: Dual-Gated Imaging with C-SPECT. Contributed to IEEE Nuclear Science Symposium and Medical Imaging Conference, Manchester, UK October 2019.
29. L.C. Johnson, M.A. Guerraty, S.C. Moore, and S.D. Metzler: Quantification of defect contrast in microSPECT imaging of a myocardial phantom. Contributed to IEEE Nuclear Science Symposium and Medical Imaging Conference, Manchester, UK October 2019.
30. S.D. Metzler and S.C. Moore: Analytic Determination of Rectangular-Pinhole Sensitivity With Penetration. Contributed to IEEE Nuclear Science Symposium and Medical Imaging Conference, Manchester, UK October 2019.

Editorials, Reviews, Chapters, including participation in committee reports (print or other media):

1. Metzler, SD; Jaszczak RJ: Estimates of Axial and Transaxial Resolution for One-, Two-, and Three-Camera Helical Pinhole SPECT. In: Small-Animal SPECT Imaging. M.A. Kupinski and H.H.. Barrett, Eds (eds.). Springer Science+Business Media, Inc, 2005.
2. Moghbel, Mateen C., Saboury, Babak, Basu, Sandip, Metzler, Scott D., Torigian, Drew A., Langstrom, Bengt, Alavi, Abass: Amyloid-beta Imaging with PET in Alzheimer's Disease: Is It Feasible with Current Radiotracers and Technologies? European Journal of Nuclear Medicine and Molecular Imaging 39(2): 202-208, February 2012.
3. W. Chang, M. Rozler, S.D. Metzler: SPECT Instrumentation. Physics of PET and SPECT Imaging Magnus Dahlbom (eds.). CRC Press Inc, February 2017.

Books:

1. Harrison, P and Quinn, H (ed) : The BaBar Physics Book: Physics at an Asymmetric B Factory. The BABAR physics book: physics at an asymmetric B factory SLAC Report 504 Harrison, P and Quinn, H (ed) (eds.). SLAC, 1998 Notes: The BaBar experiment is an international collaboration of more than 550 physicists & engineers using the BaBar particle detector @ Stanford Linear Accelerator Center, Stanford University. See attachment for all 550 contributors to this research.

Alternative Media:

[none]

Patents:

S.D. Metzler and R.J. Jaszczak (DUKE): Axis of Rotation Measurement and Identification Method for Bore Geometries. USA Patent Number 60/587,747, 2004.

S.D. Metzler, R. Accorsi, and R.M. Lewitt (PENN): 2D Pinhole Collimator. USA Patent Number 60/783,077, 2006.

The Trustees of The University of Pennsylvania: Apparatus and Method for Collecting Super-Sampled Imaging Data. USA Patent Number 14/769,622, 2015.