CURRICULUM VITAE

NAME: Stephen Albert Fulling

DATE OF BIRTH: April 29, 1945

PLACE OF BIRTH: Evansville, Indiana

CITIZENSHIP U.S.

MARITAL STATUS: Single

CURRENT OFFICE ADDRESS, ETC.

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EDUCATION

Degree	University	Year
A.B.	Harvard College, Summa cum Laude	1967
M.A.	Princeton University, Dept. of Physics	1969
Ph.D.	Princeton University, Dept. of Physics	1972

PROFESSIONAL EMPLOYMENT

1984-	Professor, Mathematics Department, Texas A&M University
2000-	Professor (by courtesy), Physics Department, Texas A&M University

Spring 2010, '12, '14, '16, '18, '20	On leave (on campus, but not teaching)
Fall 2008	On leave (visited various institutions)
Spring 2007	Faculty Development Leave, Isaac Newton Institute for Mathematical Sciences, University of Cambridge
Spring 2003	On leave, Mathematical Sciences Research Institute, University of California – Berkeley
Fall 1999	Faculty Development Leave (visited various institutions)
Fall 1989	Faculty Development Leave (visited various institutions)
Fall 1984	On leave, Mathematics Department, State University of New York – Stony Brook
Spring 1981	On leave, Institute for Theoretical Physics, University of California – Santa Barbara
1979-1984	Associate Professor, Mathematics Department, Texas A&M University (tenured 1982)
1976-1979	Assistant Professor, Mathematics Department, Texas A&M University
1974-1976	Research Assistant (=postdoc.), Mathematics Dept., King's College, University of London
1973-1974	(simultaneous with below) Part-time Lecturer, University of Wisconsin–Milwaukee, Physics Dept.
1972-1974	Postdoctoral Fellow, Physics Department, University of Wisconsin–Milwaukee

SOCIETY MEMBERSHIPS AND MISCELLANEOUS AWARDS

Royal Society of Sciences at Uppsala [Sweden], elected 2004
Phi Beta Kappa
Sigma Xi
American Association of Physics Teachers
American Physical Society and various of its Divisions and Forums
(elected Fellow, 2018)
American Association for the Advancement of Science
Mathematical Association of America and various of its Special Interest Groups
Distinguished Alumnus (Class of 1963), Lindbergh High School, St. Louis, Missouri, elected 2014

INVITED CONFERENCE ADDRESSES

Workshop on Quantum Field Theory in Curved Space-Time, University of British Columbia, July, 1977.

Invited participant, **est** Foundation Conference on Geometry, Gravity and Field Theory, San Francisco, January, 1978.

Seminar on Quantum Gravity, USSR Academy of Sciences, Moscow, December, 1978.

Albert Einstein Symposium, Rosario, Argentina, July, 1979.

Symposium on Gauge Theory and Gravitation, Nara, Japan, August, 1982.

Induced Gravitation Workshop, Erice, Italy, October, 1983.

Joint Fall Meeting, Texas Sections, American Physical Society and Association of Physics Teachers, College Station, Symposium on Mathematical Physics, November, 1985 (also helped organize the session).

Western States Mathematical Physics Meeting, CalTech, May, 1986.

Conference on Cosmology and Particle Physics, Fermilab, May, 1987.

Workshop on Quantum Gravity Theory and Computer Symbolic Manipulation, National Center for Supercomputing Applications, U. of Illinois, August, 1987.

Canadian Association of Physicists' Summer Institute in Theoretical Physics, Queens University, Kingston, Ontario, July, 1989.

American Mathematical Society Regional Meeting, Special Session on Geometric Inequalities and Convex Bodies, Denton, Texas, November, 1990.

Third Colloquium on Differential Equations, Plovdiv, Bulgaria, August, 1992.

American Mathematical Society Central Section Meeting, Special Session on Nonlinear Partial Differential Equations, College Station, Texas, October, 1993.

Invited participant, Conference on Heat Kernel Techniques and Quantum Gravity, Winnipeg, Manitoba, Canada, August, 1994.

Sixth International Seminar on Quantum Gravity, Moscow, Russia, June, 1995.

The Richard Arnowitt Fest, Texas A&M, April, 1998.

Invited participant, Workshop on Quantum Optics, Jackson Hole, July, 1999.

International Conference "Quantization, Gauge Theory and Strings" Dedicated to the Memory of Professor Efim Fradkin, Moscow, June, 2000.

Minisymposium in Honor of Leonard Parker, Oakland University, Michigan, October, 2000.

Informal talk in last-day discussion, International Meeting on Quantum Gravity and Spectral Geometry, Naples, July, 2001.

Workshop on Quantum Optics, Jackson Hole, Wyoming, August, 2001.

Invited participant, S. W. Hawking birthday conferences, Cambridge, 2002, 2012, 2017.

Texas Geometry and Topology Meeting, Texas Tech, April, 2002.

Workshop on Casimir Forces, Harvard–Smithsonian Center for Astrophysics, November, 2002.

American Mathematical Society Southeastern Section Meeting, Special Session on Asymptotic Analysis, Stability, and Generalized Functions, Baton Rouge, March, 2003.

Workshop on Asymptotic Analysis, Stability, and Generalized Functions, Louisiana State U., Baton Rouge, March, 2003.

American Mathematical Society Western Section Meeting, Special Session on Spectral Geometry, Albuquerque, October, 2004.

35th Winter Colloquium on the Physics of Quantum Electronics, Snowbird, Utah, January, 2005.

Brian G. Wybourne Commemorative Meeting, Torun, Poland, June, 2005.

AMS-IMS-SIAM Joint Summer Research Conference on Quantum Graphs and Their Applications, Snowbird, Utah, June, 2005.

Princeton-TAMU Bose-Einstein Condensation Symposium, Princeton, New Jersey, October, 2005.

Conference on Heat Kernels in Mathematics and Physics, Blaubeuren, Germany, November, 2006.

Workshop on Quantum Graphs, their Spectra and Applications, Newton Institute, Cambridge, England, March, 2007.

Invited participant, Program on The Theory and Practice of Fluctuation-Induced Interactions, Kavli Institute for Theoretical Physics, University of California – Santa Barbara, November, 2008.

Fourth International Sakharov Conference on Physics, Moscow, Russia, May 2009.

9th Workshop on Quantum Field Theory under the Influence of External Conditions, Norman, Oklahoma, September, 2009.

XXVII Physics Meeting in the North-Northeast Brazil, Belém, Brazil, November, 2009.

MiltonFest on Nonperturbative Quantum Field Theory, U. of Oklahoma, Norman, April, 2010.

Analysis on Graphs and Its Applications – Follow-up Meeting, Newton Institute, Cambridge, July, 2010.

10th Workshop on Quantum Field Theory under the Influence of External Conditions, Benasque, Spain, September, 2011.

Invited participant, Theo Murphy International Scientific Meeting on Complex Patterns in Wave Functions, Chicheley, UK, September, 2012.

Casimir Physics Session, École de Physique, Les Houches, France, April, 2014.

Workshop on Cosmology and the Quantum Vacuum, Rhodes, Greece, June, 2015.

70th birthday celebration workshop for W. G. Unruh, Perimeter Institute, Waterloo, Ontario, August, 2015.

Invited participant and impromptu remarks, Hawking Radiation Conference, Stockholm, Sweden, August, 2015.

International Workshop on Strong Field Problems in Quantum Theory, Tomsk State University, Tomsk, Russia, June 2016.

Ginzburg Centennial Conference on Physics, Lebedev Physical Institute, Moscow, Russia, May-June 2017.

Conference on Gravity: Past, Present, and Future, Pacific Institute for Theoretical Physics (UBC), Vancouver, Canada, September 2017.

Winter Colloquia on the Physics of Quantum Electronics, Snowbird, Utah, January 2018, January 2019.

Scattering and Spacetime Horizons: Mathematical Challenges, Ecole de Physique des Houches, France, May 2018.

TAMU-Princeton-Baylor Summer School on Quantum Science and Engineering, Casper, Wyoming, July 2018.

Texas-Louisiana sectional meeting of SIAM, session on spectral problems for differential operators, Baton Rouge, October 2018.

Frontiers of Quantum and Mesoscopic Thermodynamics, Prague, July 2019.

2nd International Conference on Symmetry, Benasque, Spain, Sept. 2019.

Princeton-TAMU Workshop on Unruh Acceleration Radiation, Vacuum Entanglement and Relativity, Dec. 2020.

OTHER ADDRESSES

Colloquium and seminar talks at universities (other than TAMU math. dept.):

1974: Colorado, Utah, Maryland, Johns Hopkins
1975: Oxford, Cambridge, Bern
1976: Wisconsin (Milwaukee), Chicago, Imperial College (London), Cambridge, University College (Cardiff), Paris (Institute Henri Poincaré), Princeton
1977: Texas (Austin), Alberta (Edmonton), Texas A&M (Physics Dept.)
1979: Texas (Austin), Rice
1980: Wisconsin (Milwaukee), Chicago
1981: North Carolina (Chapel Hill), Manitoba (Winnipeg)
1982: Princeton
1984: Maryland, SUNY (Stony Brook)
1989: Manitoba, Case-Western Reserve (Cleveland)
1990: Oregon (Eugene), Oregon State (Corvallis)
1991: Texas A&M (Oceanography Dept.)

1992: Texas A&M (Physics Dept.)
1993: Alberta
1994: Texas A&M (Chemistry Dept.), Texas (Austin)
1995: Alberta, Texas A&M (Physics Club)
1999: Manitoba (Winnipeg), Texas A&M (Quantum Optics seminar), Costa Rica (San José)
2001: Texas A&M (Quantum Computation seminar), Texas A&M (College of Science, report on TMI grant)
2003: MSRI (Semiclassical Analysis seminar)
2006: Bristol
2007: Sussex, York, Cambridge (INI)
2008: Minnesota (IMA), California (Santa Barbara), California (KITP Santa Barbara)
2010: Tulane
2016: Texas A&M (Physics Dept.)
2017, 2018, 2019: Texas A&M (Institute for Quantum Science and Engineering)
2018: Institute of Theoretical Physics, State University of São Paulo, Brazil.

American Physical Society Annual Meeting, Chicago, 1974
Eighth International Conference on General Relativity and Gravitation, Waterloo, 1977
Texas Partial Differential Equations Meeting, 1978, 1982, 1983, 1987, 1990, 1995, 1998, 2004, 2912
New Orleans Conference on Quantum Theory and Gravitation, 1979
Birmingham Conference on Spectral Theory of Differential Operators, 1981
Western States Mathematical Physics Meeting, CalTech, 1982, 2012
XIIIth International Colloquium on Group Theoretical Methods in Physics, College Park, 1984
Birmingham Conference on Differential Equations and Mathematical Physics, 1986, 1990, 1999
First International Conference on the Physics of Phase Space, College Park, 1986
International Symposium on Asymptotic and Computational Analysis, Winnipeg, 1989
TEX Users' Group Annual Meeting, College Station, 1990
Fourth Canadian Conference on General Relativity and Relativistic Astrophysics, University of Winnipeg, 1991
Conference on Quantized Geometry, Ohio State University, 1991
Second International Wigner Symposium, Goslar, Germany, 1991
UAB–Georgia Tech Conference on Differential Equations and Mathematical Physics, 1992
Summer School on Mathematical Quantum Theory, University of British Columbia, 1993
Cornelius Lanczos International Centenary Conference, North Carolina State University (Raleigh), 1993
International Conference on Symmetry in Nonlinear Mathematical Physics, Kiev, Ukraine, 1995
Internet Awareness Week, Texas A&M University, 1995

Conference on Combinatorics and Physics, Los Alamos, 1998
Fourth Workshop on Quantum Field Theory under the Influence of External Conditions, Leipzig, Germany, 1998
Eyvind H. Wichmann Symposium, Berkeley, 1999
TeX Users Group Annual Meeting, Vancouver, 1999 (also organized and moderated a panel discussion)
International Meeting on Quantum Gravity and Spectral Geometry, Naples, July, 2001.
QMath-8, Taxco, Mexico, December, 2001.
Sixth Workshop on Quantum Field Theory under the Influence of External Conditions, U. Oklahoma, Norman, September, 2003.
Workshop on Semiclassical Approximation and Vacuum Energy, Texas A&M, January, 2005 (2 pedagogical talks and a research talk)
Seventh Workshop on Quantum Field Theory under the Influence of External Conditions, Barcelona, Spain, September, 2005
Oklahoma-Texas-Louisiana Quantum Vacuum Research Group, Norman, Oklahoma, June, 2006; May, 2011; College Station, Texas, August, 2008; June, 2009; July, 2010; May, 2012; May, 2013
Workshop on Spectral Theory and Its Applications, Newton Institute, Cambridge, England, July, 2006
Midwest Geometry Conference (in memory of T. Branson), Iowa City, May, 2007
Eighth Workshop on Quantum Field Theory under the Influence of External Conditions, Leipzig, Germany, September, 2007
International Conference on Spectral Geometry, Dartmouth, 2010
Workshop in Analysis and Probability: Recent Advances in Harmonic Analysis and Spectral Theory, Texas A&M University, August, 2012
Focused Program on Casimir and van der Waals Physics, Hong Kong, April, 2016.
International Workshop on Operator Theory and its Applications, Lisbon, July 2019.

GRANTS

College of Science Organized Research Funds, salary support, summer 1977 and spring semester 1979.

National Science Foundation Grant, August, 1977–January 1980. Renewed, April 1980–September 1982; July 1982–December 1984; June 1984–May 1986.

Sun Microsystems, equipment donation for Large-Scale Symbolic Computation, in collaboration with S.M. Christensen (NCSA, U. of Illinois) and L. Parker (U. of Wisconsin-Milwaukee), 1989.

NATO Grant for International Collaboration in Research, with T. A. Osborn (U. of Manitoba), 1989 (renewed 1991).

TAMU Research Mini-Grant (undergraduate research assistant), summer 1993.

National Academy of Sciences – National Research Council COBASE Project Development Grant (visit of V. P. Gusynin from Ukraine), July 1994.

College of Science Research Enhancement Funds (graduate research assistant), summer 1996.

College of Science Technology-Mediated Instruction Materials Funds, summer 2001.

National Science Foundation, Workshop on Semiclassical Approximation and Vacuum Energy, Texas A&M, January 2005.

National Science Foundation, Collaborative Research: Quantum Vacuum Energy (linked to grants at U. of Oklahoma Physics Dept. and Louisiana State U. Math Dept.), June 2006–August 2014.

Texas A&M University and São Paulo Research Foundation, São Paulo Researchers in International Collaboration (SPRINT), Acceleration and Radiation: Classical and Quantum, Electromagnetic and Gravitational, March 2018–March 2020.

SERVICE (DEPARTMENTAL, UNIVERSITY, PROFESSIONAL)

TAMU Department of Mathematics Outstanding Service Award, 2011.

Frequent referee for Physical Review D, Physical Review Letters, Journal of Physics A, Journal of Mathematical Physics, and other journals, and for various granting agencies.
Certificate of Recognition as an Outstanding Referee for the Journals of the American Physical Society, 2008.

Associate Editor, Journal of Mathematical Analysis and Applications, May 2009–.

Frequent member of graduate-student committees (for oral examinations), mostly in the physics department.

External examiner on 3 Ph.D. dissertations for Canadian physics departments (British Columbia, Manitoba, Alberta), and one for the Mathematics Department of SUNY – Buffalo.

Course coordinator, Math 151–253 (engineering calculus), Fall 1978–Fall 1979.
Author of report to Dean of College of Science on instructional practices and teaching loads in the department, Fall 1979.
Developed upper-level course, Math 489Q/689Q/460, for science majors (Hilbert space, self-adjoint operators, eigenfunction expansions, group representations). Related 685 and 485 supervisions. Related textbook in preparation.
Helped design Math 640–642 sequence (analysis for applications) and Math 624 and 460 (tensors and general relativity).
Major revision of Math 401, particularly inclusion of perturbation theory for differential equations (1988).
Math 689, applied pseudodifferential operators (1994, 2000).
Foundation Coalition Freshman Team, 1996–1998.
Textbook for Math 311 (linear algebra with analysis applications) published 2000.
Participated in revision of Math 312 (renumbered 412) (2001), review of Math 311 and related courses (2003), design of a writing-intensive option for Math 467 (2009) and its recertification (2012,'16), splitting of Math 311 into Math 311 and Math 309 (2010).

Course coordinator, Math 152, Spring 2001 and Fall 2002.

Chair, committee to respond to planned withdrawal of physics majors from upper-level math courses, 2008. This assignment morphed into a continuing effort to rationalize our offerings (math minor and double major) for physics majors and to recruit therefor.

Active in organization of mathematical physics (and other) seminars.

Host for 5 Frontiers in Mathematics visitors (H. Widom, M. Gutzwiller, R. Wald, J. Lyness, S. de Bièvre).
Mentor to 5 postdocs (S. Ruijsenaars, B. Bourgeois, G. Kennedy, M. Radzikowski, J. Wagner)

Mathematics Department Executive Committee, 1995–1996, 2010–2012
Subcommittee P (promotion to professor), 1988, 1991, 2010–2012
Subcommittee T (promotion and tenure), 1998 and 1999
Teaching Evaluation Committee, 2003–2005, 2013–2015 (Chair during second year in each case), 2017–2019, 2020–
Awards Committee, 2005–2006, 2007–2009
Undergraduate Studies Committee, 2009–2010
Honors Committee, 2016–2017
Mathematics Department hiring committees, several occasions, most recently 1994.

Faculty Senate, 1983–1988
- Planning Committee, 1983–1987 (Chair 1986–1987)
- Governance and Administration Subcomittee (chair), 1985–1986
- Executive Committee, 1985–1986
- Minority Conditions Subcommittee, 1985–1986
- Academic Affairs Committee, 1987–1988
- Core Curriculum Oversight Subcommittee, 1988–1989 (Chair 1988)

University Research Standards Officer, 1999–2006, 2008–2012
Committee on Academic Freedom, Responsibility, and Tenure, 2012–2015

Spectrum (College of Science publication) Editorial Board, 1987–1989

Search Committee for Director of Center for Theoretical Physics, 1983–1985
Physics Head Search Committee, 1987–1988
Math Head Evaluation Committee, 1988
Math Head Search Committees, 1991–1993

Bakelman Memorial Symposium organizing committee, 1993
International advisory committee, Second International Wigner Symposium, Goslar, Germany, 1991
Conference organizing committee, Heat Kernel Techniques and Quantum Gravity, Winnipeg, Manitoba, Canada, 1994
International advisory committee, International Meeting on Quantum Gravity and Spectral Geometry, Naples, Italy, 2001
Local organizing committee, Mitchell Symposium on Observational Cosmology, TAMU, April 2004.

Organizing committee and editorial board of the proceedings (*Contemporary Mathematics* **415**, 2006), AMS-IMS-SIAM Joint Summer Research Conference on Quantum Graphs and Their Applications, Snowbird, Utah, 2005.
Local organizing committee, 9th Workshop on Quantum Field Theory under the Influence of External Conditions, Norman, Oklahoma, September, 2009.
Organizing committee, AMS Special Session, Mathematical Aspects of Spectral Problems Related to Physics, Waco, Texas, October, 2009.
International advisory committee, International Workshop on Strong Field Problems in Quantum Theory, Tomsk, Russia, 2016.
Organizing committee, Princeton-TAMU workshop on Unruh Acceleration Radiation, Vacuum Entanglement and Relativity, Princeton Center for Theoretical Science, Zoom, Dec. 2020.

Organizer, Workshop on Semiclassical Approximation and Vacuum Energy, TAMU, January 12-16, 2005.

Organizer, On-line discussion group, Acceleration Radiation Community, 2020–

Publisher and chief editor, **Discourses in Mathematics and Its Applications** (conceived 1983, first volume 1991, more volumes 1994–5).

Phi Beta Kappa, TAMU Chapter, ad hoc bylaws committee (during the formation of the chapter), Fall 2003; Committee on Members in Course [election of students], chair 2004, member 2005–6.

TEACHING

TAMU Department of Mathematics Outstanding Teaching Award, 2013.

At the University of Wisconsin–Milwaukee: Introductory Astronomy: Fall 1973, Spring 1974.

At SUNY–Stony Brook: Calculus; Special Topics in Quantum Field Theory in Curved Space-Time: Fall 1984.

At TAMU:

Fall 1976:	Math 230 and 601
Spring 1977:	Math 308 (2 sections) and 312
Fall 1977:	Math 210 (2 sections)
Spring 1978:	Math 152 and 489Q
Fall 1978:	Math 151 and 311
Spring 1979:	Math 312 and two 685 students
Fall 1979:	Math 253 and 311 and one 485 student
Spring 1980:	Math 130 and 151
Fall 1980:	Math 152 and 308
Fall 1981:	Math 151 and 308
Summer 1981:	Math 602
Spring 1982:	Math 151 and 489Q
Fall 1982	Math 152 and 308 and one shared 485 student
Spring 1983:	Math 308 and 602 and one shared 485 student
Fall 1983:	Math 151 and 450

Spring 1984:	Math 151
Spring 1985:	Math 230 and 640 and one 685 student
Fall 1985:	Math 311 and 640
Spring 1986:	Math 308 and 624
Summer 1986:	one 685 student
Fall 1986:	Math 142 and 311
Spring 1987:	Math 308 and 311
Summer 1987:	one 685 student
Fall 1987:	Math 311 and 640, one 685 student
Spring 1988:	Math 308 and 489[Q], one 691 student
Fall 1988:	Math 151 and 401
Spring 1989:	Math 308 and 401
Spring 1990:	Math 401 and 624
Summer 1990:	three 685 students
Fall 1990:	Math 401 and 640, one 685 student
Spring 1991:	Math 311 and 401, one 685 student
Fall 1991:	Math 161 and 311, two 685 students
Spring 1992:	Math 151 and 401, one 685 student
Summer 1992:	one 685 student
Fall 1992:	Math 311 and 460[GR] (as 485, 7 students), one other 485 student
Spring 1993:	Math 308 and 311
Fall 1993:	Math 312
Spring 1994:	Math 151 and 689
Fall 1994:	Math 401 and 640, one 485H student
Spring 1995:	Math 171 and 311, one 485H student
Fall 1995:	Math 311
Spring 1996:	Math 302 and 311
Summer 1996:	two 685 students
Fall 1996:	Math 151 (Coalition) and 311, one 485H student
Spring 1997:	Math 152 (Coalition) and 612
Fall 1997:	Math 151 (Coalition)
Spring 1998:	Math 152 (Coalition) and 642
Fall 1998:	Math 311 and 401 (as 485, 7 students)
Spring 1999:	Math 311, one 485 student
Spring 2000:	Math 311 and 689
Fall 2000:	Math 312
Spring 2001:	Math 152 (WebCalc) and 401
Fall 2001:	Math 151 (WebCalc)
Spring 2002:	Math 302 and 311 (Honors)
Fall 2002:	Math 152 and 302
Fall 2003:	Math 401 and 629 (Distance)
Spring 2004:	Math 311 (Honors)
Summer 2004:	one Physics 485 student
Fall 2004:	Math 302 and 412
Spring 2005:	Math 401
Fall 2005:	Math 412 and 489[GR], three Contract Honors students in 489, one Math 685 student
Spring 2006:	Math 401
Fall 2006:	Math 412 (Honors) and 629 (Distance), one Math 491H student
Spring 2007:	one Math 491H student
Summer 2007:	one Math 685 student
Fall 2007:	Math 412 (Stacked Honors), one Phys 685 student
Spring 2008:	Math 151 (Distance) and 489[GR]
Fall 2008:	two Phys 691 students

Spring 2009:	Math 401 and 467, two Phys 691 students
Summer 2009:	one Math 691 student
Fall 2009:	Math 467 (Stacked W) and 489[GR], one Math 685 and one Math 691 student
Spring 2010:	One student each in Math 685 and 691
Summer 2010	Two students in Math 691
Fall 2010:	Math 467 (regular and W sections), one student each in Math 491 and 691
Spring 2011:	Math 467(W), one Math 491 and two Math 691 students
Fall 2011:	Math 151 and 460, two Math 485 and one Phys 485 students
Spring 2012:	One Phys 485 student
Fall 2012:	Math 311, Math 412 (stacked H), one Math 485 and one Phys 691 student
Spring 2013:	Math 467(W), and one Math 685 student
Fall 2013:	Math 460 and 467(W) and one Phys 691 student
Spring 2014:	One Phys 691 student
Fall 2014:	Math 311 and 467(W)
Spring 2015	Math 629 (Distance) and one Phys 491 student
Fall 2015	Math 412 (stacked H) and 467(W) and two Math491/Phys491 students
Fall 2016	Math 467 (2 W sections) and one Math 491/Phys 491 student
Spring 2017	Math 467(W) and two Math 491 students
Summer 2017	one Math 491 student
Fall 2017	Math 467(W) and one Math 491(H) student
Fall 2018	Math 309 and Math 640 (Distance)
Spring 2019	Math 467(W, stacked H)
Fall 2019	Math 460 and one each of Math 491, Phys 491H, Math 685, Phys 685
Spring 2020	two Math 491 students
Summer 2020	one Math 691, two Phys 491
Fall 2020	Math 309, Math 467(W), and one Math 691, two Math 491, one Phys 491H

UNDERGRADUATE RESEARCH SUPERVISED

Undergraduate Research Mentoring Award, TAMU College of Science, 2015.

1. C. E. Dean, Math 485 with research on spectral asymptotics for Hamiltonians exhibiting resonance, 1979–80.
2. D. M. Potts, informal research on infinite-precision arithmetic via the Chinese remainder theorem, 1992–94.
3. D. M. Potts, research culminating in Undergraduate Research Fellow thesis, *Large mass approximations in quantum physics and a bridge to quantum chemistry*, 1993–95.
4. C. J. Romero, Math 485 with research on spectral Riesz means of a topologically nontrivial differential operator, 1999.
5. J. H. Wilson, Undergraduate Research Fellow thesis, *Vacuum energy in quantum graphs*, 2006–07.
6. R. B. McDonald, Undergraduate Research Scholar thesis, *Neumann nodal curves*, 2007–08.
7. P. N. Truong, research on quantum field theory on cones, 2008.
8. C. S. Trendafilova, Undergraduate Research Scholar thesis, *Cylindrical symmetry in general relativity and vacuum energy*, 2010–11.
9. C. S. Trendafilova, Undergraduate Research Fellow thesis, *Vacuum energy for static, cylindrically symmetric systems*, 2011–12.

10. K. Thapa, Undergraduate Research Scholar thesis, *Calculation of highly oscillatory integrals by quadrature methods*, 2011–12.
11. M. Rugh, Math 485 with research on enumeration of multigraphs, 2012–2013.
12. S. Murray and C. Whisler, joint Undergraduate Research Scholar thesis, *The soft wall model of the Casimir effect*, 2014–2015.
13. D. Lujan, T. Settlemyre, and J. Merritt, Phys/Math 491 with research on quantum vacuum energy in a background scalar potential, 2016–2017.
14. W. Ibarra and I. Zane, Phys/Math 491 with research on asymptotic approximations, 2019–2020.
15. A. Shayit, Undergraduate Research Scholar thesis, under way.

GRADUATE STUDENTS SUPERVISED

1. J. H. Sanders, nonthesis M.S. with informal research on asymptotics for matrix-valued differential operators, 1985.
2. R. B. Upson, nonthesis M.S. with informal study of numerical methods for PDEs, 1987.
3. P. A. Carinhas, nonthesis M.S. in Physics (formally supervised by A. L. Ford) with informal research on asymptotics for fourth-order differential operators, 1987.
4. S. E. Mock, nonthesis M.S. with informal research on asymptotics for differential operators with nonscalar principal symbol, 1992.
5. K. S. Güntürk, Ph.D. in Physics, *Covariant Weyl quantization, symbolic calculus, and the product formula*, 2006.
6. J. D. Bondurant, nonthesis M.S. (finance option supervised by D. DeBlassie) with informal research on mathematical physics, 2003.
7. M. Agriesti, nonthesis M.S. (distance, teaching option), 2005.
8. Z. H. Liu, M.S. in Physics, *Cylinder kernel expansion of Casimir energy with a Robin boundary*, 2006.
9. T. A. Zapata, M.S. in Physics, *The WKB approximation for a linear potential and ceiling*, 2007.
10. K. Hoerster, nonthesis M.S. (distance, teaching option), 2007.
11. K. Resil, nonthesis M.S. in Physics (formally supervised by R. E. Allen) with informal research on quantum graphs, 2007.
12. Z. H. Liu, Ph.D. in Physics, *Closed path approach to Casimir effect in rectangular cavities and pistons*, 2009.
13. C. Bishop, nonthesis M.S. (distance, teaching option), 2009.
14. F. D. Mera, M.S., *The Schrödinger equation as a Volterra problem*, 2011.
15. J. D. Bouas, M.S., *Hertz potentials and diffferential geometry*, 2011.
16. M. Rugh, nonthesis M.S. (teaching option), 2015.

PUBLICATIONS

Papers in refereed journals

1. S. A. Fulling and G. R. Satchler, Theoretical analysis of 30 MeV proton inelastic scattering, *Nucl. Phys. A* **111**, 81–99 (1968).

2. L. Parker and S. A. Fulling, Quantized matter fields and the avoidance of singularities in general relativity, *Phys. Rev. D* **7**, 2357–2374 (1973). Reprinted in *Cosmology* (American Association of Physics Teachers, Stony Brook, 1979).
3. S. A. Fulling, Nonuniqueness of canonical field quantization in Riemannian space-time, *Phys. Rev. D* **7**, 2850–2862 (1973).
4. S. A. Fulling, Comment on 'Probability distribution of momenta in an infinite square-well potential', *Amer. J. Phys.* **41**, 1374–1375 (1973).
5. B. L. Hu, S. A. Fulling, and L. Parker, Quantized scalar fields in a closed anisotropic universe, *Phys. Rev. D* **8**, 2377–2385 (1973).
6. L. Parker and S. A. Fulling, Adiabatic regularization of the energy-momentum tensor of a quantized field in homogeneous spaces, *Phys. Rev. D* **9**, 341–354 (1974).
7. S. A. Fulling and L. Parker, Renormalization in the theory of a quantized scalar field interacting with a Robertson–Walker space-time, *Ann. Phys. (N.Y.)* **87**, 176–204 (1974).
8. S. A. Fulling, L. Parker and B. L. Hu, Conformal energy-momentum tensor in curved space-time: Adiabatic regularization and renormalization, *Phys. Rev. D* **10**, 3905–3924 (1974); erratum *ibid.* **11**, 1714 (1975). ,
9. S. A. Fulling, Absence of trivial subrepresentations from tensor products of unitary representations of pseudo-orthogonal groups, *J. Math. Phys.* **15**, 1567–1570 (1974).
10. S. A. Fulling, Adiabatic expansions of solutions of coupled second-order linear differential equations. I, *J. Math Phys.* **16**, 875–883 (1975).
11. S. A. Fulling, Varieties of instability of a boson field in an external potential, *Phys. Rev. D* **14**, 1939–1943 (1976).
12. S. A. Fulling and P. C. W. Davies, Radiation from a moving mirror in two-dimensional space-time: Conformal anomaly, *Proc. Roy. Soc. A* **348**, 393–414 (1976).
13. P. C. W. Davies, S. A. Fulling and W. G. Unruh, Energy-momentum tensor near an evaporating black hole, *Phys. Rev. D* **13**, 2720–2723 (1976).
14. P. C. W. Davies and S. A. Fulling, Quantum vacuum energy in two-dimensional space-times, *Proc. Roy. Soc. A* **354**, 59–77 (1977).
15. S. M. Christensen and S. A. Fulling, Trace anomalies and the Hawking effect, *Phys. Rev. D* **15**, 2088–2104 (1977). Reprinted in Russian in *Chyornyye Dyry* (Mir, Moscow, 1978).
16. S. A. Fulling, 'Radiation' and 'vacuum polarization' near a black hole, *Phys. Rev. D* **15**, 2411–2414 (1977). Reprinted in Russian in *Chyornyye Dyry* (Mir, Moscow, 1978).
17. S. A. Fulling, Alternative vacuum states in static space-times with horizons, *J. Phys. A* **10**, 917–951 (1977).
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