# Donna W. Stokes

Curriculum Vitae

University of Houston
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## EDUCATION

**Ph.D., Physics**, University of Houston, Houston, Texas, August 1998.
Dissertation: "$Al_{1-x}In_xAs_{1-y}Sb_y$/GaSb Heterojunctions and Multilayers Grown by Molecular Beam Epitaxy For Effective Mass Superlattices."
Advisor: Dr. Terry Golding

**M.S., Physics**, University of Houston, Houston, Texas, 1992.
Thesis: "An Infrared Sensor Based on a Double Barrier Resonant Tunneling Structure"
Advisor: Dr. Terry Golding

**B.S., Physics**, Southern University, Baton Rouge, Louisiana, 1988.

## PROFESSIONAL EXPERIENCE

2020-present Associate Dean of Undergraduate Affairs and Student Success, University of Houston, College of Natural Sciences and Mathematics, Houston, Texas,

2019-2020 Assistant Dean of Undergraduate Affairs, University of Houston, College of Natural Sciences and Mathematics, Houston, Texas,

2019-present Professor, University of Houston, Department of Physics, Houston, Texas
Teaching, research and service as a professor. Research focuses on physics education research (PER) to improve student success in physics courses, educational research on preparation of Science and Math teachers for secondary education and on the structural and optical characterization of semiconductors.

2006-2019 Undergraduate Academic Advisor, University of Houston, Department of Physics, Houston, Texas
Serve as academic advisor to all physics majors and minors as well as teacher certification candidates in the teachHOUSTON program by offering guidance and support for development of an academic plan and course selection. Serve as the chair of the Undergraduate Studies Committee where I oversee academic planning for the undergraduate program. Provide vision for new programs to promote student success. Access and interpret data for assessing and enhancing programming.

2006-2019 Associate Professor, University of Houston, Department of Physics, Houston, Texas
Teaching, research and service as an associate professor. Research focuses on the structural, optical and electrical characterization of semiconductor and related materials for optoelectronic device applications.

**PROFESSIONAL EXPERIENCE (continued)**

2000-2006 Assistant Professor, University of Houston, Department of Physics, Houston, Texas
Teaching, research and service as an assistant professor. Research focuses on the structural, optical and electrical characterization of semiconductor and related materials by high-resolution x-ray diffraction, absorption/transmission spectroscopy, Photoluminescence, and Hall Effect measurements for optoelectronic device applications.

1998-2000 Postdoctoral Associate, U. S. Naval Research Laboratory, Washington, DC
Research involving fabrication, and optical and electrical testing of mid-infrared antimonide based lasers.

1992-1998 Research Assistant, University of Houston, Department of Physics, Houston, Texas
Dissertation research involving the molecular beam epitaxial growth of $Al_{1-x}In_xAs_{1-y}Sb_y$/GaSb superlattices and characterization of these films by high-resolution x-ray diffraction, and magneto Hall effect measurements.

1988-1992 Research Assistant, University of Houston, Department of Physics, Houston, Texas
Master's thesis research involving the growth of InGaAs/AlGaAs/GaAs resonant tunneling diodes by molecular beam epitaxy. The heterostructures were processed by photolithography, metal evaporation, ion milling, annealing and wire bonding for diode testing.

1991-1992 Research Assistant, Schmidt Instruments, Houston, Texas
Master's thesis research involving set up and operation of equipment for electrical characterization of resonant tunneling detectors. Room and low temperature current-voltage measurement were performed and analyzed to determine negative differential resistance transitions.

1988 – 1997 Teaching Assistant, University of Houston, Department of Physics, Houston, Texas

Summer 1988 and 1989 Research Assistant, Los Alamos National Lab, Los Alamos, New Mexico
Characterization of fuel cells using a SEM, TEM and use of a 3 million volt tandem electrostatic accelerator. Providing operational startup and assistance to users of a 3 million volt tandem electrostatic accelerator and analyzed YBaCuO superconductors using the tandem accelerator.

9/87-5/88 Research Assistant Southern University, A&M College, Department of Physics, Baton Rouge, Louisiana, FORTRAN and BASIC programming on a project entitled "Atmospheric Aerosol Chemistry Modeling".

Summer 1987 Research Assistant, AT&T Bell Laboratories, Murray Hill, New Jersey
Worked as a lab technician. Responsibilities included fabrication of thin films of chromium on silicon substrates by evaporation in a vacuum bell jar and characterization of these films using a SEM.

## PROFESSIONAL EXPERIENCE (continued)

Summer 1986 Research Assistant, Bell Communications, Holmdell, New Jersey
Hall Effect measurements on GaAs/InGaAs superlattices for fabrication of field effect transistors.

## HONORS AND AWARDS

American Physical Society, Committee on Education, Improving Undergraduate Education Award 2019-2021 (Department of Physics Award)
American Education Research Association Narrative Special Interest Group Outstanding Paper Award April 2019
American Association of Physics Teacher - Member Highlight January 2019
American Physical Society Physics Teacher Education Coalition (PhysTEC) Fellow 2017 - 2019
UH Group Teaching Excellence Award 2017
UH Cougar Chairs Leadership Member 2016
UH Provost Academic Advising and Mentoring Award 2011
National Science Foundation Career Award 2003
National Research Council Post-Doctoral Associateship Award 1998
North American Molecular Beam Epitaxy Conference Student Paper Award 1997
Ford Foundation Dissertation Fellowship 1996-1997
NASA Graduate Research Program Fellowship 1992-1995
Zonta International Foundation Amelia Earhart Fellowship Award 1994
Sigma Chi Honor Society Graduate Student Poster Award 1991
American Physical Society Scholarship 1986-1988
Environmental Protection Agency Fellowship 1985-1986
Southern University Outstanding Sophomore and Junior in Physics

## CURRENT FUNDING

1. National Science Foundation DUE Award # 1950036, Co-PI, "Preparing Effective STEM Teachers by Advancing the Cultural and Computational Engagement of STEM Scholars," $1,199,872, (6/01/2020 – 5/3/2025)
2. National Science Foundation DUE Award #1832534, PI, "Building Capacity: Integrated Interventions to Improve Undergraduate Student Success in STEM," $1,499,879 (1/1/2019 – 12/31/2023)
3. National Science Foundation DUE Award #164491, PI, "STEM Scholarship Program with Promotion and Retention of STEM Education through Networking Team (PARENT) Support," $1,000,000 (1/1/17 – 12/31/21)
4. National Science Foundation DUE Award #1557309, Co-PI, "University of Houston: Learning through Informal and Formal Experiences," $1,450,000 (09/01/16-08/31/21)

## PAST FUNDING

5. National Science Foundation DUE Award #1557273, Co-PI, "Collaborative Research: Understanding Robert Noyce Teacher Scholarship Outcomes in Texas," $447,763 (07/01/16-06/30/19)

**PAST FUNDING (continued)**

6. National Science Foundation DUE Award #1240083, PI, "Recruitment, Preparation and Retention of STEM Students as High School Teachers," $ 980,005 (09/01/12 - 08/31/18)
7. University of Houston (TIP), Co-PI, "Enhancing Student Engagement in Physics with Hybrid Courses and Social Media ," $17,000 (9/01/17 - 8/31/18)
8. University of Houston (TIP), PI, " Recruitment, Infusing Advanced Physics Courses with Demonstrations," $15,180 (10/01/16 - 9/31/17)
9. University of Houston Small Grants Program, PI, "Evaluation of Physics and Chemistry Pre-service Teacher Scholarship Program," $3,000 (1/01/15-12/31/15) No cost extension to 12/2017.
10. University of Houston (GEAR), PI, "InGaN/GaN Epitaxial Structures for Terahertz Applications," $29,998 (06/01/14 - 05/31/16)
11. University of Houston Teaching Innovations Program, co-PI, "Infusing Advanced Physic Courses with Demonstrations and Interactive Learning Activities," $15,679 (6/01/14 – 5/31/16)
12. University of Houston Teaching Innovations Program, PI, "Enhancing University Physics II Laboratories through an Inquiry-based Approach," $15,240 (6/01/14 – 5/31/16)
13. Delphian's Chapter Award, "Physics Demonstration Equipment, " $975 (6/01/14 – 5/31/15)
14. University of Houston Quality Enhancement Program, PI, "An Inquiry Based Approach to University Physic I Laboratories," $10,000 (6/01/13 – 5/31/14)
15. University of Houston Quality Enhancement Program, PI, "Writing Instruction Enhancements for Physics Advanced Laboratory Sequence," $5,000 (6/01/13 – 5/31/14)
16. University of Houston Student Success Grant, co-PI, "Pretesting and Early Intervention in Physics 1301," $12,882 (6/01/11 – 5/31/12)
17. University of Houston Faculty Development Initiative B, PI, "An Interactive Approach to Teaching Introductory Physics," $25,000 (9/01/09 – 8/31/10)
18. Texas Center for Superconductivity Seed Grant, PI, "Spintronic Devices based on GaSb/AlSb System ," $20,000 (9/1/06 – 8/31/08)
19. University of Houston Faculty Development Initiative Program A, PI, "Electronic Resources for Improving Problem Solving Skills for Introductory Physics Courses ," $4,000 (9/1/07 – 8/31/08)
20. National Science Foundation Award # 0237811, PI, "Supplemental Research Experience for Undergraduates Program: Lateral Composition Modulation in InAs/GaSb Superlattices: Nanometer Sized Quantum Wires," $24,000 (6/1/04 – 5/31/08)
21. Texas Higher Education Coordinating Board Advanced Technology Program, PI, "Supplemental Summer High School Teacher Grant: High Efficiency Solid State Light Source," $9,000 (6/1/04 – 5/31/06)
22. University of Houston Faculty Development Initiative B, PI, "Continuing Education Using "Peer Instruction" for Introductory Physics Courses," $25,000 (1/1/05 – 12/31/06)
23. Texas Higher Education Coordinating Advance Technology Program, PI, "High Efficiency Solid State Light Source," $127,800 (1/1/04 – 12/31/06)
24. UH Faculty Development Initiative Program B, PI, "Development of "Peer Instruction" Taught Introductory Physics Courses," $25,000 (6/1/03 – 5/31/04)
25. National Science Foundation Faculty Early Career Development Award, PI, "Lateral Composition Modulation in InAs/GaSb Superlattice: Nanometer Sized Quantum Wires," $405,997 (6/1/2002 – 5/31/08)
26. University of Houston New Faculty Grant, PI, "Terahertz Lasers Engineered from InAs/GaSb Superlattices," $6,000 (9-01-021 - 8/31/01)

## PATENTS

1. Patent # 10241058: Systems and methods for quality control of a periodic structure, Maznev, Alexei, Nelson, Keith A., Bensaoula, Abdelhak, Gandhi, Jateen S., **Stokes, Donna Washington**, Forrest, Rebecca Lynne, Shin, Hyun Doug, United States, Massachusetts Institute of Technology http://www.freepatentsonline.com/10241058.html (2019).

## PUBLICATIONS (h-index – 14)

https://scholar.google.com/citations?user=hMGmFE4AAAAJ&hl=en

1. Teaching through Culture: Employing Culturally Responsive Pedagogy to Transform Postsecondary STEM Instruction, McAlister-Shields, L., Hutchison, L., and **Stokes, D.** Chapter in J. Conyers, C. Edwards, & K. Thompson (Eds.), *African Americans in Higher Education: A Critical Study of Social and Philosophical Foundations of Africana Culture*. Gorham, ME: Myers Publishing (in press).

2. Long mean free paths of room-temperature THz acoustic phonons in a high thermal conductivity material, Ting-Han Chou, Lucas Lindsay, Alexei A. Maznev, Jateen S. Gandhi, **Donna W. Stokes**, Rebecca L. Forrest, Abdelhak Bensaoula, Keith A. Nelson, and Chi-Kuang Sun, *Phys. Rev. B*, **100**, 094302 (2019).

3. The Gordian Knot of Teacher Induction: When Context Trumps Teacher Preparation and the Desire to Teach, Cheryl J. Craig, Paige Evans, Jing Li and **Donna Stokes**, A chapter in Denise McDonald (Ed.), *Facing Challenges and Complexities in Retention of Novice Teachers, Information Publishing*, Charlotte, North Carolina (2018).

4. A tribute to 'unsung teachers': teachers' influences on students enrolling in STEM programs with the intent of entering STEM careers, Cheryl J Craig, Paige Evans, Rakesh Verma, **Donna Stokes**, and Jing Li, *European Journal of Teacher Education*, DOI:10.1080/02619768.2018.1523390 (2018).

5. The influence of parents on undergraduate and graduate students' entering the STEM disciplines and STEM careers, Cheryl J. Craig, Rakesh Verma, **Donna Stokes**, Paige Evans and Bobby Abrol, *International Journal of Science Education*, DOI:10.1080/09500693.2018.1431853 (2018).

6. The embodied nature of narrative knowledge: A cross-study analysis of embodied knowledge in teaching, learning, and life knowledge in teaching, learning, and life, Cheryl J. Craig, JeongAe You,, Yali Zou, Rakesh Verma, **Donna Stokes**, Paige Evans, Gayle Curtis, *Teaching and Teacher Education*, 71, 329 (2018).

7. Propagation of THz acoustic wave packets in GaN at room temperature, Maznev, A. A., Hung, T.-C., Yao, Y.-T., Chou, T.-H., Gandhi, J. S., Lindsay, L., Shin, H. D., **Stokes, D. W.**, Forrest, R. L., Bensaoula, A., Sun, C.-K. and Nelson, K. A., *Appl. Phys. Lett.*, **112**, 061903 (2018).

**PUBLICATIONS (continued)**

8. Math Remediation Intervention for Student Success in the Algebra-Based Introductory Physics Course, Forrest, R.L., **Stokes, D.W.**, Burridge, A.B. and Voight, C.D., *Physical Review Physics Education Research*, 13, 20137 (2017).

9. Developing STEM Teachers through both Informal and Formal Learning Experiences, **Stokes, D.**, Evans, P. and Craig, C., Search and Research: *Teacher Education for Contemporary Context*. Editors Juanjo Mena, Ana Garcia Valcarcel, Francisco Garcia-Penalvo and Marta Martin del Pozo, Publiusher Ediciones Universidad de Salamanca (2017).

10. Attracting, preparing and retaining teachers in high need areas: A science as inquiry model of teacher education, Craig, C., Evans, P., **Stokes, D.** and Bott, S., Chapter in M. Peters, B. Cowie and I. Mentor (Eds.) *A companion to research in teacher education*, New York, NY: Springer Publishing. (2017).

11. Recruitment, Retention and Preparation of Secondary Physics and Chemistry Teachers. **Stokes, D.**, Evans, P., Craig, C., and Bott, S., *American Physical Society Forum on Education Newsletter* (Fall 2016).

12. Pre-testing and early Intervention in Introductory General Physics I, **Stokes, D.W.,** Forrest, R.L., and Voight, C.D., Publications from the 6th International Technology Education and Development Conference, Valencia, Spain (March 2012).

13. Effect of strain on the growth of InAs/GaSb superlattices: An x-ray diffraction study J. H. Li, **D. W. Stokes**, J. C Wickett, O. Caha, K. E. Bassler, and S. C. Moss *J. Appl. Phys.*, **107**, 123504 (2010).

14. Short Period InAs/GaSb superlattices for mid-infrared photodetectors, H.J. Haugan, F. Szmulowicz, G.J. Brown, B. Ullrich, S.R. Munshi, S. Elhamri, J,C. Wickett and **D.W. Stokes,** *Phys. Stat. Sol.*, **4**, 1702-1706 (2007).

15. Growth of Short-Period InAs/GaSb Superlattices, H.J. Haugan, K. Mahalingam, G.J. Brown, W.C. Mitchal, B. Ullrich, L. Grazulis, S. Elhamri, J,C. Wickett and **D.W. Stokes**, *J. Appl. Phys*., **100**, 123110-1- 123110-5 (2006).

16. X-ray Diffraction Analysis of an Osmium Silicide Epilayer Grown on Si (100) by Molecular Beam Epitaxy, F.Z. Amir, R.J. Cottier, T.D. Golding, W. Donner, N. Anibou and **D.W. Stokes**, *J. Cryst. Growth*, **294**, 174-178 (2006).

17. Effects of Interfacial Strain on the Morphological Instability of Semiconductor Epitaxial Films, J.H. Li and **D.W. Stokes**, *Appl. Phys. Lett*., **89**, 111906-1 – 111906-3 (2006).

**PUBLICATIONS (continued)**

18. X-ray diffraction Analysis of Interdiffusion in $Al_{1-x}In_xAs_{1-y}Sb_y$ Multilayers, R.L. Forrest, **D.W. Stokes**, J.H. Li, R. Lukic-Zrnic and T.D. Golding, J Vac. Sci. Technol. B, **24**, 1127-1129 (2006).

19. Effects of Interfacial Bonds on Morphological Instability of Slightly Lattice Mismatched Epitaxial Thin Films, J.H. Li, **D.W. Stokes**, O. Caha, S.L. Ammu, J. Bai, K.E. Bassler, and S.C. Moss, *Science Highlight from the National Synchrotron Light Source*, (November 2005).

20. Morphological Instability in InAs/GaSb Superlattices Due to Interfacial Bonds, J.H. Li, **D.W. Stokes**, O. Caha, S.L. Ammu, J. Bai, K.E. Bassler, and S.C. Moss, *Phys. Rev. Letters*, **95**, 96104-1 – 96104-4 (2005).

21. Molecular Beam Epitaxial Growth of β-$Fe(Si_{1-x}Ge_x)_2$ , R.J. Cottier, K. Hossain, F.Z. Amir, J.B. House, B.P. Gorman, J.M. Perez, O.W. Holland, T.D. Golding and **D.W. Stokes**, *Proceeding from the North American MBE Conference, J. Vac. Sci. Technol. B,* **23**, 1299 - 1303, (2005).

22. Optical and Structural Properties of InAs/GaSb Nanostructures, **D.W. Stokes**, J.H. Li, R.L. Forrest, S.L. Ammu, J.C. Lenzi, S.C. Moss. B. Nosho, E.H. Aifer, B. Bennett and L.J. Whitman, *Materials Research Society Symposia Proceedings,* **794**, 271-276 (2004).

23. X-ray Diffraction Analysis of Lateral Composition Modulation in InAs/GaSb Superlattices Intended for Infrared Detector Applications, **D.W. Stokes**, R.L. Forrest, J.H. Li, S. C. Moss. B. Nosho, B. Bennett, L.J. Whitman and M. Goldberg, *IEE – Optoelectronics, Proceedings from the 5th International Conference on Mid-Infrared Optoelectronic Materials and Devices,* **150,** 420-423 (2003).

24. Lateral Composition Modulation in InAs/GaSb Superlattices, **D.W. Stokes**, R.L. Forrest, J.H. Li, S.C. Moss. B. Nosho, B. Bennett, L.J. Whitman and M. Goldberg, *J. Appl. Phys.*, **93**, 311-315 (2003).

25. Type II Antimonide Quantum Well for Mid-Infrared Laser, M.J.Yang, J.R.Meyer, W.W.Bewley, C.L.Felix,, I.Vurgaftman, W.Barvosa-Carter, L.J.Whitman, R.E.Bartolo, D.W.Stokes, H.Lee and R.U.Martinelli, *Optical Materials*, **17**, (1–2), 179-183(2001)

26. Electrical and Magneto Transport in $Al_{1-x}In_xAs_{1-y}Sb_y$/GaSb Multilayers, R. Lukic-Zrnic, **D.W. Stokes**, C.L. Littler and T.D. Golding, *Semicond. Sci. Tech*., **16**, 353-357 (2001).

27. Mid-infrared W quantum-well lasers for noncryogenic continuous-wave operation, C.L. Felix, WW. Bewley, I. Vurgaftman, R.E. Bartolo, **D.W. Stokes**, J.R. Meyer, M.J. Yang, H. Lee, R. J. Menna, R.U. Martinelli, D.Z. Garbuzov, J.C. Connolly, M. Maiorov, A.R. Sugg, and G.H. Olsen, *Appl. Opt*., **40**, 806-811 (2001).

**PUBLICATIONS (continued)**

28. Mid-Infrared "W" Lasers, I. Vurgaftman, C. L. Felix, W. W. Bewley, D. W. Stokes, R. E. Bartolo and J. R. Meyer, *Phil. Trans. R. Soc. Lond. A,* **359**, 489-503 (2001).

29. Optlcally- and electrically-pumped type-II "W" quantum-well lasers for the mid-IR, J. R. Meyer, W. W. Bewley, I. Vurgaftman, C. L. Felix, L. J. Olafsen, D. W. Stokes, M. J. Yang, H. Lee, R. J. Menna, R. U. Martinelli, D. Z. Garbuzov, J. C. Connolly, M. Maiorov, A. R. Sugg, and G. H. Olsen, in *Conference on Lasers and Electro-Optics*, S. Brueck, R. Fields, M. Fejer, and F. Leonberger, eds., OSA Technical Digest (Optical Society of America, 2000), paper CMM3, San Francisco, California (May 2000).

30. Type II mid-infrared lasers, Jerry R. Meyer, William W. Bewley, Igor Vurgaftman, Christopher L. Felix, Linda J. Olafsen, Edward H. Aifer, **Donna W. Stokes**, Ming J. Yang, Hao Lee, Raymond J. Menna, Ramon U. Martinelli, Dmitri Z. Garbuzov, John C. Connolly, Mikhail A. Maiorov, Alan R. Sugg, and Gregory H. Olsen, *Proc. SPIE*, **3947**, 100 (2000).

31. High Temperature W Diode Lasers Emitting at $3.3\,\mu m$, L. J. Olafsen, W.W. Bewley, I. Vurgaftman, C.L. Felix, E.H. Aifer, **D.W. Stokes**, J.R. Meyer, H. Lee, R.J. Menna, R.U. Martinelli, D.Z. Garbuzov, M. Maiorov, J.C. Connolly, A.R. Sugg, and G.H. Olsen, *Materials Research Society symposia proceedings,* **607**, 95 (2000).

32. Optical-Pumping Injection Cavity (OPIC) Mid-IR "W" Lasers with High Efficiency and Low Loss, W.W. Bewley, C.L. Felix, I. Vurgaftman, **D.W. Stokes,** J.R. Meyer, H. Lee, and R.U. Martinelli, *IEE Phot. Tech. Lett.* **12**, 477-479 (2000).

33. Continuous-Wave Operation of $\lambda = 3.25\mu m$ Broadened Waveguide "W" Quantum-Well Diode Lasers up to T=195 K, W.W. Bewley, H. Lee, I. Vurgaftman, R.J. Menna, C.L. Felix, R.U. Martinelli, **D.W. Stokes**, D.Z. Garbuzov, J.R. Meyer, M. Maiorov, J.C. Conolly, A.R. Sugg, and G.H. Olsen, *Appl. Phys. Lett.*, **76**, 256-258 (2000).

34. Mid-IR broadened-waveguide and angled-grating distributed feedback(α-DFB) "W" quantum well lasers, C.L. Felix, I. Vurgaftman, R.E. Bartolo, D.W. Stokes, M.J. Jurkovic, J.R. Lindle, J.R. Meyer, M.-J. Yang, H. Lee, R.J. Menna, R.U. Martinelli, D.Z. Garbuzov, J.C. Connolly, M. Maiorov, A.R. Sugg and G.H. Olsen, IEEE 17th International Semiconductor Laser Conference (2000).

35. High Temperature Diode and Optically-Pumped Mid-IR Lasers with Type-II "W" Quantum Wells, W.W. Bewley, L.J. Olafsen, I. Vurgaftman, C.L. Felix, E.H. Aifer, **D.W. Stokes,** J.R. Meyer, M.J. Yang, H. Lee, R.J. Menna, R.U. Martinelli, D.Z. Garbuzov, J.C. Conolly, M. Maiorov, A.R. Sugg, and G.H. Olsen, *Optics and Photonics News*, **10**, 18-19 (1999).

36. Type-II Quantum-Well "W" Lasers Emitting at $\lambda = 5.4 - 7.3\mu m$, **D.W. Stokes**, L.J. Olafsen, W.W. Bewley, I. Vurgaftman, C.L. Felix, E.H. Aifer, J.R. Meyer, and M.J. Yang, *J. Appl. Phys.*, **86**,4729-4733 (1999).

**PUBLICATIONS (continued)**

37. Thermal Characterization of Diamond-Pressure-Bond Heat Sinking for Optically Pumped Mid-Infrared Lasers, W.W. Bewley, CL. Felix, E.H. Aifer**, D.W. Stokes**, I. Vurgaftman, L.J. Olafsen, J.R. Meyer, M.J. Yang, and H. Lee, *IEEE J. Quant. Electron*., **35**, 1597-1601 (1999).

38. High-Efficiency Midinfrared "W" Laser with Optical Pumping Injection Cavity, C.L.Felix, W.W. Bewley, I. Vurgaftman, L.J. Olafsen, **D.W. Stokes**, J.R. Meyer, and M.J. Yang, *Appl. Phys. Lett*., **75**, 2876-2878 (1999).

39. High-Temperature Continuous-Wave Operation of Optically-Pumped Type-II "W" Lasers from 3-6.3 microns, W.W. Bewley, C.L. Felix, I. Vurgaftman, **D.W. Stokes**, L.J. Olafsen, E.H. Aifer, J.R. Meyer, M.J. Yang, B.V. Shanabrook, H. Lee, R.U. Martinelli, J.C. Connolly, and A.R. Sugg, *Technical Digest, Summaries of papers presented at the Conference on Lasers and Electro-Optics, Optical Society of America*, **578**, 366 (1999).

40. High Temperature Continuous-Wave 3-6.1 μm "W" Lasers with Diamond-Pressure-Bond Heat Sinking, W.W. Bewley, C.L. Felix, I. Vurgaftman, **D.W. Stokes**, E.H. Aifer, L.J. Olafsen, J.R. Meyer, M.J. Yang, B.V. Shanabrook, H. Lee, R.U. Martinelli, and A.R. Sugg, *Appl. Phys. Lett.*, **74**, 1075-1077 (1999).

41. Continuous-Wave Type-II "W" Lasers Emitting at $\lambda$ = 5.4 - 7.1 μm, C.L. Felix, W.W. Bewley, L.J. Olafsen, **D.W. Stokes**, E.H. Aifer, I. Vurgaftman, J.R. Meyer, and M.J. Yang, *IEE Phot. Tech. Lett.*, **11**, 964-966 (1999).

42. Optically Pumped Mid-infrared Type-II Lasers: Advances in High Temperature Performance, C.L. Felix, W.W. Bewley, L.J. Olafsen, **D.W. Stokes**, E.H. Aifer, I. Vurgaftman, J.R. Meyer, M.J. Yang, H. Lee, R.U. Martinelli, J.C. Connolly, A.R. Sugg and G.H. Olsen, *Proceedings of the SPIE-The International Society for Engineering*, **3628**, 130-139 (1999).

43. $Al_{1-x}In_xAs_{1-y}Sb_y$/GaSb Effective Mass Superlattices Grown by Molecular Beam Epitaxy. **D. Washington-Stokes**, T.P. Hogan, P. Chow, T.D. Golding, U. Kirschbaum, C.L. Littler and R. Lukic, *J. Cryst. Growth*, **201-202**, 854-857 (1999).

44. $Al_{1-x}In_xAs_{1-y}Sb_y$/GaSb Heterojunctions and Multilayers Grown by Molecular Beam Epitaxy for Effective Mass Superlattices. **D. Washington**, T. Hogan, P. Chow, T. Golding, C. Littler and U. Kirschbaum, *J. Vac. Sci. Tech. B*, **16**, 1385-1388 (1998).

**TEACHING EXPERIENCE**

| | |
|---|---|
| Modern Optics | Fall 2010, Fall 2011, Fall 2013, Spring 2015, Spring 2016, Spring 2017, Spring 2018 |

**TEACHING EXPERIENCE (continued)**

| | |
|---|---|
| Modern Optics Laboratory | Fall 2010, Fall 2011, Fall 2013, Spring 2015, Spring 2016, Spring 2017, Spring 2018 |
| Senior Honors Thesis (Phys 3398/Phys 3399) | Fall 2019, Spring 2020 |
| Interdisciplinary Studies – Succeeding in STEM (IDNS 2197) | Fall 2019, Spring 2020 |
| General Physics I (Phys 1301) | Fall 2003, Spring 2004, Spring 2005, Fall 2005, Spring 2006, Spring 2007, Spring 2008, Spring 2011, Spring 2012, Fall 2012, Spring 2014, Fall 2014, Spring 2017 |
| Intermediate Mechanics (Phys 3309) | Fall 2006, Fall 2007, Fall 2008, Fall 2009 |
| Electronic Devices and Applications | Fall 2012, Fall 2014, Fall 2015, Fall 2016, Fall 2016, Fall 2017, Fall 2018, Fall 2019 |
| University Physics I (Phys 1321) | Spring 2002, Fall 2002, Spring 2003, Spring 2007, Spring 2009, Spring 2010, Spring 2013 |
| University Physics II (Phys 1322) | Fall 2000 |
| Prob. Solving Tech. in Phys. (Phys 1100) | Fall 2007, Spring 2008, Fall 2008 |
| Special Problems-Experimental Techniques in Semiconductor Physics | Spring 2004 |
| General Physics Laboratory I (Phys 1101) | Fall 1988, Spring 1989 |
| General Physics Laboratory II (Phys 1102) | Fall 1989, Spring 1990 |
| University Physics II Laboratory (Phys 1122) | Spring 1997, Fall 1997 |

**GRADUATE and POST DOCTORAL ADVISING**

Postdoctoral Associate, Gayle Curtis, Physics/STEM Education, (2017-2020)
Postdoctoral Associate, Xiao Han, Physics/STEM Education (2015 – 2017)

## GRADUATE and POST DOCTORAL ADVISING (continued)

Postdoctoral Associate, Jateen Gandhi, Physics, Currently he is a lecturer Lone Star Community College (2014 – 2015)

Postdoctoral Associate, Bobby Abrol, Physics/STEM Education, (2012- 2015)

Postdoctoral Associate, Rebecca Forrest, Physics Currently she is an Instructional Associate Professor in the Department of Physics at the University of Houston. (2001 – 2006)

Postdoctoral Associate, Jian Hua Li, Physics, Currently Research Scientist at Rice University (2001 – 2006)

PhD Graduate: Julia Lenzi Wickett (Graduated Spring 2010)
Dissertation Topic: Structural and Optical Analysis of InAs/GaSb Nanostructures

MS Graduate: Carol Voight (Graduated Spring 2010)
Thesis topic: Physics Education: Math Deficiencies of Students Entering a General Physics Course and Their Effect on Student Performance. Mrs. Voight is a recipient of the UH-AGEP Summer Scholarship for 2008, 2007 and 2006

## UNDERGRADUATE RESEARCH ADVISING

Undergraduate Student: Brian Garcia – Math major - STEM Education Research

Undergraduate Student: Khadija Lokhandwala- Math major – STEM Education Research

Undergraduate Student: Courtnee Stain – Physics Major – Physics Education Research

Undergraduate Student: Fredy Orellna – Engineering Major - Physics Education Research

Undergraduate Student: Aerielle Rodriguez – teachHOUSTON/Math Major – STEM Student Success Research

Undergraduate Student: James Kelley- Senior Physics Major

Undergraduate Student: Travis Hernandez (Analytical Engineer at Advanced Semiconductor Materials International)

Undergraduate Student: Gael Nguyen (Graduated PhD program University of California-Irvine)

Undergraduate Student: Carol Voight (Adjunct Math and Physics Professor at San Jacinto College Central, Houston, TX)

Undergraduate Student: Mansi Bargharva (Intel, Portland, Oregon)

## THESIS/DISSERTATION COMMITTEES – TEACHING AND SERVICE

1. Member – Senior Honor Thesis Committee – Reed Masek, "A Dosimetric Evaluation of MiniPIX Performance Using In-situ and Simulated Environments" (Physics – August 2019 – May 2020)
2. Chair – Senior Honors Thesis Committee – Brian Vu, "Hermite-Gauss Quadrature with Generalized Hermite Weight Functions and Small Sample Sets for Sparse Polynomials" (Physics – August 2019 – May 2020)
3. Member – Dissertation Committee – Brian McElhenny (Physics January 2019 – Present)
4. Member – Dissertation Committee – Dhan Rana, "Earth Abundant Metal Chalcogenide Semiconductors for Solar Cell Applications" (Physics – September 2018 – Present)
5. Chair – Dissertation Committee – Michael Fitchette, "Advanced Quantum Engineered Semiconductors Cells and Hot Carrier Solar Cells: Towards High Efficiency Photovoltaics" (Physics - March 2017 – Present)
6. Member – Dissertation Committee –Ilya Davydov, "Interfacial studies on semiconducting and hydrophobic substrates "(Chemistry – October 2016 – Present)
7. Member – Dissertation Committee – Jacob Ezerski, "Characterization of intrinsically disordered

**THESIS/DISSERTATION COMMITTEES – TEACHING AND SERVICE (continued)**

protein ensembles " (Physics - March 2017 – 2020)

8. Member – Dissertation Committee – Sladjana Maric, "Formation of Proton Translocating Water Channels In ATP Synthase" (Physics – March 2010 – August 2019)
9. Member – Dissertation Committee – Khim Kharel, "Next Generation of Quantum Engineered Compound semiconductor Solar Cells: for integration With Si PV," (Physics - March 2016 – December 2018)
10. Member – Dissertation Committee – Surendra Maharjan, "Nonlinear Optics and Optical Limiting Materials" (Physics – August 2015 – November 2017)
11. Member – Dissertation Committee – Ayo Kolapo, "Topological Phases in Condensed Matter Systems and its Consequences," (Physics, October 2017 –April 2018).
12. Member – Dissertation Committee – Kaveh Shervin, "Strategies towards Development of High Efficiency Low Cost III-V Solar Cells," (Physics, July 2017 – November 2017).
13. Member – Dissertation Committee – Jing Wu, "Green's Theorem Methods for Separating the Reference Wave and Preserving Reflection Data, and Deghosting, for Towed Streamer, onshore and Ocean Bottom Acquisition, with Horizontal or Variable Topography Acquisition Surface: Implications for Multiple Removal, Structural Determination and Amplitude Analysis; II. Inverse Scattering Series Internal Multiple Attenuation in an Absoprtive Dispersive Earth, without Knowing, Needing or Estimating Elastic or Aneleastic Subsurface Properties," (Physics, March 2017 - July 2017).
14. Member – Dissertation Committee – Zhen Zhang, "Impact of the Topography of the Acquisition Surface on Preprocessing and subsequent Free Surface Multiples Elimination and Depth Migration: Examining the Issue and Providing a Preprocessing Response that accommodates a Variable Topography- Thereby Allowing Subsequent Multiple removal and Imaging Methods to deliver Their Promise and Potential," (Physics - March 2017 - July 2017).
15. Member – Dissertation Committee – Giwan Katwal, "The Development of nanostructures and Their Application in the Gas Sensor," (Physics- June 2015 – June 2017)
16. Member – Dissertation Committee – Pawanjit Kaur, " (Physics – June 2015 – July 2017)
17. Member – Dissertation Committee – Ma Chao, "An Inverse Scattering Series (ISS) Data Comprehensive Internal Multiple Attenuation Algorithm that Accommodates Primaries and Internal Multiples in the Input Data" (Physics – June 2014 – July 2016)
18. Member – Dissertation Committee – Aida Torabi, "Mixed halide perovskite solar cells: Influence of fabrication and post fabrication conditions on the device performance" (Physics – March 2014 – December 2016)
19. Member – Dissertation Committee – Manori Gunasekera, "Real-Time Characterization of Self-Assembled Quantum Dots (SAQD) by Reflection High Energy Electron Diffraction (RHEED)," (Physics – May 2011 - April 2015)
20. Member – Dissertation Committee – Gopi Krishna, "Dilute Nitride Multi Quantum Well Solar Cells," (Physics – May 2011 – December 2014
21. Member – Dissertation Committee – Ruiteng Li, "Lattice Matched Buffer Layers for InGaN Growth," (Physics – January 2013, November 2014)
22. Member – Dissertation Committee – Ananya Debnath, "The Effect of Nitrogen Plasma Species on the Growth, Morphology and Mechanism of GaN Nanocolumns Deposited By Plasma Assisted Molecular Beam Epitaxy," (Physics – April 2013- August 2015)

**THESIS/DISSERTATION COMMITTEES – TEACHING AND SERVICE (continued)**

23. Member – Dissertation Committee – Wei "Ivy" Wang, "Fabrication and Design of Textured 2D Sub-wavelength Grating for Improving Light Harvesting in Multi-junction III-V Photovoltaic" (Physics – March 2013- September 2015)
24. Member – Dissertation Committee – Jinlong Yang, "Extending the Inverse Scattering Series Free-Surface Multiple Elimination and Internal Multiple Attenuation Algorithms By Incorporating the
25. Source Wavelet and Radiation Pattern: Examining and Evaluating the Benefit and Added Value,"( Physics – August 2012 – July 2014)
26. Member – Dissertation Defense Committee – Lin Tang, "Developing and Analyzing Green's theorem Methods to Satisfy Prerequisites of Inverse Scattering Series Multiple Attenuation for Different Types of Marine Acquisition and Extending Prerequisite Satisfaction to On-Shore exploration," (Physics – June 2012 – July 2014)
27. Member – Dissertation Committee – Amrita Haldar, "Development of Flexible Organic Photovoltaics Via Inkjet Printing," (March 2011 - April 2013)
28. Member –Master's Thesis Committee – Joon Jang, "Sum frequency Vibrational Depletion Spectroscopy," (Chemistry – April 2013)
29. Member –Master's Thesis committee member – Vasudeva Chintamsetti, "Molecule Specific Contrast Using Ultra-Low-Field Magnetic Resonance Imaging" (Chemistry –April 2013)
30. Member –Dissertation Committee – Xin Zhang, "Organic Photovoltaic Solar Cells," (Physics – November 2013)
31. Member –Dissertation Committee – Mozhdeh Niazmand, "An Inverse Scattering Approach to Attenuating Internal Multiple From Quasi-Elastic Ocean Bottom" (Physics – January 2011 - August 2012)
32. Member –Dissertation Committee – Zhiqiang Wang, "Progressing Inverse Scattering Series Depth Imaging Without the Velocity Model for Larger Contrast and Laterally Variable Media" (Physics – August 2012Member –Dissertation Committee Member – Xin Zhang, "Organic Photovoltaic Solar Cells," (Physics – May 2012)
33. Member –Dissertation Committee – Besar Wickasono, "Dynamic and Transparent Support for Managing Memory Bottlenecks in Open MP" (Computer Science - December 2011)
34. Member –Dissertation Committee – Rabi Ebrahim, "Detailed study of Filamentary Bipolar EPIR Switching in $Cu_xO$ and Amorphous silicon RRAM," (Physics - December 2011)
35. Member –Dissertation Committee – Sumit Abhichandani, "Efficient Formation of Radiation Resistant Carbon Films for Nanoscale Ion and Neutral Particle Proximity Lithography," (Electrical Engineering – October 2011)
36. Member –Dissertation Committee – Shih-Ying-Hsu, "Efficacy Determination and Efficiency Advances for the Inverse Scattering Series Internal Multiple Removal: An Update, Land Data, Testing and Evaluation," (Physics - July 2011)
37. Member – Dissertation Committee – Magnus Legemah, "Synthesis, Electrochemical and Spectroscopic Characterization of Diruthenium Complexes in High and Low Oxidation States,' (Chemistry – August 2011)
38. Member – Dissertation Committee – Di Chang, "Developing Multidimensional Depth Imaging Algorithm in Seismic Exploration," (Physics – May 2011)
39. Member – Dissertation Committee – Rabi Ebrahim, "EPIR Switching in $Cu_xO$ Thin Films," (Physics – May 2010, 2011)

**THESIS/DISSERTATION COMMITTEES – TEACHING AND SERVICE (continued)**

40. Member – Dissertation Committee – Imee Martinez – Characterization of Imidazolium-Based room Temperature Ionic Liquids in a Contained Environment," (Chemistry- November 2007 - May 2010)
41. Member – Thesis Defense Committee – Carol Voight, Physics Education: Math Deficiencies of Students Entering a General Physics Course and Their Effect on Student Performance," (Physics - April 2010)
42. Member – Dissertation Committee – Omar Lozano, "Consequences of Nb-doping to $In_2O_3$, a Magneto-Transport and Optical Study of a Novel Thin Film Transparent Conductor," (Physics – December 2009)
43. Member – Dissertation Committee – Priya Chinta, "Magneto-Transport and Optical Study of Al-doped ZnO Thin Films," (Physics – December 2009)
44. Member – Dissertation Committee – Hans Infante, "Electrical Detection, Mechanism and Analysis of Biological Enzyme Activity in Live Cells," (Physics – December 2008)
45. Member – Dissertation Committee – Z. W. Xing, "Electric pulse Induced Resistance switching effect and related properties in Manganite Oxide Structures," (Physics – December 2009)
46. Member – Oral Progress Exam Committee – Magnus Legemah, "Synthesis and characterization of Paddle Wheel Diruthenium (III,III), (III,II) Complexes," (Chemistry - December 2008)
47. Member – Dissertation Committee – Mansi Bhargava "High Dose Ion Implanted Resist Removal Using Plasma Ashing" (Electrical Engineering - December 2007)
48. Member – Dissertation Proposal Committee – Manwen Yao, "Biosensor development Based on Fluorescence and Long range Surface Plasmon Resonance," (Electrical Engineering - December 2007)
49. Member – Honors Thesis Defense Committee - , Arafat Hashwani, "Derivation of the Oxygen Dissociation Curves and Derivation of the Mathematical equations for CO2 Dissociation Curves in Blood" (Chemical Engineering - May 2007)
50. Member – Qualifying Exam Committee – Mansi Bhargava "Oxidation of Ion Implanted Silicon Wafers During Plasma Ashing" (Electrical Engineering – December 2004 - December 2006)
51. Member – Dissertation Committee – A. M. Milinda Abeykoon, "HgSe Semiconductor Nanoclusters in Zeolites" (Physics – November 2006)
52. Member – Dissertation Committee – Gustavo Cardenas "Quantum Tunneling in Condense Matter and Biological Systems" (Physics – July 2006)
53. Member – Dissertation Committee – Casey Romero "Sum Frequency Vibrational Spectroscopy of the Solid/Liquid Interface" (Chemistry – November 2003 - April 2006)
54. Member – Dissertation Committee – Nouredine Anibou "X-ray Study of the Sputtered deposited Ni-Al Thin films" (Physics –April 2006)
55. Member – Master's Thesis Defense Committee – Candic Robertson, "Synthesis, Structure and Properties of Organic-Based Copper Iodides," (Chemistry – October 2003 - January 2005
56. Member – Master's Thesis Defense Committee – Aristotelis Fotkatzikis, "Chemical Beam Epitaxy of Ga(In)AsN on Ga As," (Physics – August 2004)
57. Member – Master's Thesis Defense Committee – Cynthia Singh (Electrical Engineering-Spring 2002)

**PROFESSIONAL MEMBERSHIPS**

American Physical Society (Member since 1991)

## PROFESSIONAL MEMBERSHIPS (continued)

Texas Section of the American Physical Society
Society of Black Physicists
American Association for the Advancement of Science
International Study Association of Teachers and Teaching
National Association of Research in Science Teaching
American Association of Physics Teachers
American Educational and Research Association National Society of Black Physicist
Alpha Chi Honors Society
Sigma Pi Sigma Honor Society
Society of Physics Students

## PROFESSIONAL SERVICE

Proposal Review Panelist - National Science Foundation NSF Physics REU Program (October 2020)
Panelist - Voices of Women in Physics – American Association of Physics Teachers Summer Meeting (July 2020)
Proposal Reviewer – National Science Foundation Division of Undergraduate Education, Directorate for Education and Human Resources (June 2020)
Article Reviewer – Journal of Chemistry Education (February 2020)
Article Reviewer – Studies in Educational Evaluation Journal (April 2019)
Board Member – American Physical Society Disciplinary Advisory Board for the Inclusive Graduate Education Network (IGEN) Physics Bridge Program (March 2019 – Present)
Highlight – Kazoo Magazine for Girls (March 2020)
Member - Conference Planning Committee for University of Houston –AAPT 2019 Winter Meeting, Houston, TX (September 2018 – January 2019)
Chair, Conference Planning Committee – Texas Section of the American Physical Society Fall 2018 Meeting (January 2017 – October 2018)
Editorial Board Member – International Journal of Physics: Study and Research (March 2018 – Present)
Past Treasurer – National Society of Black Physicist (April 2018 – Present)
Article Reviewer – The Physic Teacher Journal (April 2018)
Article Reviewer – Journal of Statistics Education (October 2017)
Facilitator – Conference for Undergraduate Women in Physics, Negotiations Session (January 2017)
Session Chair – ISATT 18th Biennial International Conference on Teachers and Teaching (July 2017)
Proposal Review Panelist – National Science Foundation, Division of Electronic and Photonic Materials, Career Award (October 2016)
Facilitator –National Society of Black Physicist Fall Meeting Professional Development for Undergraduate, Graduate and Post-docs Session (October 2016)
UH Liaison to Conference Organizers – APS 2016 National Mentoring Conference at UH – (October 2016)
Facilitator – American Physical Society Professional Development Workshop (June 2016)
Treasurer – National Society of Black Physicist (April 2016 – 2018)
Member - Texas Section of the American Physical Society Conference Program Committee, New Mexico State University (2016)

## PROFESSIONAL SERVICE (continued)

Review Panelist – National Science Foundation, Division of Materials Research, Committee on Visitor (August – November 2015)
Facilitator – American Physical Society Train the Trainer Professional Development Workshop (March 2015)
Video Highlight – Career Girls – Advice for Girls- https://www.careergirls.org/role-model/physicist-2/ (2017)
Proposal Review Panelist – American Physical Society Bridge Program (July 2014)
American Physical Society Leadership Convocation (February 2014)
Member-at-Large – Texas Section of the American Physical Society (September 2013 – Present)
Site Visit Team Member – American Physical Society Committee on the Status of Women in Physics Site Visit to Colorado State University (February 2013)
Session Chair – 6th International Technology, Education and Development Conference (March 2012)
Member - American Physical Society Fund Raising Committee for the Beuchet Award (2010 – 2013)
Article Reviewer, Physica B (November 2013)
Proposal Review Panelist, National Science Foundation, Division of Materials Research, Center of Excellence in Materials Research and Innovation and Materials Interdisciplinary Research Team Panel ((June 2011)
Proposal Reviewer – National Science Foundation, Division of Materials Research (March 2011)
Article Reviewer – IEEE Journal of Quantum Electronics (January 2011)
Review Panelist – National Science Foundation, Division of Materials Research, Materials Research Centers and Teams (October 2010)
Proposal Reviewer – National Science Foundation (February 2010)
Proposal Reviewer – US Civilian Research and Development Foundation (February 2010)
Session Chair/Planner – American Physical Society March Meeting (February 2009)
Proposal Reviewer – National Science Foundation (January 2009)
Review Panelist – Division of Materials Research Committee on Visitors (February 2008)
Article Reviewer – IEEE Journal of Quantum Electronics (April 2008)
Proposal Review Panelist – National Science Foundation (October 2007)
Proposal Reviewer – National Science Foundation (March 2007)
Proposal Reviewer – National Science Foundation (March 2006)
Proposal Review Panelist – National Science Foundation (February 2006)
Proposal Reviewer, National Science Foundation (November 2005)
Article Reviewer, IEEE Journal of Quantum Electronics (October 2005)
Book Reviewer, Addison Wesley Publishing, (May 2005)
Proposal Reviewer, National Science Foundation (April 2005)
Proposal Reviewer, Department of Energy (July 2004)
Proposal Reviewer, US Civilian Research and Development Foundation (October 2004)

## UNIVERSITY SERVICE

Member - University of Houston Presidential Working Group on Social Justice
Member - Fall Instructional Delivery Working Group (June 2020 – Present)
Member – UH Center for Integration of Research, Teaching and Learning (June 2020 – Present)
Member – African American Studies Visiting Scholar Search Committee (Spring 2020)

**UNIVERSITY SERVICE (continued)**

Panel Facilitator – UH Center for ADVANCING UH Faculty Success Mid-Career Workshop (February 2020)
Member – Retention and Graduation Task Force (September 2019 – Present)
Member – UH Strategic Planning Committee (December 2019 – Present)
Facilitator - UH ADVANCE Gender Equitable Men & Women (GEM): Gender Allies in Academia Workshop (March – April 2019)
Member – UH ADVANCE Internal Advisory Board (April 2018 – December 2019)
Founding Member and Leadership Committee Member - UH Women of Color Coalition (June 2016 – Present)
Advocate – UH ADVANCE (January 2015 – Present)
Member – UH ADVANCE Leadership Fellows Committee (October 2014 – 2016)
Member – UH ADVANCE Professional Development/Engagement Committee (September 2014 - 2016)
Member – UH ADVANCE Departmental Mentoring Pilot Committee (August 2015 – 2016)
Member – NSF ADVANCE Proposal Working Group #2 (June 2013 – August 2013)
Member – Provost Summer Read Book Selection Committee (February 2016 – December 2016)
Member – Faculty Senate Undergraduate Committee (August 2012 – 2016)
Member – UH Teamwork Assessment Committee (March 2012 - 2014)
Member – UH Search Committee for the Vice Chancellor/Vice President of Research and Technology Transfer (June 2010 – August 2010)
Member – UH Texas College Readiness Initiative Committee (Fall 2008 – 2010)
Member – UH Institutional Effectiveness Committee (Spring 2007)
Proposal Reviewer – UH Faculty Development Initiative Program Committee (Spring 2008)
Member – UH Quality Enhancement Planning Committee (Summer 2007 – 2008)
Member – Faculty Development Leave and Teaching Excellence Committee (April 2006)
Member – UH Representative for the Office of the Vice President for Research – Ronald E. McNair Scholarship Gala (February 2006)
Member – UH Foundation of Excellence Transitions Dimensions Committee (February 2014 – December 2014)
Member – UH NSF Career Award Mentoring Roundtable Discussions (March 2012)
Roundtable Discussion Leader - Friends of Women's Studies 16th Annual Table Talk Luncheon and Fundraiser (February 2012)
Volunteer – Mu Delta Health Professions Society Pie Toss (April 2012)
Participant – UH NSF Career Award Mentoring Roundtable Discussions (April- May 2012)
Chair - UH Office of the Vice Chancellor/Vice President of Academic and Faculty Affairs Committee of Inquiry (Spring 2012)
Representative- Institutional Effectiveness Plan Workshop (Fall 2012)
Member – UH Search Committee for the Vice Chancellor/Vice President of Research and Technology Transfer (June 2010 – August 2010)
Member – UH Texas College Readiness Initiative Committee (Fall 2008 – 2010)
Featured in Presidents Booklet (Spring 2008)
Member – UH Institutional Effectiveness Committee (Spring 2007)
Member – UH FDIP Proposal Review Committee (Spring 2008) Member – UH Quality Enhancement Planning Committee (Summer 2007 – 2008)

## UNIVERSITY SERVICE (continued)

Member – Faculty Development Leave and Teaching Excellence Committee (April 2006)
Representative for the Office of the Vice President for Research – Ronald E. McNair Scholarship Gala (February 2006)
Representative for the University of Houston Office of the Vice President for Research - Minority Access 4th National Role Models Conference (September 2003)
Session Chairman, Materials Research Society Fall Meeting (December 2003)
Martin Luther King Visiting Professor, Wayne State University, Detroit, MI (October 2003)
Proposal Reviewer, US Civilian Research and Development Foundation (April 2003)
Article Reviewer, IEE Journal of Optoelectronics (Spring 2003)
Article Reviewer, IEE Journal of Quantum Electronics (Fall 2003)
Guest Speaker, UH Louis Stokes Alliance for Minority Participation Conference (August 2000)
Member – African American Studies Visiting Scholar Search Committee (Spring 2002)
Member – African American Studies Graduate Fellowship Committee (Spring 2002)
Focus Group on the Status of Women at University of Houston (Spring 2001)
Representative for the University of Houston, Greater Houston Women's Foundation Luncheon (Spring 2001)

## COLLEGE SERVICE

Member – NSM John C. Butler Excellence in Teaching Award Committee (Spring 2020)
Member – NSM Advance Task Force (September 2018 - 2019)
Member – NSM Academic Scholarship Committee (2000- Present)
Member – NSM Curriculum Committee (2006 – Present)
NSM SACNAS Chapter STEM Panel (October 2019)
Representative – Educate Texas Learning Tour Meeting, TcSUH (June 2017)
Physics Coordinator – NSM Summer Bridge Program (2014, 2015, 2017 and 2018)
Physics Instructor – NSM Summer Bridge Program (2014, 2015, 2017 and 2018)
Member – NSM Butler Teaching Excellence Award Committee (2011 – 2016)
NSM Representative - UH Black Alumni Association Scholarship Gala (March 2014)
Member – NSM Grievance Committee (July 2010)
NSM Chemical and Physical Science Leader –Rice-University of Houston Alliance for Graduate Education and the Professoriate (AGEP) (2004- 2009)

## DEPARTMENT SERVICE

Faculty Advisor – Astronomy Society at the University of Houston (2017 – Present)
Faculty Advisor – Society of Physics Students (2006-Present)
Faculty Advisor – Sigma Pi Sigma Faculty Advisor (2006- Present)
Chair – Department of Physics Undergraduate Studies Committee (2006 – 2020)
Advisor - Department of Physics Undergraduate Academic Faculty Advisor (2006- 2020)
Participant – NSM Spring Convocation (2010, 2011, 2012, 2013, 2016, 2017, 2018, 2019)
Department Representative - UH Cougar Connection (March 2014 and January 2015)
Participant – American Physical Society Department of Physics Video (2014)
Participant – NSM Fall Convocation (2013, 2016, 2019)
Physics Department Representative – Spin-Up Workshop, Austin, TX (Spring 2012)
Member – Search Committee for Energy Faculty Position (Spring 2011)

## DEPARTMENT SERVICE (continued)

Judge – Texas Center for Superconductivity Symposium (December 2010)
Member – Search Committee for Particle Physics Faculty Position (Spring 2010)
Department Recruiter – UH Recruiting for "The Event" (February 2008)
Member – Library Committee (2000 – 2008)
Judge – Science and Engineering Fair of Houston (February 2020)
Chair – Department of Physics, Search Committee for Nano-science Faculty Position (Spring 2007)
Department Representative – Air Force Luncheon (February 2007)
Participant – NSM Convocation (May 2002, 2003, 2004, 2006)
Representative for the Department of Physics – Southeast Universities Research Association Workshop (April 2005)
Monthly Speaker, University of Houston Society of Physics Students (Spring 2002)
Recruiter, National Conference of Black Physics Student (Spring 2001)
Member – Faculty Search Committee, Department of Physics (2001)
Recruiter for the University of Houston, Department of Physics, National Conference of Black Physics Students (March 2001).
Member – Search Committee for Director of the Texas Center for Superconductivity (2001)

## COMMUNITY SERVICE

Physics Demonstrations – Alief Elsik High School (February 2020)
Judge –Science and Engineering Fair of Houston (February 2020)
Physics Demonstrations – Pearland Junior High School East Campus (December 2019)
Judging for Inventors' Showcase – Chiyoda Young Innovators' Academy (July 2019)
Physics Demonstrations – Equinor STEM Camp (June 2019)
Physics Demonstrations – Mars Rover Competition (March 2019)
Physics Demonstrations – UH Bauer STEM Camp (February 2019)
Lab Tours – NSF STEM Parent Scholarship Program (February 2019)
Physics Demonstrations – UH STEM Center Outreach: Power 4 Life Non-Profit for the Kelly Clayton, Kennedy and Cuney Housing Communities (August 2018)
Physics Demonstrations – Statoil Summer STEM Camp Outreach (June and July 2018)
Member – Phi Sigma Rho Sorority UH Upsilon Chapter Women in STEM Panel (April 2018)
Physics Demonstrations – Day of Discovery (IDEA Public School, Brownsville) (February 2018)
Physics Demonstrations Organizer– Mars Rover (January 2018)
Physics Demonstrations – Energy Day (October 2017)
Physics Demonstrations – StatOil Summer Camp – Physics Demonstrations (June and July 2017)
Physics Demonstrations – UH Staff Council Take Your Child to Work Day (June 2017)
Girls Exploring Math and Science (GEMS) Houston Museum of Natural Sciences – Physics Demonstrations (February 2016, February 2017)
Volunteer Organizer – Girls Inc. Summer Camp – Camp BitSmart (July 2016, 2017)
Physics Demonstrations – Cougar STEM Camps (3 day outreach) (July 2016)
Physics Demonstrations – San Jacinto Community College STEMtastic Adventures Summer Camp (June 2016)
Physics Demonstrations – ExxonMobil Bernard Harris Science Camper (June 2017, 2016, 2015, 2014 and 2013)

**COMMUNITY SERVICE (continued)**

Physics Demonstrations – Adventures in STEM – A Houston Area Science and Engineering Festival sponsored by Dow Chemical (March 2017, 2016)
Physics Demonstrations – UH Calculus I Course (October 2015)
Bonnie Dunbar STEM Camps – Physics Demonstrations (July 2015)
Physics Demonstrations – Pasadena Memorial High School UH Visit (April 2015)
Physics Demonstrations – Bales Intermediate School (May 2015)
Physics Demonstrations – Adventures in STEM - A Houston Area Science and Engineering Festival sponsored by Dow Chemical (March 2015)
Physics Demonstrations – Girls Exploring Math and Science (GEMS) Houston Museum of Natural Sciences (February 2015)
Physics Demonstrations – Alvin Independent School District's Mary Marek Elementary School UH Visit (January 2015)
Judge, UH Charter School Science Fair (December 2015, 2013, 2011, 2010, 2009 and 2008)
Speaker – John Marshall Middle School Academy of Fine Arts - Black History Month Celebration (February 2014)
Judge and Representative for Physics Department – Mars Rover Competition, (March 2014, 2013, 2012, 2011 and 2010)
Lab Tour - Alvin Independent School District's Mary Marek Elementary (January 2014 and December 2012)
Physics Demonstrations – Pasadena Memorial High School UH Visit (January 2014)
Host Brigham – Young Recruiter Visit (November 2013)
Physics Demonstrations – Westwood Elementary (May 2013)
Physics Demonstrations – Quail Valley Middle School (May 2013, 2011, 2010)
Physics Demonstrations – Horace Mann Junior High School Career Day (May 2013 and 2012)
Physics Demonstrations – Earth Day- Discovery Greens Houston (April 2013)
Physics Demonstrations – University of Houston NMS/BP Extreme Boating Event (April 2013)
Lab Tour - Alvin Independent School District's Mary Marek Elementary (January 2012)
Physics Demonstrations and Judge – University of Houston NMS/BP Extreme Boating Event (April 2010, 2011)
Laboratory Tour – Kletzman Intermediate School (November 2011)
Judge – Science and Engineering Fair of Houston Judge, Ninth Grade (March 2010, 2009, 2008)
Laboratory Tour - HISD Coop Elementary School (November 2009)
Physics Demonstrations – Outreach Visit – Love Missionary Baptist Church Vacation Bible School (July 2008)
Laboratory Tour - HISD Austin High School (February 2008)
Physics Demonstrations – HISD Patrick Henry Middle School (November 2009)
Judge, Science and Engineering Fair of Houston, Junior Division (March 2007 and 2006)
Chair – Department of Physics, Search Committee for Nano-science Faculty Position (Spring 2007)
Laboratory Tour – Bear Branch Elementary School (May 2006)
Participant – NSM Convocation (May 2002, 2003, 2004, 2006)
Representative for the Department of Physics – Southeast Universities Research Association Workshop (April 2005)
Judge, Sigma Xi Research Day Poster Contest, University of Houston, (April 2005)
Judge – Peterson Elementary Science Fair (January 2005)

## COMMUNITY SERVICE (continued)

Recruiter – Conference for the Advancement of Science Teaching 2003 Volunteer for University of Houston Recruiters Booth (November 2003)

Judge – Science and Engineering Fair of Houston, APS Special Awards, Junior Division (2001, 2002 and 2003)

Monthly Speaker, University of Houston Society of Physics Students (Spring 2002)

Recruiter, National Conference of Black Physics Student (Spring 2001)

Member – Faculty Search Committee, Department of Physics (2001)

Recruiter for the University of Houston, Department of Physics, National Conference of Black Physics Students (March 2001).

Member – Search Committee for Director of the Texas Center for Superconductivity (2001)

## INVITED TALKS

1. Community Building in Undergraduate STEM programs through Mentoring and Scholarship, Virtual Workshop: Growing Equity, Inclusion, and Diversity for the Physics of Living Systems Student Research Network (Grow PoLS), October 2020.

2. A Vision for Promoting and Achieving Student Success, University of Houston, College of Natural Sciences and Mathematics, Houston, TX, November 2019.

3. Mentorship and Scholarship on Physics: My Journey, NASA High School Aerospace Scholars (HAS) Program, University of Houston STEM Center, University of Houston, Houston, TX, July 2019.

4. Impact of a Physics By Inquiry Course on Preparing Qualified Physics Teachers, Texas A&M University - Commerce, Commerce, TX April 2019

5. Effective Components of a Teacher Education Program, University of Houston Clear Lake, Clear Lake, TX, April 2019.

6. Mentoring and Scholarship in STEM: My Journey, Department of Physics, Sam Houston State University, Huntsville Texas, February 2019.

7. Community Building in Undergraduate Physics Programs A Conversation with Students, Department of Physics, Sam Houston State University, Huntsville Texas, February 2019.

8. The Effectiveness of a Physics By Inquiry Course in a STEM Teacher Preparation Program, American Association of Physics Teachers Winter Meeting, Houston, TX , January 2019.

9. Professional Skills for Women in Science, Conference for Undergraduate Women in Physics, Rice University, Houston, TX, January 2017.

10. Strategic Persuasion: Success in Meeting and Negotiations - A Program for Mentoring Graduate and Postdoctoral Students, National Society of Black Physicist 2016 Fall Workshop, Fermi National Labs, Batavia, IL, October 2016.

**INVITED TALKS (continued)**

11. Incorporation of Inquiry-Based Activities in Physics Classrooms for Pre-service Teachers, Texas Tech Department of Physics Colloquia, Lubbock, Texas, October 2014.

12. Implementation of Math Pre-testing and Tutorials for Improving Student Success in Algebra-based Introductory Physics Course, Texas Section of the American Physical Society, Lubbock, TX, October 2012.

13. Structural and Optical Analysis of Nanostructures in InAs/GaSb Superlattices, Joint Conference of the National Society of Black Physicists and National Society of Hispanic Physicists, Austin, TX, September 2011.

14. Structural and Optical Analysis of Nanostructure Formation in InAs/GaSb Superlattices, Sam Houston State University, Huntsville, TX, October 2011.

15. Structural and Optical Analysis of InAs/GaSb Superlattices, University of Houston, Clearlake, Clearlake TX, March 2011.

16. X-Ray Diffraction analysis of Nanostructured InAs/GaSb Superlattices for Infrared Detectors, Trinity University San Antonio, TX, April 2010.

17. Effects of Nanostructure Formation in InAs/GaSb Superlattices, Texas Section of the American Physical Society meeting, El Paso, TX, October 2008.

18. Self-Assembled Nanostructure Formation in InAs/GaSb Superlattices, Texas State University, San Marcos, TX, November 2007.

19. My Graduate School Experiences, Society of Engineering Students, Michigan State University, Lansing Michigan, September 2006.

20. Nanostructure Formation in InAs/GaSb Superlattices, Michigan State University, Lansing MI, September 2006.

21. Effect of Interfacial Bonds and Strain on the Formation of InAs/GaSb Self Organized Nanostructures," American Physical Society March Meeting, Baltimore, MD, March 2006.

22. Lateral Composition Modulation in Antimonide based Superlattices Intended for Midinfrared Detectors, Wayne State University, Detroit, MI, October 2003.
23. The Importance of Nanotechnology to Our Futures, Detroit Academy for Science and Technology, Detroit, MI, October 2003.

24. The Structure of InAs Nanowires Formed in InAs/GaSb Superlattices, University of Houston Society of Physics Students, Monthly Meeting, April 2002.

**INVITED TALKS (continued)**

25. X-ray Diffraction Analysis of Lateral Composition Modulation in III-V Semiconductor Superlattices, University of North Texas, Denton, TX, March 2002.

26. Continuing Success for Minority Science, Engineering and Mathematics Majors, Louis Stokes Alliance for Minority Participation Conference, Southwest Texas University, San Marcos, TX, August 2000 "Midwave-Infrared Antimonide "W" Lasers: A Novel Optoelectronic Device," University of Houston, Houston, TX, April 2000.

**CONTRIBUTED PRESENTATIONS**

1. Supporting Undergraduate STEM Student Success through Multilevel Mentoring—Including Parental Involvement**, Donna Stokes,** Laveria Hutchison, Monique Ogletree, Gayle Curtis, Cheryl Craig and Paige Evans, Association of American Colleges and Universities, Conference for Transforming STEM in Higher Education Chicago, IL (November 2019).

2. Increasing Recruitment and Retention of STEM Majors to Teach in High-Need School Districts, Paige Evans, Leah McAlister-Shields, **Donna Stokes** and Laura Harlow, Noyce Summit, Washington, DC (July 2019).
3. STEM Teacher Preparation at the University of Houston: Learning through Informal and Formal Experiences (UH-LIFE) - Paige Evans, Leah McAlister-Shields, **Donna Stokes** and Catherine Horn, Noyce Summit, Washington, DC (July 2019).

4. Women of Color Coalition: A Means of Empowering Underrepresented Women in Academia, **Donna Stokes**, Consuelo Arbona, Elebeoba E. May and Norma Olvera, NSF Includes Symposium for ADVANCING Latinas in STEM Academic Careers, South Padre Island, TX (May 2019).

5. Integrating Culturally Responsive Pedagogy into STEM Teacher Preparation Programs, Evans, P., McAlister-Shields, L., Manuel, M., **Stokes, D.**, Ekeoba, J., UTeach National Conference, Austin, TX (May 2019).

6. Women of Color Coalition: A Means of Empowering Underrepresented Female Faculty in Academia, Norma Olvera, Consuelo Arbona, **Donna Stokes** and Elebeoba E. May, UH Empower Women's Leadership Conference, University of Houston, Houston, TX (March 2019).

7. Mentoring in the midst of *teach*HOUSTON: Exemplars from a National Science Foundation-supported STEM Teacher Education Program, Cheryl J. Craig, Paige K. Evans, **Donna Stokes**, Leah McAlister-Shields, Gayle A. Curtis, American Educational Research Association Annual Meeting, Toronto, Canada (April 2019).

8. Infusing Culturally Responsive Pedagogy in STEM Teacher Preparation, Paige Evans, Leah McAlister-Shields, Mariam Manuel, **Donna Stokes**, Jacqueline Ekeoba and Cheryl J. Craig Invisible College, Toronto, Canada (April 2019).

**CONTRIBUTED PRESENTATIONS (continued)**

9. An Increase in Production of Physics Teachers at the University of Houston: A Collaborative Effort, **Stokes, D.**, Evans, P., Forrest, R., Bain, R., Physic Teacher Education Conference, Washington, DC (February 2019).

10. Integrating Engineering Design in High-Need STEM Classrooms, Manuel, M., Evans, P., McAlister-Shields, L., **Stokes, D.**, Ekeoba, J., and Pel, R., Western Regional Noyce Conference, Tucson, AZ (February 2019).

11. Culturally Responsive Teaching: A Component of a Secondary STEM Teacher Preparation Program, **Stokes, D.**, McAlister-Shield, L., Evans, P., Manuel, M., & Ekeoba, J., Western Regional Noyce Conference, Tucson, AZ (February 2019).

12. Effective STEM Education in Economically Disadvantaged Schools: Using Inquiry-Based Pedagogies in STEM Teacher Certification Courses, **Donna Stokes**, Paige Evans, Mariam Manuel, Leah McAlister-Shields and Cheryl Craig, Hawaiian International Conference on Education, Honolulu, HI (January 2019).

13. Infusing Culturally Responsive Pedagogy Across a Secondary STEM Education Preparation Program, Leah McAlister-Shields, Paige Evans, Mariam Manuel, **Donna Stokes** and Cheryl Craig, Hawaiian International Conference on Education, Honolulu, HI (January 2019).

14. Culturally Responsive Pedagogy in Physics Teacher Preparation, Mariam Manuel, Paige Evans, **Donna Stokes** and Leah Shields, American Association of Physics Teachers Winter Meeting, Houston, TX (January 2019).

15. Improving Student Problem Solving Skills with Interactive Multimedia Tools, Reginald Bain and **Donna Stokes,** American Association of Physics Teachers Winter Meeting, Houston, TX (January 2019).

16. The Influence of a Parent Academy on Student Persistence in STEM Beyond the Freshmen Year, **Donna Stokes,** Laveria Hutchison, Monique Ogletree, Gayle Curtis, Cheryl Craig and Paige Evans, 2018 Transforming STEM Higher Education Conference, Atlanta, Georgia (November 2018).

17. Promoting STEM Retention through Professional Development, Advising, and Mentoring, **Donna Stokes,** Monique Ogletree, Gayle Curtis, Laveria Hutchison, Cheryl Craig and Paige Evans, 2018 Transforming STEM Higher Education Conference, Atlanta, Georgia (November 2018).

18. Active Learning and Recitation Sessions Promote Student Success in Introductory STEM Courses, Rebecca Forrest, Shuo Chen, **Donna Stokes**, and Ann Cheek, 2018 Transforming STEM Higher Education Conference, Atlanta, Georgia (November 2018).

**CONTRIBUTED PRESENTATIONS (continued)**

19. STEM Teacher Preparation at the University of Houston: Learning through Informal and Formal Experiences (UH-LIFE), Evans, P., **Stokes, D**., and McAlister-Shield, L., 2018 Noyce Summit, Washington, DC (July 2018)

20. Robert Noyce Scholarship Program: A Model for Recruitment and Preparation of Secondary physics and Chemistry Teachers, **Stokes, D.** and Evans, P.**,** 2018 Noyce Summit, Washington, DC (July, 2018).

21. Impact of a Math Tutorial on Underrepresented Minority Student Success in Algebra-Based Introductory Physics, **Donna Stokes**, Rebecca Forrest, Andrea Burridge and Carol Voight, 2018 American Association of Physics Teachers Summer Meeting, Washington, DC (July 2018).

22. Utilizing Inquiry-Based Learning in STEM Classrooms, Evans P., **Stokes, D.**, Manuel, M., McAlister-Shields,L., Noyce Summit, Washington, DC (July 2018).

23. University of Houston: Learning through Informal and Formal Experiences (UH-LIFE), Evans, P., **Stokes, D.**, Horn, C. and Bark, S., Southeast Regional Robert Noyce Conference, Mobile, AL (June 2018).

24. *teach*HOUSTON: A Science as Inquiry Model of Teacher Education, Evans P., and **Stokes, D.**, Invisible College for Research on Teaching, New York, NY (April 2018).

25. Enhancing STEM Pre-service Teacher Preparation through Both Formal and Informal Learning Experiences, Evans, P., McAlister-Shields, L., Manuel, M., **Stokes, D.**, Craig, C.J.,Li, J., Gale, T., and Zhu, G., Invisible College for Research on Teaching, New York, NY (April 2018).

26. The influence of professors on undergraduate and graduate students' choosing STEM careers, Craig, C., Evans, P., **Stokes, D.**, Verma, R., Zhu, G. and Gale, T., Invisible College for Research on Teaching, New York, NY (April 2018).

27. A tribute to "unsung teachers": Teachers' influences on students enrolling in STEM programs with the intent of entering STEM careers, Craig, C., Evans, P., Verma, R., **Stokes, D**. and Li, Jing, Invisible College for Research on Teaching, New York, NY (April 2018).

28. The Influence of Parents on Undergraduate and Graduate Students' Entering the STEM Disciplines and Careers, Craig, C., Evans, P., Verma, R., **Stokes, D**., Invisible College for Research on Teaching, New York, NY (April 2018).

29. STEM Teacher Preparation at the University of Houston: Learning through Informal and Formal Experiences (UH-LIFE), Evans, P., **Stokes, D.**, Bark, S., and Horn, C., American Association for the Advancement of Science (AAAS) and the National Science Foundation National Conference, Washington, DC (July 2017).

**CONTRIBUTED PRESENTATIONS (continued)**

30. Robert Noyce Scholarship Program: Secondary Physics and Teacher Preparation Program 2012-2017, **Stokes, D**., Evans, P.K., Bott, S., and Craig, C.J., American Association for the Advancement of Science (AAAS) and the National Science Foundation National Conference, Washington, DC (July 2017).

31. Developing STEM Teachers through both Informal and Formal Learning experiences, **Stokes, D.**, Craig, C. and Evans, P., ISATT 18th Biennial International Conference on Teachers and Teaching, Salamanca Spain (July 2017).

32. Increasing Preservice Retention through a Summer Internship Program, Evans, P., **Stokes, D.**, Manuel, M., McAlister-Shields, L., 2017 UTeach National Conference, Austin, TX (May 2017).

33. The Embodied Nature of Narrative Knowledge: A Cross-Study Analysis of Teaching, Learning and Living, Craig, C., You, J., Zou, Y., **Stokes, D**., Evans, P., Verma, R., and Curtis, G., American Educational Research Association Annual Meeting, San Antonio, TX (April 2017).

34. The Influence of Parents on Undergraduate and Graduate Students' Entering the STEM Disciplines and Careers, Craig, C., **Stokes, D.**, Evans, P. and Verma, R., National Associationfor Research in Science Teaching (NARST) 2017 Annual International Conference, San Antonio, TX (April 2017).

35. Using a Science as Inquiry Model to Prepare STEM Teachers in High Need Areas, **Stokes, D.**, Craig, C. and Evans, P., National Association for Research in Science Teaching (NARST) 2017Annual International Conference, San Antonio, TX (April 2017).

36. From Cookbook to Inquiry in STEM Classrooms, **Stokes, D**., Evans, P., McAllister, L. with Noyce scholars, 2017 Western Regional Noyce Conference, Fresno, CA (February 2017).

37. Implementing the 5E Lesson Plan in STEM Classrooms, Evans, P., McAllister, L. and **Stokes, D**. with Noyce scholars, 2017 Western Regional Noyce Conference, Fresno, CA (February 2017).

38. State of Mind: Integration of Growth Mindset Strategies in STEM Education Classrooms, McAllister, L., Evans, P. and **Stokes, D**. with Noyce scholars, 2017 Western Regional Noyce Conference, Fresno, CA (February 2017).

**CONTRIBUTED PRESENTATIONS (continued)**

39. Trolling for Topics in a Qualitative Research Pool: Finding Stories Worth Telling in Narrative Inquiries, C. Craig, Y. Zou, J. You, G. Curtis, **D. Stokes** and P. Evans), American Educational Research Meeting, Washington, D.C. (2016)

40. Incorporating Project-Based Learning into your STEM Classroom, Evans, P. and **Stokes D**., with Noyce Scholars, 2016 Western Regional Noyce Conference, San Diego, CA (November 2016).

41. Incorporating Formative Assessment Strategies into your STEM Classrooms, Evans, P. and **Stokes D**., with Noyce Scholars, 2016 Western Regional Noyce Conference, San Diego, CA (November 2016).

42. Noyce Internship Institute at the University of Houston: Professional Development for Noyce Interns, **Stokes, D**., Evans, P.K., Bott, S., Itzep, J., 2016 American Association for theAdvancement of Science (AAAS) and the National Science Foundation National Conference, Washington, DC (July 2016).

43. Recruitment, Preparation and Retention of STEM Students as High School Teachers at the University of Houston, **Stokes, D.**, Evans, P., Bott, S., Itzep, J., 2016 American Association for the Advancement of Science (AAAS) and the National Science Foundation National Conference Washington, DC. (July 2016).

44. Lifetime of THz coherent phonons in InGaN/GaN structures, Doug Shin, A.A. Maznev, Jateen S. Gandhi, **Donna Stokes**, Rebecca Forest, Abdelhak Bensaoula, Chi-Kuang Sun, and KeithA. Nelson, 15th International Conference on Phonon Scattering in Condensed Matter, Phonons 2015, University of Nottingham, UK (July 2015).

45. Best Practices across Multiple Sections of Freshmen Biology, Physics, and Calculus, A. Cheek, **D. Stokes** and J. West, Bridges to Success Conference, Victoria, TX (October 2015).

46. Outcomes and Success of a High School Professional Development Program, **D.W. Stokes**, M. S. Cheung, W. Dominey, P. K. Evans, R. Forrest, A. Kapral, and M. Suskavcevic, American Association of Physics Teachers, College Park, MD (July 2015)**.**

47. Successful Pre-testing and Early Intervention in Algebra-based Introductory Physics, Rebecca Forrest, **Donna Stokes** and Andrea Burridge, Joint meeting of the Texas Section of APS and AAPT, Baytown Texas (March 2015).

**CONTRIBUTED PRESENTATIONS (continued)**

48. Incorporation of Inquiry-Based Activities in STEM Classrooms, **Donna Stokes** and Paige Evans, NSF Western Region Robert Noyce Teacher Workshop, San Francisco, CA, (May 2014).

49. Inquiry-Based High School Physics Teacher Professional Development at the University of Houston, Rebecca Forrest, M. S. Cheung, W. Dominey, A. Kapral, and **Donna Stokes**, American Physical Society PhysTEC Conference, Austin, TX (July 2014).

50. Increasing the Potential of Physics and Chemistry Teachers through Formal and Informal Learning Experiences, Paige Evans, Geoffrey Hart, **Donna Stokes** and Simon Bott, NSF Robert Noyce Teacher Scholarship Conference Workshop, Washington, DC (May 2013).

51. Increasing the Potential of Physics and Chemistry Teachers in *teach*HOUSTON, Paige Evans, Donna Stokes, R. Riley Hatch and Geoffrey Hart, Robert Noyce Teacher Scholarship Conference Workshop, Washington DC (May 2013).

52. University of Houston Department of Physics Overview, **Donna W. Stokes**, Rebecca Forrest and Gemunu Gunaratne, SPIN-UP Conference, Austin, TX, (May 2012).

53. Physics Problem Solving Course Creates Bridge for Student Success, Carol Voight and **Donna Stokes,** American Association of Physics Teachers Summer Meeting, Edmonton, Alberta (July 2008).

54. Physics Education: Math Deficiencies of Students Entering an Introductory Physics Course and its Effects on their Performance, Carol Voight, **D.W. Stokes,** University of Houston - Alliance for Graduate Education and the Professorate 2006 Summer Program, Houston, TX (July 2007).

55. Absorption Analysis of InAs/GaSb Superlattices Exhibiting Lateral Composition Modulation, J.C. Wickett, **D.W. Stokes,** 32nd Semiannual TcSUH Student Symposium, Houston, TX (December 2006).

56. Physics Education: A Continuing Study of Math Deficiencies of Students Entering an Introductory Physics Course and its Effects on their Performance, C.D. Voight, **D.W. Stokes**, L.T. Wood, University of Houston, – Alliance for Graduate Education and the Professorate 2006 Summer Program, Houston, TX (August 2006).

57. Effect of Interfacial Bonds and Strain on the Formation of InAs/GaSb Self Organized Nanostructures, **D.W. Stokes**, American Physical Society March Meeting, Baltimore, MD, (March 2006).

58. Effect of Strained Superlattice Layers on Formation of Lateral Composition Modulation (LCM) and on Optical Response in InAs/GaSb Superlattices**,** J.C. Wickett, **D.W. Stokes** and J.H. Li, Sigma Xi Research Day, University of Houston, Houston, TX (March 2006).

**CONTRIBUTED PRESENTATIONS (continued)**

59. Physics Education: Math Deficiencies of Students Entering an Introductory Physics Course and Its Effects on Their Performance, C. D. Voight, D.W. Stokes, L.T. Wood, University of Houston – Alliance for Graduate Education and the Professorate Houston, TX (Summer 2005).

60. Absorption Analysis of Lateral Compositionally Modulated InAs/GaSb Superlattices, J.C. Wickett, **D.W. Stokes**, J.H. Li, S.L. Ammu and S.C. Moss, Materials Research Society Symposium T, Boston, MA (December 2004).

61. IR absorption spectra of InAs/GaSb nanostructures, Wickett, J. C., **Stokes, D. W.**, Li, J. H., Forrest, R. L., Ammu, S. L., Moss, S. C., Nosho, B. Z., Bennett, B. R. and Whitman, L.J., American Physical Society, Texas Section Fall Meeting, Waco, TX (October, 2004)

62. Epitaxial Growth of β-Fe$(Si_{1-x}Ge_x)_2$ Towards a Tunable Silicon Based Electro-Optic Material, R.J. Cottier, K. Hossain, B.P. Gorman, **D.W. Stokes**, F.Z. Amir, A.G. Birdwell, O.W. Holland, A. Neogi, C.L. Littler and T.D. Golding, North American Molecular Beam Epitaxy Conference, Banff, Alberta, Canada (June 2004).

63. IR absorption analysis of InAs/GaSb nanostructures, J.C. Wickett, **D.W. Stokes**, J.H. Li, R.L. Forrest, S.L. Ammu, S.C. Moss, B.Z. Nosho, B.R. Bennett and L.J. Whitman, Texas Section of the American Physical Society, Waco, TX (October 2004).

64. Structural Characterization of A Group III-V Semiconductor superlattice, Daniel A. Brenes, Rebecca L. Forrest, Jerry, R. Meyer, and **Donna W. Stokes**, 107th Annual Meeting of the Texas Academy of Science, Schreiner University, Kerrville, TX (March 2004).

65. Optical and Structural Properties of InAs/GaSb Nanostructures, **D.W. Stokes**, J.H. Li, R.L. Forrest, S.L. Ammu, J.C. Lenzi, S.C. Moss. B. Nosho, E.H. Aifer, B. Bennett and L.J. Whitman, Materials Research Society Symposium T, Boston, MA (December 2003).

66. Structural Characterization of a Group III/V Semiconductor Superlattice, Rebecca Forrest, Jerry Meyer, and **Donna Stokes,** 3rd Annual Student Research Conference, University of Houston Downtown Scholars Academy (November 2003).

67. Project Location: University of Houston-DowntownX-ray Diffraction Analysis of Lateral Composition Modulation in InAs/GaSb Superlattices Intended for Infrared Detector Applications, **D.W. Stokes**, R.L. Forrest, J.H. Li, S.C. Moss. B. Nosho, B. Bennett, L.J. Whitman and M. Goldberg, 5th International Conference on Mid-Infrared Optoelectronic Materials and Devices, Annapolis, MD (June 2003).

68. λ = 3.3 μm Broadened Waveguide 'W' Quantum Well Diode Laser Operating at Room Temperature, L.J. Olafsen, H. Lee, W.W. Bewley, R.J. Menna, I. Vurgaftman, R.U. Martinelli, **D.W. Stokes**, D.Z. Garbuzov, C.L. Felix, M. Maiorov, J.R. Meyer, J.C. Connolly,

**CONTRIBUTED PRESENTATIONS (continued)**

A.R. Sugg, and G.H. Olsen, March Meeting of American Physical Society, Minneapolis, MN (March 2000).

69. Large Magnetoresistance and High Mobilities in Annealed Bi thin Films, Cho, S., Kim, Y., Divenere, A., Wong, G. K., Freeman, A. J., Ketterson, J. B., **Stokes, D. W.**, Vurgaftman, I.,Meyer, J. R.,Hoffman, C. A., American Physical Society, Annual March Meeting, Minneapolis, MN (March 2000).

70. High efficiency optically Pumped Type-II W-Optic Lasers Emitting in the Mid-IR, W. W. Bewley, C.L. Felix, I. Vurgaftman, **D.W. Stokes**, J.R. Meyer, M.J. Yang, H. Lee, and R.U. Martinelli, March Meeting of American Physical Society, Minneapolis, MN (March 2000).

71. High Temperature W Diode Lasers Emitting at 3.2 μm, L. J. Olafsen, W. W. Bewley, I. Vurgaftman, C.L. Felix, E.H. Aifer, **D.W. Stokes**, J.R. Meyer, H. Lee, R.J. Menna,R.U.Martinelli, D.Z. Garbuzov, M. Maiorov, J.C. Connolly, A.R. Sugg, and G.H. Olsen, Materials Research Society Symposium, Boston, MA (December 1999).

72. Broadened-Waveguide W Quantum-Well Diode Lasers Operating at $\lambda = 3.2$ μm, H. Lee, R.J. Menna, R.U. Martinelli, D.Z. Garbuzov, J.C. Connolly, L.J. Olafsen, W.W. Bewley, I. Vurgaftman, C.L. Felix, E.H. Aifer, **D.W. Stokes**, J.R. Meyer, M. Maiorov, A.R. Sugg, and G.H. Olsen, IEEE-LEOS Annual Meeting, San Francisco, CA (November 1999).

73. High-Temperature cw W Lasers Emitting at $\lambda = 3–7.1$ μm, J.R. Meyer, W.W. Bewley, E.A. Aifer, C.L. Felix, **D.W. Stokes**, L.J. Olafsen, I. Vurgaftman, M.J. Yang, B.V. Shanabrook, H. Lee, R.U. Martinelli, and J.C. Connolly, 12th Annual Diode Laser Technology Review, Fort Walton Beach, FL (May 1999).

74. Long-wavelength optically-pumped type-II W lasers, L. J. Olafsen, **D. W. Stokes**, W. W. Bewley, C. L. Felix, I. Vurgaftman, E. H. Aifer, J. R. Meyer, and M. J. Yang, Semiconductor Laser Workshop, Baltimore, MD (May 1999).

75. Long Wavelength High Temperature CW Operation of Optically-Pumped Type-II W Mid-IR Lasers, W.W. Bewley, .H. Aifer, C.L. Felix, I. Vurgaftman, **D.W. Stokes**, L.J. Olafsen, J.R. Meyer, M.J. Yang, B.R. Bennett, B.V. Shanabrook, H. Lee, R.U. Martinelli, and A.R. Sugg, 1999 Centennial Meeting of the American Physical Society, Atlanta, GA (March 1999).

76. Optical Pumping Injection Cavity (OPIC) for High-Efficiency Mid-IR W Lasers, C.L. Felix, W.W. Bewley, I. Vurgaftman, L.J. Olafsen, **D.W. Stokes**, J.R. Meyer, M.J. Yang, H. Lee, and R.U. Martinelli, IEEE-LEOS Annual Meeting, , San Francisco, CA, (November, 1999).

77. Pulsed and CW Operation of Type-II W Lasers Emitting from 5.0 to 7.3 μm, **D.W. Stokes**, L.J. Olafsen, W.W. Bewley, I. Vurgaftman, C.L. Felix, E.H. Aifer, M.J. Yang, and J.R. Meyer, Optical Society of America Annual Meeting, Santa Clara, CA (September 1999).

**CONTRIBUTED PRESENTATIONS (continued)**

78. Antimonide Interband and Intersubband Mid-IR and Terahertz Lasers, I. Vurgaftman, C L. Felix, W.W. Bewley, E.H. Aifer, L.J. Olafsen, **D.W. Stokes**, J.R. Meyer, M J. Yang, and H.Lee, 5th Int. Conf. Intersubband Transitions in Quantum Wells, Bad Ischl, Austria, (September 1999).

79. Room-Temperature W Mid-IR Quantum Well Lasers, L.J. Olafsen, W.W. Bewley, I. Vurgaftman, C.L. Felix, E.H. Aifer, **D.W. Stokes**, J.R. Meyer, H. Lee, R.J. Menna, R.U. Martinelli, D.Z. Garbuzov, J.C. Connolly, M. Maiorov, A.R. Sugg, and G.H. Olsen, 3rd Int. Conf. Mid-Infrared Optoelectronics Materials and Devices Aachen, Germany, (September 1999).

80. Optically-Pumped W and W-OPIC Mid-IR Lasers, W.W. Bewley, C.L. Felix, I. Vurgaftman, L.J. Olafsen, **D.W. Stokes**, E.H. Aifer, J.R. Meyer, M.J. Yang, H. Lee, R.U. Martinelli, and A.R. Sugg, 3rd Int. Conf. Mid-Infrared Optoelectronics Materials and Devices, Aachen, Germany, (September 1999).

81. New Techniques for Epi-Down Mounting of Mid-IR Type-II Quantum-Well Lasers, E. H. Aifer, W. W. Bewley, C. L. Felix, L. J. Olafsen, I. Vurgaftman, **D. W. Stokes**, J. R. Meyer, H. Lee, R. J. Menna, R. U. Martinelli, D. Z. Garbuzov, M. Maiorov, J. C. Connolly, A. R. Sugg, and G. H. Olsen, 41st Electronic Materials Conference, Santa Barbara, CA (June 1999)

82. High-Temperature cw W Lasers Emitting at $\lambda$ = 3–7.1 μm, J.R. Meyer, W.W. Bewley, E.A. Aifer, C.L. Felix, **D.W. Stokes**, L.J. Olafsen, I. Vurgaftman, M.J. Yang, B.V. Shanabrook,

83. H. Lee, R.U. Martinelli, and J.C. Connolly, 12th Annual Diode Laser Technology Review, Fort Walton Beach, FL, (May 1999).$Al_{1-x}In_xAs_{1-y}Sb_y$/GaSb Effective Mass Superlattices Grown by MBE, **D. Washington-Stokes**, T. P. Hogan, P. C. Chow and T. D. Golding, U. Kirschbaum and C. L. Littler, 10th International Conference on Molecular Beam Epitaxy, Cannes, France (June1998).

84. Kinetic Confinement of Charge Carriers in $Al_{1-x}In_xAs_{1-y}Sb_y$/GaSb Effective Mass Superlattices grown by MBE, **D. R. Washington**, T. Hogan, P. Chow, T. D. Golding, C. L. Littler and U. Kirschbaum, March Meeting of the American Physical Society, Los Angeles, CA, (March 1998).

85. $Al_{1-x}In_xAs_{1-y}Sb_y$/GaSb Heterojunctions and Multilayers Grown by Molecular Beam Epitaxy for Effective Mass Superlattices. **D. Washington**, T. Hogan, P. Chow, T. Golding, C. Littler and U. Kirschbaum, 16th North American Molecular Beam Epitaxy Conference, Ann Arbor, MI, (October 1997).

**CONTRIBUTED PRESENTATIONS (continued)**

86. Molecular Beam Epitaxy Growth of $Al_{1-x}In_xAs_{1-y}Sb_y$ Epilayers on GaSb (100) Substrates, **D. Washington- Stokes**, T.P. Hogan, P.C. Chow, T.D. Golding, Materials Research Society, Boston, MA, March 1997.