

Curriculum Vitae

Sharmistha Basu-Dutt, Ph.D.

**Associate Professor of Chemistry and Engineering Studies Coordinator
University of West Georgia**

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Teaching

A. Employment History

Associate Professor, Department of Chemistry, State University of West Georgia, 2003 - present

Engineering Studies Coordinator, State University of West Georgia, 2003 - present

Assistant Professor, Department of Chemistry, State University of West Georgia, 1997 - 2003

Laboratory Coordinator, Chemistry Department, State University of West Georgia, 1996 - '97

Graduate Assistant, Department of Chemical Engineering, Wayne State University, 1990 - '95

Environmental Engineer, Bata India Limited, Calcutta, India, 1987 - '89

B. Courses Taught

<u>Course Number</u>	<u>Course Name</u>	<u>Date</u>
CHEM 1211K	Principles of Chemistry I	'97 - '99, '02 - present
CHEM 1212K	Principles of Chemistry II	'96 - '01, '02 - present
CHEM 1211	Honors Chemistry I	'00 - '01
CHEM 1212	Honors Chemistry II	'99 - '02
CHEM 1230K	Accelerated Principles of Chemistry	'02
CHEM 3522/ CHM-442*	Physical Chemistry II (Thermodynamics)	'98, '00, '03 - '04
CHEM 3810/CHM 490*	Chemical Process Principles	'97 - '04
CHEM 3830	Chemical Engineering Thermodynamics	'00 - '05
CHEM 3885	Transport Phenomena	'99
CHEM 4081	Fluid Mechanics – Honors	'00
CHEM 4911	Advanced Laboratory I	'00 - '04
CHEM 4920/5920	Environmental Chemistry	'02, '04
CHEM 4940/5940/490*	Industrial Chemistry	'97, '00
CHEM 5785/690*	Industrial Chemistry for Teachers	'98, '00

CHEM 5785	Science for Everyday Living for Teachers	'00
CHEM 4185/5785	Inquiry in the Science Classroom	'05 – present
XIDS 2001/CHM 290*	What do you know about engineering?	'97 - '99, '03 – present
XIDS 2201	Science Foundations	'02 – '04
XIDS 2002	Frontiers in Science – CSI:UWG	'04
XIDS 2002	Frontiers in Space Science	'05 - present
ENV 230*	Environmental Studies	'97
CHM 483*	Instrumental Analysis	'96
CHM 490*/690*	Law and Admn. Of Chemicals	'97

* Courses taught under the quarter system, before semester conversion

C. Course Development

1. Chemical Process Principles
2. Chemical Engineering Thermodynamics
3. Industrial Chemistry
4. Science for Everyday Living
5. Inquiry in the Science Classroom
6. What do you know about engineering?
7. Law and Administration of Chemicals
8. Frontiers in Science – CSI:UWG
9. Frontiers in Science – Space Science

D. Directed Study/ SRAP/ GEMS Research Projects

<u>Students</u>	<u>Project Title</u>	<u>Placement</u>
Sangeetha Gomadam	<i>Redox properties of Co/Fe</i>	Dow Corning – Chemical engg
Amanda Harris	<i>QSAR of barbiturates</i>	GBI – Forensic chemist
Jill Buchanan	<i>Modeling Cannabinoids</i>	Mercer U - MD program
Brian Grizzard		Construction industry
Daniel L. Parker		U of Utah – graduate student
Daniel P. Parker		UWG – BS (Chemistry) major
Thao Nguygen		Emory U – BS(Biology) major
David Hathcock	<i>Educational modules</i>	G. Tech – Ph.D student
Eric Hall		UWG – BS (Chemistry) major
David Hebert		G. Tech, UWG Dual Degree
Tim Ayers		UGA – Ph. D student
Kenneth Stone		UNC (Chapel Hill) Ph.D student
Amanda Matthews	<i>QSAR of pesticides</i>	UWG – BS(Biology) major
Damita Pritchett		Industrial chemist
Scott Tinney	<i>Carcinogenicity of PAH</i>	Emory U – Ph.D. student

Brian Shipano Amy Smith Edward Croker Kevin Gardner	<i>Statistical Mechanics</i>	UWG – business major Mercer U – pharmacy school Construction industry UWG - BS (Chemistry) major
Marc Baumgardner	<i>Computational Electrochemistry</i>	Dual degree major
Gabriel Morrow Nimish Pandya Tina Galka	<i>QSAR of Pesticides</i>	Dual degree major – Georgia Tech Dual degree major – Georgia Tech UWG - BS (Chemistry) major
Dusty Otwell	<i>Molecular Orbital Theory</i>	UWG - BS (Chemistry) major
Maki Hasimoto Taylor Proctor Israel Free Jennifer Payne	<i>Environmental water chemistry</i>	Environmental studies program UWG – BS (Geology) major UWG - BS (Chemistry) major Dual degree major – Georgia Tech
Vishal Amin Russell Phillip	<i>Degradation of Herbicides</i>	Advanced Academy – Rutgers Advanced Academy - Georgia Tech
Heather Dahlin Kristi Nichelson Jalpa Patel Amna Ali	<i>Efficiency of Solar Cells</i>	Dual degree major UWG - BS (Mathematics) major Dual degree major – Georgia Tech UWG - BS (Chemistry) major
Suzie Blosser Marshall Blosser	<i>Computational Chemistry</i>	UWG - BS (Chemistry) major
Justin Batson Sriharsha Rayapati Nathan Black Daniel Toney	<i>Space Science Modules</i>	Dual degree major – Georgia Tech Aerospace Engineering – Georgia Tech Dual degree major – Georgia Tech Pre-engineering major
Jeremy Ryan Emily Vickers Ajay Pillai	<i>Photochemical gasoline degradation</i>	Dual degree major Dual degree major UWG - BS (Chemistry) major
Melissa Usry	<i>Medicinal Chemistry</i>	Pre-pharmacy
Ashley Blasiolo Megan Alexander	<i>Designing efficient Solar Cells</i>	Dual degree major Dual degree major
Samuel Townsend Jarrett Wilbanks	<i>Developing nanotechnology expt</i>	Dual degree major Mechanical Engineering – Georgia Tech
Lan Nguyen Savini Santha	<i>Enzyme kinetics</i>	Chemistry major Chemistry major

E. Student Presentations at National, Regional, and State Meetings and published abstracts
(students underlined)

- 1) Alexander, J., Blasiolo, A., Basu-Dutt, S., “Performance of nanocrystalline solar cells using various dyes and electrolytes”, at the Southeastern Meetings of the American Chemical Society, Greenville, SC, in October 2007.
- 2) Dahlin, H., Patel, J., Basu-Dutt, S., “Evaluating the efficiency of nanocrystalline solar cells”, at the Southeastern Meetings of the American Chemical Society, Augusta, GA in November 2006.
- 3) Usry, M., Basu-Dutt, S., “Factors affecting the stability of Quinidine”, at the Southeastern Meetings of the American Chemical Society, Augusta, GA in November 2006.
- 4) Dahlin, H., Patel, J., Ali, A., Geisler, V., Basu-Dutt, S., “Evaluation of factors controlling solar cell efficiency”, at the National Meetings of the American Chemical Society, Atlanta, GA in March 2006.
- 5) Gaquere, A., Basu-Dutt, S., Chance, J., Marong, B., Tchoua, P., Parker, C., “Degradation of 2, 4, 5-trichlorophenol under ultrasounds”, at the National Meetings of the American Chemical Society, Atlanta, GA in March 2006.
- 6) Basu-Dutt, S., Gaquere, A., Amin, V., Phillip, R., Reed, S., Raja, E., Abiodun, Y., “Degradation of Simazine under various environments”, at the Southeastern Regional Meetings of the American Chemical Society, Raleigh, NC in November 2004.
- 7) Gaquere, A., Basu-Dutt, Lindquist, D., Raja, E., Reed, S., Parker, C., “Sonoremediation of Trichlorophenol”, at the the Southeastern Regional Meetings of the American Chemical Society, Raleigh, NC in November 2004
- 8) Baumgardner, M., Otwell, D., Basu-Dutt, S. “Computational Electrochemistry”, at the Southeastern Regional Meetings of the American Chemical Society, Atlanta, GA in November 2003
- 9) Hashimoto, M., Payne, J., Free, I., Asif, G., Basu-Dutt, S. “Environmental Fate of the Herbicide Simazine”, at the Southeastern Regional Meetings of the American Chemical Society, Atlanta, GA in November 2003
- 10) Gardner, K., Croker, E., Basu-Dutt, S. “Statistical Mechanical Analysis of Energy and Entropy”, at the Southeastern Regional Meetings of the American Chemical Society, Charleston, SC in November 2002
- 11) Croker, E., Maharaj, K., Basu-Dutt, S. “QSAR of a class of substituted amines”, at the National Meetings of the American Chemical Society, Orlando, FL in April 2002.
- 12) Croker, E., Maharaj, K., Basu-Dutt, S., “Molecular Modeling Experiments in Physical Chemistry”, at the Southeastern Regional Meetings of the American Chemical Society, Savannah, September 2001.

- 13) Shipano, B., Johnson, B., Basu-Dutt, S., “An Empirical Study of Aromatic-aromatic interactions”, at the National American Chemical Society Meetings, San Diego, March 2001.
- 14) Tinney, S., Shipano, B., Johnson, B., Basu-Dutt, S., “Carcinogenic Potential of Petroleum Refinery Emissions”, at the National American Chemical Society Meetings, San Diego, March 2001.
- 15) Parker, D., Shipano, B., Johnson, B., Nguyen T., Basu-Dutt, S., “Factors affecting aromatic-aromatic interactions”, at the National Collegiate Honors Conference, Washington, D.C., October 2000.
- 16) Shipano, B., Johnson, B., Basu-Dutt, S., “Predicting Carcinogenicity of Petrochemical Refinery Emissions”, at the Georgia Academy of Science Meetings, Valdosta, March 2000.
- 17) Shipano, B., Johnson, B., Basu-Dutt, S., “Predicting Carcinogenicity of Petrochemical Refinery Emissions”, at the Nanotechnology Symposium, Georgia Institute of Technology, Atlanta, November 1999.
- 18) Shipano, B., Johnson, B., Buchanan, A.J., Parker, D., Nguyen, T., Basu-Dutt, S., “Predicting Carcinogenicity of Petrochemical Refinery Emissions”, at the Southeast Regional American Chemical Society Meetings, Knoxville, November 1999.
- 19) Buchanan, A.J., Basu-Dutt, S., Hurst, D.P., Reggio, P.H., "Binding of SR 144528 at the CB1 and CB2 Receptor", at the Georgia Academy of Science Meetings, Lawrenceville, March 1999.
- 20) Harris, A., Gomadam, S., Basu-Dutt, S., Esslinger, G.W., “Synthesis and Molecular Modeling of Novel Spiro Barbiturates”, at the Georgia Academy of Science Meetings, Lawrenceville, March 1999.
- 21) Gomadam, S., Eaves, B., Basu-Dutt, S., Slattery, S.J., “Correlation of Molecular Orbital Calculations to Magnetic and Electrochemical Properties for Fe(II) and Co(II) Complexes”, at the Georgia Academy of Science Meetings, Lawrenceville, March 1999.
- 22) Harris, A., Gomadam, S., Basu-Dutt, S., Esslinger, G.W., “Correlation of Molecular Electronic Property to Therapeutic Activity for Barbiturates”, at the Southeast Regional American Chemical Society Meeting, Raleigh, November 1998.
- 23) Gomadam, S., Hathcock, D., Grizzard, B., Eaves, B., Basu-Dutt, S., Slattery, S.J., “Correlation of Molecular Orbital Calculations to Magnetic and Electrochemical Properties for Fe(II) and Co(II) Complexes”, at the Southeast Regional American Chemical Society Meeting, Raleigh, November 1998.
- 24) Smith, A., Gary, T., Green, B., Basu-Dutt, S., Geisler, V., Khan, F., “Nitration of Polycyclic Aromatics”, at the Georgia Academy of Science Meeting, Savannah, April 1998.

F. Student Thesis

- 1) Sangeetha Gomadam – *Correlation of molecular electronic properties to therapeutic activities of*

barbiturates – co-advised with W. G. Esslinger – 1998.

- 2) Amanda Harris – *Synthesis & computational studies of spiro-cyclo barbiturates* - co-advised with W.G. Esslinger – 1998.
- 3) Brian Grizzard – *Binding of SR-144528 at the cannabinoid receptor* – 1999.
- 4) Damita Prtichett - *QSAR of a class of pesticides* – 2001.
- 5) Edward Croker – *A classical and quantum chemical analysis of heat capacity* – 2002.
- 6) Kevin Gardner – *A computational look at energy and entropy* – 2002.
- 7) Dusty Otwell – *Computational electrochemistry* – 2003.
- 8) Maki Hashimoto – *Degradation studies of the herbicide Simazine* – 2003.

Service to Institution

A. University Wide Committees

1. Member of VP-Student Services Evaluation Committee (2007)
2. Vice President’s Advisory Committee (2007 – present)
3. Member of Post-tenure Committee (2006 – present)
4. Faculty representative on Pandemic Flu Committee (2006 – present)
5. Faculty Orientation Leader (2006 - present)
6. Project Graduation Guide (2006 – present)
7. Faculty representative on Homeland Security Committee (2005 – 2007)
8. Project leader of Campus Pipeline portal solution (2003 – present)
9. Member of Graduation Task Force (2005 – present)
10. Member of American Democracy Project (2004 – present)
11. Member of University General Education Council (2003 – 2005)
12. Panel discussant in “Freshman Success Seminar Series” (2003)
13. Panel discussant “Research Seminar in Doctoral Program in School Improvement” (2003, 2005, 2006)
14. Panel discussant in “Bioethics in Science, Technology and Society” (1998)
15. Panel discussant in Center for Teaching and Learning Seminar Series (2005)
16. Panel discussant in “Minority Achievement Program” (1997, 2004 - present)

17. Advanced Academy Nominating Committee (2000 – present)
18. Excel Center Advisor (2004 – present)
19. Student Athletics Committee (2000 – 2002)
20. Learning Resources Committee (1998 – 2000)
21. Department representative to “Festival of Majors” (1999, 2000, 2003)
22. Committee member for students in Master of Middle Grades or Secondary Education (1998)
23. Conducted “Right to Know” training sessions for all new faculty (1996)
24. Faculty mentor in Minority Achievement Program (2004 – present)

B. College of Arts & Sciences Committees

1. Engineering Studies Coordinator (2003 – present)
2. Engineering faculty representative in the National Science Foundation sponsored GEMS project (2004 – 2009)
3. Organized faculty development workshop for the College of Arts and Sciences on Inquiry Teaching and Learning (2005)
4. Promotion and Tenure Committee (2004 – 2006)
5. Chair of interdisciplinary Science Foundations course reform committee (2003 – 2004)
6. Pre-engineering Learning Community Coordinator (1998, 1999)
7. Engineering Studies Committee (1996 – present): designed brochure, developed RETP plan of work for all engineering majors, development of all ENGR courses
8. TEAC- Teacher Education Advisory Committee (1998)
9. P-16 and STEP subcommittee (1999)
10. Local Arrangements Committee for Annual Meeting of the Georgia Academy of Sciences at SUWG (1997)
11. Tenure Track Physics Department Faculty Search Committee (2002)
12. Tenure Track Curriculum and Instruction Faculty Search Committee (2004, 2006)
13. 3rd Year Review Committee of Muhammad Rahman, Department of Computer Science (2005)
14. 3rd Year Review Committee of Li Yang, Department of Computer Science (2006)
15. Tenure and promotion Review Committee of Anja Remshagen, Department of Computer Science (2006)

C. Departmental Committees

1. **Chair:** Promotion to Professor review of Dr. Partha Ray (2005)
2. **Chair:** Promotion to Professor review of Dr. Andrew Leavitt (2003)
3. **Chair:** Post tenure review of Dr. Andrew Leavitt (2003)
4. **Program Advisor:** “3+2” Chemistry/Chemical Engineering Dual Degree (1997 – present)
5. **Chair:** Laboratory Coordinator search committee (1997)
6. **Member:** Temporary and tenure track faculty search committee (1999, 2000, 2001, 2002, 2004, 2005)
7. **Faculty mentor:** NSF sponsored Research Experience for Undergraduates grant (1999, 2000, 2001)

D. Community Service

1. **Workshop Coordinator:** Inquiry Science Teaching, Chapel Hill Elementary School, Douglasville (April 2006); Mirror Lake Elementary School, Villa Rica (December 2006)
2. **Panelist:** Women in Academe, Georgia Institute of Technology (2005)
3. **Judge:** Regional Science Bowl (1999), Georgia Science Olympiad (1997 – 2001), West Georgia Regional Science and Engineering Fair (2002), Carrollton Junior High School Academic Fair (2003, 2004), Bay Springs Middle School (2005)
4. **Instructor:** Women in Science camp (1997, 2006), Young Scholars Institute (1999), UWG Summer Day Camp (2000), “Live to Learn” camp (2001, 2003)
5. **Mentor:** Georgia Junior Academy of Science (1997 – present)
6. **Coordinator:** “Introduction to Engineering for high school students” workshop (1997, 1999)
7. **Organizing Committee:** North American Bengali Conference in Atlanta (2002)

Academic Achievement

A. Degrees

B.S. Chemical Engineering, Jadavpur University, Calcutta, India, 1983 – 87
Thesis – SO₂ Removal from a Thermal Power Plant
Advisor – Professor B.N. Mukherjee

Ph.D. Chemical Engineering, Wayne State University, Detroit, MI, 1990 - 95
Thesis – Feasibility Studies of a Photosynthetic Artificial Lung
Advisor – Professor Steven O. Salley

B. Honors

1. Regents Excellence in Teaching Award, 2007
2. Faculty First Year Student Advocate Award, 2007
3. Nominated by Dean of Arts and Sciences for CASE Carnegie US Professor of the Year Award, 2007
4. Excellence in Teaching Award, College of Arts & Sciences, University of West Georgia, 2005
5. Who's Who Among American Teachers, 2005
6. Empire Who's Who Among Executive and Professional Women, 2005
7. Nominated by VPAA to Board of Regents Award for Excellence in Innovation for reforming Science Foundations course, 2005
8. Honors Faculty of the Year Award, State University of West Georgia, 2003
9. Fellowship Award, American Society for Artificial Internal Organs, 1994
10. Excellence in Teaching Award, Wayne State University, 1992
11. Outstanding Teaching Award, Wayne State University, 1991

Professional Growth & Development

A. Memberships in Professional Organizations

1. Member of the American Chemical Society
2. Member of the Georgia Academy of Sciences
3. Member of Sigma Xi

B. Professional Service

1. **Session Chair:** Chemical Education, SERMACS Meeting, Augusta (2006)
2. **Reviewer:** National Institute of Health Institution and Systems Development Grants (2004)
3. **Reviewer:** National Science Foundation CCLI Grants (2001, 2003; invited but declined in 2002 and 2005)
4. **Reviewer:** Eisenhower Higher Education Grants (1998)
5. **Reviewer:** *The Chemical Educator* (7 reviews)

6. **Reviewer:** Georgia Assessments for the certification of Educators Bias Review Committee (2005 – present)
7. **Reviewer:** *Chemistry: Science of Change* (Thompson Brooks/Cole Publishers)
8. **Reviewer:** *Chemistry: A World of Choices* (McGraw Hill Publishers)
9. **Reviewer:** *Environmental Science, A Global Concern* (McGraw-Hill)
10. **Reviewer:** *Preparatory Chemistry* (Benjamin Cummings)
11. **Reviewer:** *Chemistry* (John Wiley)
12. **Reviewer:** *Thermodynamics: An Engineering Challenge* (McGraw Hill)

C. Publications

- 1) Matthew, H.W.T.; **Basu-Dutt, S.**; Peterson, W.D.; Salley, S.O.; Klein, M.D., "Performance of Plasma-Perfused, Microencapsulated Hepatocytes : Prospects for Extracorporeal Liver Support," in Journal of Pediatric Surgery, Vol. 28, No. 11, Nov. 1993, pp. 1423-28.
- 2) **Basu-Dutt, S.**; Salley, S.O.; Whittlesey, G.C.; Klein, M.D., "Feasibility Studies for a Photosynthetic Artificial Lung - Optimization of Parameters Affecting Photosynthesis", in American Society for Artificial Internal Organs Journal, July / September 1994, pp. M743-46.
- 3) **Basu-Dutt, S.**; Fandino, M.R.; Thompson, I.M.; Salley, S.O.; Whittlesey, G.C.; Klein, M.D., "Feasibility Studies for a Photosynthetic Artificial Lung-Interfacing the Bioreactor with Aqueous Medium", in American Society for Artificial Internal Organs Journal, Vol. 43, No. 4, July/August 1997, pp. 279-283. (*work done at WSU, manuscript written at UWG*)
- 4) Reggio, P.H., **Basu-Dutt, S.**, Hurst, J., Castro, M., D.P., Norris, Seltzman, H.H., Roche, M.J., Gilliam, A.F., Thomas, B.F., Stevenson, L.A., Pertwee, R.G., Abood, M.E., "The Bioactive Conformation of Aminoalkylindoles at the Cannabinoid CB1 and CB2 Receptors: Insights Gained from (E)- and (Z)- Naphthylidene Indenes", Journal of Medicinal Chemistry, , Vol. 41, No. 26, December 1998, pp. 5177-5187. (*work done at UWG*)
- 5) Croker, E., **Basu-Dutt, S.*** "A Classical and Quantum Chemical Analysis of Gaseous Heat Capacity, Chem. Educator, Vol 7, No. 3, 2002, pp. 136-141. (*work done at UWG*)
- 6) Gardner, K., Croker, E., **Basu-Dutt, S.*** "A Statistical Mechanical Analysis of Energy and Entropy", Chem. Educator, Vol 8, No. 1, 2003, pp. 1-6. (*done at UWG*)

D. Papers read and abstracts published at National, Regional, State Meetings

1. **Basu-Dutt, S.**, Otwell, D., Geisler, V. J., “Making chemistry relevant to the STEM freshmen student: Examples from inter-disciplinary seminar courses developed in a NSF-STEP project,” at the National Meetings of the American Chemical Society, Chicago, IL, March 2007.
2. **Basu-Dutt, S.**, Wink, D. J., “Extending a CWCS Workshop Experience: A Journey continues for a workshop leader and participant,” at the National Meetings of the American Chemical Society, Chicago, IL, March 2007.
3. **Basu-Dutt, S.**, Marshall, G., “Excursions in Inquiry for Elementary Teachers”, at the Georgia Science Teachers Association Conference, Athens, GA in February 2007.
4. **Basu-Dutt, S.**, “Evaluating the Heating Curve”, at the Southeastern Meetings of the American Chemical Society, Augusta, GA in November 2006.
5. **Basu-Dutt, S.**, Otwell, D., Geisler, V. J., “Inquiry-based energy activities in an inter-disciplinary freshmen seminar course: Frontiers in Space Science”, at the Southeastern Meetings of the American Chemical Society, Augusta, GA in November 2006.
6. Geisler, V., Bartly, J., **Basu-Dutt, S.**, Dodge, R., Geisler, V., Hasbun, J., Joyner, M., Larkin, G., Lea-Fox, D., Otwell, D., Rahman, M., Smith, K., Storer, J., Swamy-Mruthinti, S., “NSF-GEMS program at the University of West Georgia”, at the Biennial Conference on Chemical Education, Purdue University, IN in August 2006.
7. Bartley, J., **Basu-Dutt, S.**, Dodge, R., Geisler, V., Hasbun, J., Joyner, M., Larkin, G., Lea-Fox, D., Otwell, D., Rahman, M., Smith, K., Storer, J., Swamy-Mruthinti, S., “Frontiers in Space Science”, at the Georgia Science Teachers association, Columbus, GA in April 2006.
8. Bartley, J., **Basu-Dutt, S.**, Dodge, R., Geisler, V., Hasbun, J., Joyner, M., Larkin, G., Lea-Fox, D., Otwell, D., Rahman, M., Smith, K., Storer, J., Swamy-Mruthinti, S., “Frontiers in Space Science”, at the Georgia Science Teachers association, Columbus, GA in April 2006.
9. Bartley, J., **Basu-Dutt, S.**, Dodge, R., Geisler, V., Hasbun, J., Joyner, M., Larkin, G., Lea-Fox, D., Otwell, D., Rahman, M., Smith, K., Storer, J., Swamy-Mruthinti, S., “Frontiers in Forensic Science”, at the Georgia Science Teachers association, Columbus, GA in April 2006.
10. **Basu-Dutt, S.**, Lee, G., Kumar, S. “A spectroscopic experiment to characterize single-walled nanotubes in the undergraduate chemistry laboratory”, at the National Meetings of the American Chemical Society, Atlanta, GA in March 2006.
11. Bartley, J., **Basu-Dutt, S.**, Dodge, R., Geisler, V., Hasbun, J., Joyner, M., Larkin, G., Lea-Fox, D., Otwell, D., Rahman, M., Smith, K., Storer, J., Swamy-Mruthinti, S., “Generating Enthusiasm in Science and Math at the University of West Georgia”, at the National Meetings of the American Chemical Society, Atlanta, GA in March 2006.
12. Bartley, J., **Basu-Dutt, S.**, Dodge, R., Geisler, V., Hasbun, J., Joyner, M., Larkin, G., Lea-Fox, D., Otwell, D., Rahman, M., Smith, K., Storer, J., Swamy-Mruthinti, S., “Generating Enthusiasm in Science and Math at the University of West Georgia”, at the Gordon Conference in Chemical Education Research and Practice, Connecticut College, CT in June 2005.

13. **Basu-Dutt, S.**, Dodge, R., Penceo, N., Marshall, G., Reeves, L., White, K., “Rethinking Science Foundations at UWG: Moving Forward with Lessons Learned through Interdisciplinary Collaboration”, at the P-16 Conference, University System of Georgia, Valdosta, GA in April 2005.
14. Gardner, K., Croker, E., **Basu-Dutt, S.** “Statistical Mechanical Analysis of Energy and Entropy”, at the Southeastern Regional Meetings of the American Chemical Society, Charleston, SC in November 2002
15. Croker, E., Maharaj, K., **Basu-Dutt, S.** “QSAR of a class of substituted amines”, at the National Meetings of the American Chemical Society, Orlando, FL in April 2002
16. Ray, G.B., **Basu-Dutt, S.** “Molecular Modeling in Advanced Laboratory”, at the National Meetings of the American Chemical Society, Orlando, FL in April 2002
17. Croker, E., Maharaj, K., **Basu-Dutt, S.**, “Molecular Modeling Experiments in Physical Chemistry”, at the Southeastern Regional Meetings of the American Chemical Society, Savannah, September 2001.
18. **Basu-Dutt, S.**, Hurst, D.P.; Castro-Ekman, M., Reggio, P.H., "Binding of SR 144528 at the CB2 Receptor", at the Southeast Regional American Chemical Society Meeting, Raleigh, November 1998.
19. **Basu-Dutt, S.**; Hurst, D.P.; Reggio, P.H., “Morpholinoalkylindenes as Probes of the AAI Bioactive Conformation at the Cannabinoid CB1 Receptor”, at the Southeast Regional American Chemical Society Meeting, Roanoke, October 1997.
20. Reggio, P.H; **Basu-Dutt, S.**; Hurst, D.P.; Patel, M.J.; Seltzman, H.H., Thomas, B.F., "What is the Bioactive Conformation of Aminoalkylindenes at the CB1 Receptor? Insights Gained from E and Z Naphthylidene Indenes," at the International Cannabinoid Research Society Meeting, Atlanta, June 1997.
21. Castro, M.; Hunter, T.; Mericle, J.; Norris, J.; Patel, M.; **Basu-Dutt, S.**; Hurst, D.P.; Reggio, P.H., "An Aminoalkylindole Pharmacophore at the CB1 Receptor," at the International Cannabinoid Research Society Meeting, Atlanta, June 1997.
22. **Basu-Dutt, S.**; Hurst, D.P.; Reggio, P.H., “The Binding of Morpholinoalkylindenes at the Cannabinoid CB1 Receptor”, at the Georgia Academy of Science Meeting, Carrollton, April 1997

E. Funding

<u>Funding Agency</u>	<u>Amount</u>	<u>Period</u>
1. Improving Teacher Quality Proposal: <i>Invitations to in Inquiry for Elementary and Middle School Teachers – S. Basu-Dutt (PI), G. Marshall (co-PI), Douglas County School System, Carrollton City, Carroll County and Coweta County Schools.</i>	\$39188	July 2007 – June 08

2. Improving Teacher Quality \$28,004 July 2006 – June 07
 Proposal: *Excursions in Inquiry for Elementary and Middle School Teachers* – S. Basu-Dutt (PI), G. Marshall (co-PI), Douglas County School System, Carrollton City Schools.
3. National Science Foundation \$877, 093 Jan 2004 - 09
 STEP Proposal: *Generating enthusiasm in Mathematics and Sciences* – V. Geisler (PI), S. Basu-Dutt (co-PI), M. Rehman (co-PI), D. Lea-Fox (co-PI), M. Joyner (co-PI), K. Smith (co-PI), L. Kral (co-PI), J. Hasbun (co-PI)
4. National Science Foundation \$41,450 2000-02
 Course, Curriculum, & Laboratory Improvement program matched with UWG funds
 Proposal: *Visualization and Computation in the Undergraduate Chemistry Curriculum* – S. Basu-Dutt (PI), S.J. Slattery (co-PI), V. Geisler (co-PI), F.A. Khan (co-PI)
5. USG Teaching & Learning Grant \$10,500 1997-98
 Proposal: *A Multi-tiered Approach to Teach Undergraduate chemistry using Visualization and Computation* - S. Basu-Dutt (PI), S.J. Slattery (co-PI), V. Geisler (co-PI), F.A. Khan (co-PI)
6. USG Teaching & Learning Grant \$20,000 1998-99
 Proposal: *A Multi-tiered Approach to Teach Undergraduate chemistry using Visualization and Computation: A Professional Development Grant* - S. Basu-Dutt (PI), S.J. Slattery (co-PI), V. Geisler (co-PI), F.A. Khan (co-PI)

Corporate Funding

Kratos MS25RFA mass spectrometer from Coca Cola Company with fair market value of \$48,456 in 1997.

(v) Internal Funding

	<u>Grant</u>	<u>Amount</u>	<u>Year</u>
1.	Faculty Research Grant	\$1200	2007
2.	Student Research Assistant Program Grant	\$2100	2007
3.	Faculty Research Grant	\$1500	2006
4.	Student Research Assistant Program Grant	\$2100	2006
5.	GEMS Course Reform	\$1500	2005
6.	Faculty Research Grant	\$1200	2005
7.	Student Research Assistant Program Grant	\$1950	2005
8.	GEMS Course Reform	\$2000	2004

9.	Faculty Research Grant	\$1200	2004
10.	Student Research Assistant Program Grant	\$1800	2004
11.	Faculty Research Grant	\$1175	2003
12.	Online Course Development Grant	Dell Laptop	2003
13.	Faculty Research Grant	\$800	2002
14.	Student Research Assistant Program Grant	\$1800	2002
15.	Faculty Research Grant	\$1495	2001
16.	Student Research Assistant Program Grant	\$1650	2001
17.	Faculty Research Grant	\$750	2000
18.	Student Research Assistant Program Grant	\$1650	2000
19.	Faculty Research Grant	\$700	1999
20.	Faculty Research Grant	\$500	1998
21.	Student Research Assistant Program Grant	\$1650	1998
22.	Faculty Research Enhancement Award	\$1000	1997
23.	Start-up Funds	\$15000	1997

(vi) Grants submitted but not funded

<u>Funding Agency</u>	<u>Amount</u>	<u>Year</u>
1. National Science Foundation Advancement of Women in Science, Mathematics, Engineering and Technology Proposal: <i>Advance Institutional Transformation Proposal – S. Stone (co-PI), V. Geisler (co-PI), S. Basu-Dutt (co-PI), J. Bartley (co-PI)</i>	\$3,500,000	2003
2. National Science Foundation Gender Diversity in STEM Education Proposal: <i>Breaking the cycle of science and math anxiety: Improving SMET literacy and confidence in undergraduates and pre-service teachers – J. Bartley (co-PI), S. Basu-Dutt (co-PI), L. Bridges (co-PI)</i>	\$266,005	2003
3. National Science Foundation Course, Curriculum, & Laboratory Improvement Proposal: <i>Implementation of a Materials-based Curriculum through Photoelectron Spectroscopy – A.J. Leavitt (PI) and S. Basu-Dutt (co-PI)</i>	\$89,950	1998
4. National Institute of Health Proposal: <i>Synthesis, modeling and actions of barbiturates – G.T. Payne (PI), W.G. Esslinger (co-PI) and S. Basu-Dutt (co-PI)</i>	\$99,200	1998

5. Research Corporation Course, Curriculum, & Laboratory Improvement Proposal: <i>Binding of lipids to endothelial differentiation gene receptors – S. Basu-Dutt (PI)</i>	\$58,000	1998
6. Eisenhower Course, Curriculum, & Laboratory Improvement Proposal: <i>Industrial Chemistry – S. Basu-Dutt (PI) and F. Orr (co-PI)</i>	\$13,350	1998

F. Guest Lectures

1. BIOL 4731 – Introduction to Toxicology using Molecular Modeling
2. CHEM 2411 and 2422 – 3D Visualization and Electronic Properties of Organic Molecules
3. CHEM 4410 – Molecular Basis of the Action of Cannabinoids
4. XIDS 2001 – What do you really know about Chemical Engineering?
5. CHEM 2130 – Introduction to Computational Chemistry
6. CHEM 4985 – General chemistry review for GRE

G. Professional Meetings and Workshops

1. Hosted and organized Summer Learning festival sponsored faculty development workshop in Inquiry in Science and Math Education (coordinator: Professor Donald Wink, University of Illinois at Chicago), June 2007
2. Session Chair, “Energy in the Classroom”, Chemical Education session, Southeastern Regional meetings of the American Chemical Society, November 2006
3. Co-presented (with Donald J. Wink, University of Illinois at Chicago) inquiry based workshop on science and math education at the PRISM Higher Education Institute, November 2006
4. Attended United States Department of Homeland Security Office of Grants and Training Workshop on WMD Awareness, University System of Georgia, March 2006
5. Invited to attend the Gordon Conference on Chemical Education Research and Practice, June 2005
6. Hosted and organized GEMS sponsored faculty development workshop in Inquiry in Science Education (coordinator: Professor Donald Wink, University of Illinois at Chicago), February 2005

7. Attended NSF sponsored Chemical Education workshop, University of Illinois at Chicago, July 2004
8. Attended GEMS sponsored faculty development workshop on Case Based Learning (coordinator: Professor Pat Marsteller, Emory University), April 2005
9. Conducted University System of Georgia Teaching and Learning Grant sponsored workshop with Dr. Khan, Dr. Slattery, Dr. Geisler and Ms. Strange for 2-year college faculty, Spring and Fall 1999
10. Attended NSF sponsored Molecular Modeling workshop, Georgia State University, March 1998
11. Attended Wavefunction Inc. sponsored SPARTAN workshop, April 1998 and September 2000
12. Attended NSF Chatauqua workshop "Enhancing Student Success Through a Model Introduction to Engineering Course", Clark Atlanta University, May 1997
13. GSAMS seminar "Industrial Chemistry", October 1997