

CURRICULUM VITAE

NAME: KOCHHAR, GURMOHAN S.
ADDRESS: Faculty of Engineering
The University of the West Indies
St. Augustine, Trinidad

TELEPHONE NO.: 662-1621/ 662-2002

EDUCATION:

1976 PhD (Mech), University of the West Indies, Trinidad, W.I.
1972 MS (Mech), University of Wisconsin, Madison, U.S.A.
1970 BE (Mech) First Class Honours, University of Baroda, India

WORK EXPERIENCE:

1st August, 2002 to 31st July 2008:

Deputy Campus Principal, the University of the West Indies, St. Augustine

7th June, 1996 to present:

Professor of Mechanical Engineering, The University of the West Indies,
St. Augustine

1st August, 2000 to July 31st, 2002:

Advisor to the Vice-Chancellor and Campus Principal

1st August, 1994 – 31st July, 2000:

Dean, Faculty of Engineering, The University of the West Indies, St. Augustine

1st August, 1990 – 31st July, 1994:

Deputy Dean, Faculty of Engineering, in charge of Physical Facilities and Non-Academic Staff Affairs. Acted as Dean on several occasions.

1st October, 1989 – 6th June, 1996:

Senior Lecturer, Department of Mechanical Engineering, The University of the West Indies, St. Augustine

September, 1979 - 1989:

Lecturer, Department of Mechanical Engineering, The University of the West Indies, St. Augustine

April, 1978 - September, 1979:

Project Design Engineer, Stevenson, Raines & Partners, Calgary, Alberta, Canada
Work included design and specification of Air-conditioning, Ventilation, Heating, Dust Control, Plumbing Systems for Hospitals, Schools, Penal Institutions, Commercial and Industrial Projects, Energy Conservation Studies.

January, 1977 - March, 1978:

Design Engineer, VH Middleton Eng. Ltd., Calgary, Alberta, Canada
Work included design and specification of Heating, Ventilating, Air Conditioning and Plumbing Systems for Commercial and Industrial Projects.

1972 - 1976:

Graduate Assistant in the Department of Mechanical Engineering, The University of the West Indies, St. Augustine. Work included conducting undergraduate Laboratory work and tutorials in Applied Thermodynamics.

1974 - 1976:

Part-time lecturer, John Donaldson Technical Institute, Trinidad. Lectured in Applied Thermodynamics and Applied Fluid Mechanics to final year students. In charge of laboratory work.

Summer 1971:

Physics Department, University of Wisconsin. Data Processing and Drafting.

Summer 1968:

Engineering College, Baroda, India.

Summer 1967:

Ambarnath Ordnance Factory, Government of India, Material Testing.

PROFESSIONAL AFFILIATION:

1. FELLOW, American Society for Heating Refrigeration and Air Conditioning Engineers.
2. Member, American Society of Mechanical Engineers.
3. Registered Professional Engineer, Alberta, Canada.
4. Fellow, Association of Professional Engineers of Trinidad and Tobago (APETT).
5. Registered Engineer Trinidad and Tobago

AWARDS:

1. Association of Professional Engineers of Trinidad and Tobago (APETT)'s Career of Excellence in Engineering 2003
2. American Society of Mechanical Engineers May 2006 for advancing the Engineering Profession.

PUBLICATIONS:

1. "Optimum Operating Conditions of Ammonia-Water Absorption Refrigeration Systems for Flat-Plate Solar Collector Temperatures", G.S. Kochhar & S. Satcunanathan. Proceedings, p. 396, International Solar Energy Society Conference, UCLA, Los Angeles, 1975, 28th July - 1st August (22pp.).
2. "Optimum Operating Conditions of Absorption Refrigeration Systems for Flat-Plate Solar Collector Temperatures", PhD Thesis, The University of the West Indies, 1976.
3. "Optimum Operating Conditions of Absorption Refrigeration Systems for Flat-Plate Solar Collector Temperatures", G.S. Kochhar & S. Satcunanathan. Solar Engineering - ASME, New York 1981. pp. 260-266.
4. "Power from Tropical Oceans", G.S. Kochhar, D. Smith & S. Seshan.
Proceedings from the Commonwealth Engineers Conference, 8th - 13th November 1981, Port of Spain, Trinidad, pp. 103 - 112.
5. "Education and Training in New and Renewable Energy Sources", G.S. Kochhar. Proceedings of the Commonwealth Engineers Conference, 8th - 13th November 1981, Port of Spain, Trinidad, pp. 37 - 39.
6. "Fundamentals of Solar Engineering", Editors P. Persad & G.S. Kochhar. Nov. 1981. Book prepared for the short course on "Solar Engineering" 23rd - 27th November 1981, Faculty of Engineering, U.W.I.
7. "Optimum Thermal Performance of a Flat-Plate Solar Collector Driven Ammonia-water Absorption System", G.S. Kochhar.
Solar Heating Cooling Desalination. Book edited by T. Nejat Veziroglu, Ann Arbor Science Publishers 1982. pp. 233-343.
8. "Caribbean Information Facilities in New and Renewable Sources of Energy", G.S. Kochhar & J. Kochhar. Energex '82 Conference Proceedings, Vol. 11. 23rd - 29th August 1982. pp. 987 - 989.
9. "Measures for Energy Conservation in Buildings", G.S. Kochhar.
'Energy Conservation in the Caribbean' prepared by Technology and Energy Unit, Caribbean Development Bank, Barbados, 1984. pp. 19 - 24.
10. "Thermal Comfort, Air Conditioning, Heating and Ventilation", G.S. Kochhar.

- Paper presented at a Seminar on Ergonomics, 11th June 1982, Faculty of Engineering.
11. "Air Conditioning Equipment Maintenance", G.S. Kochhar
 Proceedings of the Conference, "Maintenance Engineering in the Caribbean", 8th - 10th September 1983. CCEO and Jamaica Institution of Engineers. Paper No. 8, Volume 1.
 12. "Solar Absorption Refrigeration Cooling Cost Analysis", G.S. Kochhar.
 West Indian Journal of Engineering, Vol. 9, No. 2, 1984. pp. 59 - 66.
 13. "Microprocessor Based Control Strategies to Reduce Energy Consumption in Commercial and Institutional Buildings", G.S. Kochhar.
 Proceedings, Regional Conference on Computers in Engineering. 29th October - 3rd November 1984, Trinidad pp. 123 - 129.
 14. "A Guide and Index to the Papers" published in Journal of the Association of Professional Engineers of Trinidad and Tobago, G.S. Kochhar & J. Kochhar.
 15. "The Potential for Controlled Atmosphere Storage of Some Caribbean Crops", R. Ramlochan, C.K. Sankat & G.S. Kochhar.
 American Society for Horticultural Science Tropical Region Journal. 1985. pp. 130 - 136.
 16. "Caribbean Potential for OTEC" - G.S. Kochhar
 Proceedings ASME Solar Energy Conference, 22nd - 27th March 1987, Hawaii. ASME Book No. H00374.
 17. "Constant Temperature Solar Water Heater System", G.S. Kochhar.
 International Solar Energy Society Solar World Congress, September 1987, Hamburg, Germany, Paper 2.7.06 in abstracts.
 18. "OTEC Potential for Small Caribbean Island Nations". West Indian Journal of Engineering, Vol. 13, No. 2, July 1988. pp. 6 - 18.
 19. "Thermal Conductivity of Blanket Coconut Fibre", G.S. Kochhar & K. Manohar.
 West Indian Journal of Engineering, Vol. 14, No. 1, 1989. pp. 81 - 85.
 20. Proceedings of Regional Conference on Maintenance Engineering, 23rd - 24th November, 1989, APETT Annual Technical Conference, Vols. 1 & 11. 469 pages. Editors G.S. Kochhar & C.A.C. Imbert. ISBN 976-620-009-2.
 21. "Analysis and Rationalisation of Maintenance Function - Financial Complex", J.Logan & G.S. Kochhar.
 Proceedings of Regional Conference on Maintenance Engineering, 23rd - 24th November 1989, APETT Annual Technical Conference, Editors G.S. Kochhar & C.A.C. Imbert. ISBN 976-620-009-2 Vol. 1, pp. 152 - 171.
 22. "Preventive Maintenance of Centrifugal Chill Water System", A.C. Daniell & G.S. Kochhar, *ibid.* Vol. 1, pp. 178 - 191.

23. "Development of an Expert System for Trouble Shooting in Window Air Conditioning Units", P. Persad, L. Figaro and G.S. Kochhar, *ibid.* Vol. 11. pp. 304 - 310.
24. Proceedings of Workshop on Preventive Maintenance, sponsored by Caribbean Development Bank, November 1989, Editor G.S. Kochhar, 284 pages, ISBN 976-620-0106.
25. "Preventive Maintenance of Air Conditioning Equipment, G.S. Kochhar & A.C. Daniell in Proceedings of Workshop on Preventive Maintenance, sponsored by CDB, November 1989, pp. 137-162. ISBN 976-620-0106.
26. "Performance Evaluation of Heat Sensing Temperature Controllers for Solar Domestic Hot Water Systems", G.S. Kochhar, Proceedings of 9th Miami International Congress on Energy and Environment, 11th - 13th December, 1989, Miami Beach.
27. "Thermal Conductivity of Some Caribbean Timbers", G.S. Kochhar & K. Manohar, *West Indian Journal of Engineering*, Vol. 15, No. 1, Jan. 1990. pp. 85 - 93.
28. Proceedings of Seminar on Rational Use of Energy, Editors G.S. Kochhar & T. Boopsingh, Trinidad Hilton, 14th - 15th June, 1991. ISBN 976-620-024-6.
29. "Enhancement of Thermal Performance of Domestic Roofing Systems for Tropical Climes", G.S. Kochhar, R.W.A. Osborne & E. Lewis. *Thermal Performance of the Exterior Envelope of Buildings V*, 1992. American Society of Heating, Refrigerating and Air Conditioning Engineers. pp. 429 -439.
30. "Establishment of a Division of Technological Development at the Faculty of Engineering of the University of the West Indies", C.A.C. Imbert, G.S. Kochhar & H.R. Charles. Proceedings of 5th World Conference on Continuing Engineering Education. 2nd - 5th June 1992. Helsinki University of Technology, Espoo, Finland. pp. 619 -624.
31. Proceedings of Seminar on Rational Use of Energy - Jamaica. Editors G.S. Kochhar & T. Boopsingh. Petroleum Corporation of Jamaica, Headquarters Kingston, 18th - 19th June 1992.
32. University/Industry Liaison in Commonwealth Caribbean. C.A.C. Imbert, G.S. Kochhar, T. Boopsingh & D.R. McGaw. Fourth International Conference on Management of Technology. 28th February - 4th March 1994, Miami, Florida. pp. 13.
33. "Control of Solar Energy Ingress into Buildings", G.S. Kochhar, R.W.A. Osborne & E. Lewis. *Sustainable Alternatives for Tropical Island States. Conference Proceedings*. 14th - 16th March 1994. Barbados. pp. 15.
34. "Quality and Accreditation of Engineering Education in the Commonwealth Caribbean", G.S. Kochhar & C.A.C. Imbert. Proceedings of the 6th World Conference on Continuing Engineering Education, Brazil, 8th - 12th May 1995. pp. 7.

35. "Effect of Moisture on Thermal Conductivity of Fibrous Biological Insulating Materials", G.S. Kochhar & K. Manohar - Thermal Performance of External Envelopes of Buildings VI 1995. American Society of Heating, Refrigerating and Air Conditioning Engineers. pp. 33 - 40.
36. "The Engineering Institute for the Caribbean - A University Industry Interface", G.S. Kochhar, C.A.C. Imbert & D.R. McGaw. Proceedings of the First Mexican, Central American and the Caribbean Conference of Deans of Engineering and Industry Leaders, Puebla, Mexico. 13th - 15th February 1995. pp. 12.
37. "The Caribbean Regional Infrastructure Study", G.S. Kochhar, W.H.E. Suite & T. Boopsingh, The West Indian Journal of Engineering, Vol. 18, No. 2, January 1996. pp. 49 - 54.
38. "The Partial Unbundling of the Electricity Sector in Trinidad and Tobago", C. Sharma & G.S. Kochhar, The West Indian Journal of Engineering, Vol. 18, No. 2, January 1996. pp. 55- 61.
39. "Engineering Institute for the Caribbean", D.R. McGaw, G.S. Kochhar, T. Boopsingh, C. Imbert & W. Rajpaulsingh. Proceedings, Fifth International Conference on Management of Technology, February 1996, Miami. pp. 309 - 310.
40. "Engineering Institute for the Caribbean", D.R. McGaw, G.S. Kochhar, T. Boopsingh, C.A.C. Imbert, W.T. Rajpaulsingh. Conference Proceedings, World Congress of Engineering Educators and Industry Leaders, 2nd - 5th July 1996, UNESCO, Paris, pp. 243 - 248.
41. "Design of a Wheel Barrow to Reduce Risks of Repetitive Strain Injuries", W.G. Lewis, G.S. Kochhar et al. Proceeding of the 10th Annual Technical Conference of APETT on "Reducing Risk by Engineering Design", October 14th - 16th. pp. 91- 97.
42. "Aluminium Paint: An Effective Radiant Barrier for Low-Income Tropical Roofing", G.S. Kochhar, R. Osborne & E.R. Lewis. West Indian Journal of Engineering, Vol. 19, No.2, January 1997. pp. 1 - 6.
43. "Use of Coconut Fibre as a Low-cost Thermal Insulator", G.S. Kochhar & K. Manohar. Insulation Materials: Testing and Applications, Third Volume. ASTM PCN 04-13200-61. April 1997, pp. 283 - 291.
44. "Environmental and Infrastructure Imperatives in the Commonwealth Caribbean", Proceedings of Conference/Workshop of the Caribbean Countries and the Inter-American Institute for Global Change Research, July 9 - 11, 1997. pp. 68 - 87 Mayaguez, Puerto Rico.
45. Proceedings of International Symposiums "Energy and The Environment" - Editors C. Venkobankar, W.A. Mellows, G.S. Kochhar and C.A.C. Imbert. Faculty of Engineering, The University of the West Indies, Trinidad. September 1 - 4 1998.
46. Environmentally Friendly Thermal Radiation Insulators - Coconut and Sugarcane Fibre. K. Manohar and G.S. Kochhar. Proceedings of International Symposium -

- Energy and the Environment. September 1- 4 1998. The University of the West Indies, Trinidad. pp. 46 - 52.
47. "Coconut Fiber as Low Temperature Insulator for Ice-Coolers", K. Manohar & G.S. Kochhar. Proceedings of International Symposium - Energy and the Environment September 1 - 4, 1998. The University of the West Indies, Trinidad. pp. 104 - 109.
 48. "Radiative Transfer Across Large Diameter Fibrous Materials", K. Manohar & G.S. Kochhar. Proceedings of the International Conference on Energy Research and Development, Vol. 2. pp. 703 - 711. November 9 - 11, 1998, Kuwait.
 49. The Management of the University Industry relations at the University of the West Indies. A case study of Institutional Practices. C.A.C. Imbert & G.S. Kochhar. International Institute for Educational Planning UNESCO, Paris, 32 pp., 1999.
 50. Building Thermal Insulations - Bio degradable Sugarcane and Coconut fiber K. Manohar, D.W. Yorbrough, G.S. Kochhar, Journal of Thermal Envelope and Building Science Vol. 23, January 2000. pp. 263 - 276
 51. "Computer Aided Transient-state Thermal Conductivity Measurement. Thermal Probe". Proceedings of the 16th International Conference on CAD/CAM Robotics and Factories of the Future. June 26th - 28th, 2000. Trinidad pp. 909 - 916.
 52. International Accreditation of Engineering Degrees for Developing Countries - C.A.C. Imbert & G.S. Kochhar. In proceedings of International Conference on Engineering Education August 18 - 22, 2002, Manchester England.
 53. Establishment of a Caribbean Accreditation System, C. Imbert and G. Kochhar. In Innovations 2003 World Innovation in Engineering Education and Research, Ed Win Aurg et al Chapter 7 pp. 61 – 67. Begell House Publishing, 2003.
 54. Solar Detoxification of Waster-Water – Potential for Use in Manufacturing Sector - Trinidad & Tobago, K. Manohar, D. Ramlakhan and G.S. Kochhar. In Proceedings of 16th Annual Technical Conference of APETT "Manufacturing in 21st Century", March 19th – 20th, 2003, U.W.I., St. Augustine. pp. 42 – 49.
 55. Industry-based Engineering Education in a Small Island State. C.A.C. Imbert and G. Kochhar. International Conference on Engineering Education, July 21 – 25, 2003, Valencia, Spain.
 56. Thermal Conductivity of Trinidad Wood. K. Manohar, D.W. Yarbrough, D. Ramlakhan, and G.S. Kochhar. International Conference on Thermal Insulation, January 12 – 14, 2004, White Sulphur Springs, West Virginia, Vol. XIX pp. 103 – 112.
 57. Managing the Environment: Waste Destruction versus Waste Conversion. K. Manohar, D. Ramlakhan, G.S. Kochhar. 17th Annual Technical Conference Association of Professional Engineers of Trinidad & Tobago, March 11 – 12, 2004.

58. The Potential Use of Solar Detoxification for Wastewater Treatment in Tropical Countries. K. Manohar, D. Ramlakhan, G.S. Kochhar, World Renewable Energy Congress VIII), August 29 to September 03, 2004, Denver, Colorado.
59. Thermal Conductivity Measurement of Wood by Means of Water-Activated Guarded Hot-Plate Apparatus. K. Manohar, G.S. Kochhar, D. Ramlakhan. Vol.28 (1) pgs 61-68, 2005 in West Indian Journal of Engineering.
60. Thermal Conductivity of Trinidad "Guauapo Sharp Sand" West Indian Journal of Engineering Vol 27 no.2 pgs 18-26, 2005.
61. Biodegradable Fibrous Thermal Insulators. K. Manohar, D. Ramlakhan, S. Haldar, G.S. Kochhar, Journal of Brazilian Society of Mechanical Science and Engineering, Vol XXVIII, pgs 53-55, 2006.
62. 'Free Convection Cooling of a Heated Plate in a 3D Rectangular Enclosure: Effects of the Shapes of the Plate and the Enclosure', S. Haldar, K. Manohar and G.S. Kochhar, International J. of Heat & Tech, Vol 25, No 2, Pgs 53-60, Dec 2006.
63. 'Conjugate conduction-convection analysis of empty freezers', S. Haldar, K. Manohar and G. S. Kochhar, Energy Conversion and Management, accepted.
64. 'Numerical Study of Laminar free convection about a horizontal cylinder with longitudinal fins of finite thickness', International J. of Thermal Sc. S. Haldar, G.S.Kochhar and K. Manohar. Vol. 46, Pgs 692-698, 2007.

BOOKS

(CO- AUTHOR OF THE FOLLOWING :)

65. Infrastructure for Development: A Policy Agenda for The Republic of Trinidad and Tobago. April 1996. Inter-American Bank and CDB.
66. Infrastructure for Development: A Policy Agenda for Jamaica. April 1996. Inter-American Bank and CDB.
67. Infrastructure for Development: A Policy Agenda for Barbados. April 1996. Inter-American Bank and CDB.
68. Infrastructure for Development: A Policy Agenda for Dominica. April 1996. Inter-American Bank and CDB.
69. Infrastructure for Development: A Policy Agenda for Guyana. April 1996. Inter-American Bank and CDB.
70. Infrastructure for Development: A Policy Agenda for Belize. April 1996. Inter-American Bank and CDB.
71. Infrastructure for Development: A Policy Agenda for The Bahamas. April 1996. Inter-American Bank and CDB.
72. Infrastructure for Development: A Policy Agenda for Suriname. April 1996. Inter-American Bank and CDB.

73. Infrastructure for Development: A Policy Agenda for St. Kitts-Nevis. April 1996. Inter-American Bank and CDB.
74. Infrastructure for Development: A Policy Agenda for St. Lucia. April 1996. Inter-American Bank and CDB.
75. Infrastructure for Development: A Policy Agenda for the Caribbean. Prepared for the Inter-American Development Bank and The Caribbean Development Bank. February 1996. 203 pp. (Co-authored)

CONFERENCE/SEMINAR PRESENTATIONS

1. "Approaches to Energy Conservation - Solar Energy: A Case Study", G.S. Kochhar & O. Headley. Rational Use of Energy Seminar, Jamaica, 18th - 19th June 1992.
2. Presentation of Engineering Institute at Point Lisas Industrial Estate to CEOs of Large Manufacturing Industries on the Estate. 24th January 1995.
3. Engineering Institute for the Caribbean. Seminar presentation at the Launch of Engineering Institute in Jamaica. 6th April 1995.
4. Environmental Engineering Options at the Faculty of Engineering. Technical Presentation to Pan American Center for Sanitary Engineering and Environmental Sciences (CEPIS), 17th October 1995, Lima, Peru.
5. Speaker on External Funding UNICA 2000 Annual General Meeting and Conference, Santo Domingo November 30th - December 2nd, 2000.
6. Presentation on Successful Proposals at UNICA Proposal Writing Workshop. March 15th - 16th, 2001, Sacred Heart University, Puerto Rico.
7. Presentation - Trends in University Industry Linkages Challenges Ahead, Sub-Regional UNESCO (IIEP - IESALC) Sub-Regional Workshop on Institutional Management in Higher Education for Selected Latin American and Caribbean Countries. April 2nd - 4th, 2001.

MANUSCRIPTS IN PREPARATION

1. The Influence of Air Conduction on Heat Transfer across Fibrous Materials, G.S. Kochhar & K. Manohar. Paper for ASME Journal of Heat Transfer.
2. Heat Transfer in Fibrous Materials - A Theoretical Analysis, G.S. Kochhar & K. Manohar. Paper for ASME Journal of Heat Transfer.
3. Effective Low-cost Thermal Insulation, G.S. Kochhar & K. Manohar. Paper for ASTM Conference on Insulation Materials: Testing and Applications.

REPORTS

1. "A Report on Library (The University of the West Indies, St. Augustine) Air Conditioning Systems", G.S. Kochhar. 4 pp. Faculty of Engineering, U.W.I., St. Augustine, April 1980.
2. "Technical Assessment of Air Conditioning Systems at the Library", G.S. Kochhar, U.W.I., St. Augustine, December 1985, 9 pp.
3. Technical Assessment of Air Conditioning Equipment for Lecture Room 8, Old Faculty of Agriculture Building, November 1986, 4 pp.
4. Evaluation and Rationalisation of the Air Conditioning System at the Library, U.W.I., St. Augustine, February 1988. 58 pp.
5. "Potential for Energy Conservation in Government Buildings and Offices". Report of Cabinet appointed Committee, January 1991. 26 pp.
6. Report on Technical Assistance Mission to the Ministry of Communication and Works, Montserrat, for CDB, March 1992. 37 pp.
7. Collaboration in Technical Education Report of Exploratory Visit by Team from the Faculty of Engineering, U.W.I. to Five Eastern Caribbean Countries. 26th September - 7th October 1993. 35 pp.
8. A Report on Visit to CEPIS, Peru. 14th - 20th October 1995. 6 pp.

RESEARCH IN PROGRESS

1. Determination of Comfort Zones for Local Climes. Environmental Control Laboratory facilities have been commissioned.
2. Solar Operation of Absorption Refrigeration Systems.
3. Energy Conservation - Environmental Control Systems.
4. Thermal Conductivity Measurements of Local Materials initially under. An OAS Research Grant of TT\$135,000.
5. Development of R & D Laboratory for Testing and Research on Refrigeration and Air Conditioning equipment. IDB funding of US\$140,000. The project which is industry- supported.
6. Natural Gas Cooling Project supported by National Gas Co. of Trinidad and Tobago. A TT\$4.5 million Unit installed at Mt. Hope Medical Complex.
7. Wind Energy Project, Southern Electric T&TEC supported R & D work at Tobago site.
8. Methanol as a Motor Vehicular fuel. Project funded by a group of Methanol-producing companies in Trinidad.
9. Elimination of HCFC and effects on Climate Change

DUTIES PERFORMED

1. Teaching Courses in Applied Thermodynamics at Years 11 and 111 Level: Power Plant Engineering, Environmental Control Engineering and Heat and Mass Transfer.
2. Changed course structure for ME33C to include design projects in Air Conditioning from 1980/1981. Supervised average 15 projects per year since 1980.
3. Arranged industrial visits for final year Mechanical Engineering students.
4. Participated in teaching and examination of Applied Ergonomics ME62A, MSc. Production Engineering and Management since 1983.

SUPERVISION OF POST-GRADUATE STUDENTS

1. Mr. R. Ramlochan, M. Phil Full-time. “Transient Cooling Rate and Storage of Fruits in Refrigerated and Controlled Atmosphere”. Candidate has completed the study and awarded MPhil 1990.
2. Mr. K. Manohar, PhD. “Heat Transfer Mechanisms In Biological Fibrous Materials”. Work was partly supported by grant from O.A.S. 1998.
3. Mr. E. Lewis, MPhil Full-Time. “Effects of Simple Cost Effective Treatment on Thermal Properties of Local Building Materials”. Mr. Lewis was supported from O.A.S. grant for research to G.S. Kochhar. Awarded M. Phil, 1993.
4. Mr. P. McKenzie, MSc. Production Engineering & Management, 1982. “A Study of Well Servicing Accidents and Vehicular Accidents at an Oil Company in Trinidad”.
5. Mr. J. Logan. Production Engineering and Management 1990. “Analysis and Rationalisation of Maintenance Function - Financial Complex”.
6. Examiner - M.Phil thesis, Department of Chemistry by A.F. Kothdivala, entitled, “Activated Charcoal - Methanol Refrigeration using a Compound Parabolic Concentrating - CPC Solar Collector”, 1993.
7. Mr. Keith Chin Pang, MSc. Cost Effective Upgrade of A/C Systems including Maintenance and Monitoring at Petrotrin Administration Building, Point-A-Pierre, 2001/2002
8. Ms. Kimberly Ramroop, “Measurement of Surface Heat transfer Coefficient”, 2003-2009, member PhD Supervisory Committee.
9. Mr. Dale Ramlakhan, “Photo catalytic Detoxification of Waste Water”, 2003-2009, member PhD Supervisory Committee.
10. Mr. Nandlal Premchand, “Air quality issues at Mittal Steel Trinidad” MSc project 2006.

SPECIAL RESEARCH PROJECTS

1. The Design and Construction of a Wind Energy Converter Powered Refrigerator.
2. Constant Temperature Solar Water Heater.
3. Thermal Conductivity Measurement of Local Building Materials. Received Best Student Project Award for 1985.
4. Microcomputer Data Collection for Fruit Pressure Testing.
5. Microcomputer Control of Atmosphere in a Sealed Chamber.
6. "Interface and Design of an Automatic Fruit Pressure Tester (AFPT) to an APPLE IIE Microcomputer for Data Collection and Correlation". Received Best Student Project Award for 1988.
7. Thermo Physical Property Measurement of Local Building Materials.

EXTRA DEPARTMENTAL SERVICES

1. Assisted Library in Air Conditioning Trouble-shooting and advised on Preventive Maintenance.
2. Assisted Campus Air Conditioning Sub-Committee in evaluating Campus Air Conditioning Load Distribution and Air Conditioning Policy.
3. Non-professional Representative on St. Augustine Academic Board, 1981 - 1982.
4. Non-professional Representative on Senate 1982/83, 1983/84 and 1986/87.
5. Member - Executive Council Association of Professional Engineers of Trinidad and Tobago, 1983 - 1985.
6. Chairman, Special Advisory Committee on training of Refrigeration Technicians, National Training Board, Alexandra Street, Port of Spain, 1984 to present.
7. Chairman, Public Relations Committee, APETT 25th Anniversary Celebrations 1984/85.
8. Member Organising Committee "Regional Conference on Computers in Engineering", 29th October - 3rd November 1984.
9. Member, Organising Committee, Faculty of Engineering, 25th Anniversary Celebration.
10. Member, Campus Assessment and Promotion Committee, 1986 - 1988.
11. Member, Campus Council, 1986 - 1987.
12. Member, Sabbatical Leave Committee, 1984 - 1987.
13. Member, Housing Loans Committee, 1984 - 1987.
14. Member, Editorial Board, West Indian Journal of Engineering, 1985 - 1991.
15. Member, Campus Security Committee, 1986 - 1990.

16. Member, Campus Buildings & Grounds Committee, 1987 to 2002, Principal's nominee.
17. Member, Academic & Administrative Restructuring Committee, Faculty of Engineering, 1986/87.
18. Member, University Blue Book Revision Committee, 1985 - 1988.
19. Member, Task Force, Caroni Distillery Development Plan & Implementation Strategy, 1988/89.
20. Member, Continuing Education & Extension Services Committee, Faculty of Engineering, 1987 - 2000.
21. Member, Appointments Committee (Non-Academic), October 1990 - July 1996.
22. Chairman, Appointments Committee (Non-Academic), January 1992 - July 1996.
23. Chairman - Reclassification Sub-committee of Appointments Committee (Non-Academic), March 1992 - July 1996.
24. Member, Faculty of Engineering Staff Development Committee, August 1990 - 2000.
25. Chairman, Faculty of Engineering, U.W.I. - Industry Liaison Committee. 1989 - 1992.
26. Member, Working Group on Student Relations, Vice-Chancellor's Commission on Governance, 1995/96.
27. Chairman - University of the West Indies 50th Anniversary Celebrations 1996 - 1998, St. Augustine Campus.
28. Chairman - Inter Campus Committee of Deans 1998 - 1999.

MEMBERSHIP OF BOARDS AND EXTERNAL COMMITTEES

1. Member, Board of Directors, Caribbean Industrial Research Institute, Trinidad. 1994 - 2000.
2. Member, Board of Directors, Engineering Institute, U.W.I., Trinidad, 1994 - 2000.
3. Member, Board of Engineering, Trinidad and Tobago Committee on Heating, Ventilating, Air Conditioning Code, 1993 to present.
4. Member, Board of Directors National Library and Information Science (NALIS) Trinidad and Tobago, 1999 - 2001.
5. Member Accreditation Committee NIHERST 2000 to 2002.
6. Project Director, Caribbean Regional Infrastructure Study funded by IDB and CDB (US\$300,000).
7. Session Co-Chair/Co-ordinator, State of the Art in University/Industry Partnership UNESCO 1996 World Congress of University Educators and Industry Leaders, 2nd - 5th July 1996, Paris.

8. Member, Editorial Board, “Journal of Design, Engineering and Technology (DETECH)”, Faculty of Technology, U.G. 1996 to present.
9. Member, Cabinet appointed task force on Curriculum revision for Trinidad and Tobago Schools, 1996 - 1998.
10. Member - Board of Directors Energy Institute of the Americas (A grouping of Universities from North America and Latin America)
11. Member, COHEMIS - Centre for Hemispheric Cooperation in Science and Technology, Puerto Rico University of Puerto Rico.
12. Chair - Technical Session International Conference on Energy Research and Development, Kuwait, November 1998.
13. Member, Advisory Board Trinidad and Tobago Institute of Technology 1999 to present.
14. Chair - ICEE session on Engineering Education in Developing Countries, Aug. 2002 UMIST U.K.
15. External Examiner University of Technology, Guyana, May 2002 to present.
16. Chair ICEE Session on University-Industry Collaboration Programmes. International Conference on Engineering Education, 21 – 25 July 2003, Valencia, Spain.
17. Chairman – UNICA/UWI Conference on HIV/AIDS “The Power of Education, 30 – 31, October, 2003, Trinidad.
18. Chairman – APETT 16th Annual Technical Conference, “Manufacturing in 21st Century”, 19 – 20, March, 2003, Trinidad.
19. Chairman – APETT 17th Annual Technical Conference, “Asset Management and Maintenance Engineering”, 11 – 12, March, 2004, UWI, St. Augustine, Trinidad.
20. Chairman – APETT 18th Annual Technical Conference, “Engineering Infrastructural, “Planning and Development for Disaster Preparedness and Mitigation”, 13-15, August, 2005, UWI, St. Augustine, Trinidad.
21. Member of Cabinet Appointed Steering Committee to Review Policy on Tertiary Education, Training and Distance Education and Lifelong Learning, February, 2004 to 2008.
22. Chairman Trinidad & Tobago Bureau of Standards committee on Specifications for Solar Hot Water Heaters 2011- present.

CONSULTANCY

1. Adviser to Lee Young & Partners Consulting Engineers, Consultants to Government of Trinidad and Tobago on Mount Hope Medical Complex, Air Conditioning Systems and Medical Gases Systems. 1981 - 1982.
2. Technical Assessment of Port of Spain General Hospital, Operating Theatres and X-Ray Department Air Conditioning Systems. 1982.

3. Technical Assessment of BWIA's Air Conditioning Systems at their new Head Office, Piarco and Computer Centre, Port of Spain. 1983
4. Special Adviser to National Hospital Management Company, Trinidad, on Operating Room Air Conditioning. 1986 - 1987.
5. Consultant, U.W.I. Library Air Conditioning System. Designed, specified, procured and supervised commissioning of 200-ton chillers, 1991.
6. Consultant, Ministry of Communication and Works, Montserrat, Technical Assistance Mission to Conduct Maintenance Audit on behalf of CDB on Air Conditioning Units in Government Buildings, March 1992.
7. Consultant, U.W.I. Designed and supervised installation and commissioning on new Library chillers, valued at TT\$540,000. 1990.

CONTINUING EDUCATION SHORT COURSES - PARTICIPATION

1. Fundamentals of Solar Engineering, 23rd - 27th November 1981, Faculty of Engineering.
2. Ergonomics, 11th June 1982, Faculty of Engineering.
3. Workshop on Engineering Education and Research, 20th April 1988.
4. Co-chairman, Regional Conference on Maintenance Engineering, Third Technical Conference of the Association of Professional Engineers of Trinidad and Tobago, 23rd - 24th November 1989, U.W.I., Trinidad.
5. Workshop Director, Regional Workshop on Preventive Maintenance, 17th - 22nd November 1989, Trinidad.
32 participants were invited from the Eastern Caribbean, Belize and Jamaica, sponsored by CDB.
6. Workshop Director, Second Regional Workshop on Preventive Maintenance, 23rd - 28th April 1990, Barbados.
45 participants were invited from the Eastern Caribbean, including Barbados, sponsored by CDB, CTAP.
7. Workshop Director, National Workshop on Preventive Maintenance, 17th - 22nd September 1990, Trinidad.
44 participants were registered for the Workshop.
8. Workshop Director, Second National Workshop on Preventive Maintenance, 25th February - 1st March 1991, Trinidad.
55 participants were registered for the Workshop.
9. Seminar Co-ordinator, Rational Use of Energy, 14th - 15th June 1991, Hilton, Trinidad.

42 participants were invited from overseas and Trinidad for the two-day seminar. The seminar was sponsored by CDB, T&TEC, GTZ and National Energy Corporation of Trinidad and Tobago.

10. Workshop Director, Preventive Maintenance Workshop, 7th - 10th May 1991, specially mounted for WASA for 33 employees.

11. Workshop Director, Preventive Maintenance Workshop, 2nd - 6th December 1991, Wyndham, Jamaica.

The Workshop was designed in collaboration with Jamaica Institution of Engineers and sponsored by CFTC through PVC Development & Alumni Relations.

12. Seminar Coordinator - Rational Use of Energy, 18th - 19th June 1992, Jamaica.

70 participants were invited for this two-day seminar sponsored by Caribbean Development Bank, Petroleum Corporation of Jamaica and Jamaica Public Service Co. Ltd..

13. Workshop Director, National Workshops in St. Kitts, St. Vincent, Grenada and Dominica on Maintenance of Buildings and Ancillary Services. (These workshops are sponsored by the Caribbean Development Bank.) 1993 - 1996.

14. Organised and sourced funding for attachment/training workshop of teachers from Technical Colleges of Non-Campus countries in the area of Refrigeration and Air-Conditioning, March 4th - May 24th 1996. CTAP sponsored.

15. National Workshop on maintenance of buildings. June 17th - 21st 1996, Belize Technical College. CTCS Network. CDB sponsored.

16. Director Sub-Regional Workshop on Maintenance of Buildings and Ancillary Services, July 14th - 18th 1997, St. Kitts. CTCS Network. CDB sponsored.

RESEARCH GRANTS

1. OAS Grant of TT\$135,000. for research on Thermal Properties of Local Building Materials.
2. Campus Research Grant TT\$5,600. for Research on Thermal Properties of Local Timber.
3. IDB R & D Research Grant of US\$145,400. for setting up of a Research Laboratory for Testing of Refrigeration and Air Conditioning equipment.
4. TT\$135,000. T&TEC Research Grant for Tobago Wind Energy Project.

GRANTS/SPONSORSHIP FOR WORKSHIPS/SEMINARS

1. Regional Workshop in Preventive Maintenance, November 1989, Trinidad, TT\$200,000. CDB.

2. Regional Workshop on Preventive Maintenance, April 1990, Barbados, TT\$225,000. CDB.
3. National Workshop on Preventive Maintenance, September 1990, Trinidad, TT\$15,000. CDB.
4. Second National Workshop on Preventive Maintenance, February 1991, Trinidad, TT\$15,000. CDB.
5. WASA Workshop on Preventive Maintenance, May 1991, St. Joseph, Trinidad, TT\$25,000. WASA.
6. Seminar on Rational Use of Energy, 14th -15th June 1991, CDB - GTZ (Germany) Grant TT\$125,000.
7. Workshop on Preventive Maintenance, Jamaica, December 1991, CFTC Grant TT\$80,000.
8. Seminar on Rational Use of Energy, 18th - 19th June 1992, Jamaica, CDB, Petroleum Corporation of Jamaica and Jamaica Public Service Co. sponsorship TT\$110,000.
9. Workshop on Maintenance of Building Services, Dominica, June - July 1992, CDB sponsorship TT\$45,000.

August 27, 2011