

**BRIEF RESUME OF**  
**MERITORIOUS PROFESSOR DR. S.M. AQIL BURNEY**  
 DEPARTMENT OF COMPUTER SCIENCE, (UBIT)  
 UNIVERSITY OF KARACHI

Email [burney@computer.org](mailto:burney@computer.org) | [aqil\\_burney@yahoo.com](mailto:aqil_burney@yahoo.com) | [burney@uok.edu.pk](mailto:burney@uok.edu.pk)  
 Telephone: 92-21-4824081 (H) | 92-21-9261300-6 Ext 3345, 3462,3447,2447,2462 (O) | 92-0300-9261917 (C)  
[www.drburney.net](http://www.drburney.net)

1. **Date of Birth** 13-01-1951
2. **Place of Birth** Karachi
3. **Nationality** Pakistani
4. **Qualifications** (Approximately 39 years experience of Teaching, Research & Academic Management and Administration)

Degree	University	Year
Matriculation	Karachi Board	1966
H.S.C.	Karachi Board	1968
B.Sc.	Karachi	1970
M.Sc.	Karachi	1972 ( <i>First Class First</i> )
M.Phil	Karachi	1983
Ph.D.	Strathclyde	1987 (On Scholarship by Govt. of Pakistan)

**Field of Specialization (M.PHIL):** Stochastic Models of Insurance Business & related computing methods

**Field of Specialization (PhD):** Estimation of Parameters of Multiple Time Series Models (Development and analysis of algorithms & simulation studies i.e. signal analysis in time domain), Simulation & Modeling, Data Mining, Software Development for Time Series Models / Temporal Databases, Communication & Networking, Project Management, Risk Management & Econometrics, Soft Computing and Artificial Intelligence( Bayesian Networks, Neuro Fuzzy Logic).

**5. Countries Visited for Conferences, Seminars & Education:**

Country	City	Year
Canada	Calgary	1975
United Kingdom	Glasgow, Edinburgh, London, Sheffield, Oxford	1984-87,2008,2009,2010
Malaysia	Johor Baro	1990
Singapore	--	1990,2008
Morocco	Rabat, Casablanca	1992
Italy	Rome	1992
Indonesia	Surabaya, Jakarta	1996
Saudi Arabia	Dammam, Jeddah, Mecca, Medina	2002
UAE	Dubai	2003
Turkey	Istanbul	2004

## 6. Experience:

More than **35Years** experience of teaching

- |      |  |                 |
|------|--|-----------------|
| i    | Agriculture University, Tandojam   | 1973            |
| ii   | Karachi University   | 1973-75         |
| iii  | Calgary University Teaching Assistant  | 1975-76         |
| iv   | Karachi University   | 1976-77         |
| v    | Gomal University   | 1977-78         |
| vi   | Karachi University   | 1978 - continue |
| vii  | Strathclyde University Teaching Assistant  | 1984-87         |
| viii | NED University   | 1989-91         |
| ix   | Sind University (Ph.D. Supervision of student)<br>Courses or Invited Lectures; Advisory at many private sector universities Sir<br>Syed University of Engineering & Technology, PAF-KIET, KIIT, IBA, | 1992-96         |
| x    | NIPA, NUST(Karachi), FAST, Hamdard University, Iqra University, CBM,<br>MAJU, Allama Iqbal Open University, Islamabad etc.   | 1995-2009       |

Invited / Guest Speaker & Teacher for Research Methods & Curriculum Development. 2009-2010

## 7. Posts

- |      |  |   |
|------|--|---|
| I    | <b>Lecturer</b>  | 1973-75   |
| Ii   | <b>Teaching Assistant</b>  | 1975-76   |
| Iii  | <b>Co-Operative Teacher</b>  | 1976-77   |
| Iv   | <b>Lecturer</b>  | 1977-82   |
| V    | <b>Assistant Professor</b>   | 1982-92   |
| Vi   | <b>Associate Professor</b>   | 1992-95   |
| V    | <b>Professor</b>   | 1995- continue  |
| Vi   | <b>Chairman, Dept. of Computer Science</b>   | 1994- Sep, 2000   |
| Vii  | <b>Professor Dept. of Statistics</b>   | Sep, 2000–Oct, 2001   |
| Viii | <b>Professor Dept. of Computer Science</b>   | Nov 2001- continue  |
| Ix   | <b>Visiting Professor, Dept of Computer Engineering, SSUET</b>   | Feb, 2001- continue   |
| X    | <b>Visiting Faculty, Dept. of Computer Science, PAF KIET</b>   | Oct 2000 – continue   |
| Xi   | <b>Visiting Faculty, FAST-ICS</b>  | 1988-89   |
| Xii  | <b>Registrar, University of Karachi</b>  | Oct 2001 - Sep 2002   |
| Xiii | <b>Project Director, Development of Dept of Computer Science, University of Karachi (MoST)</b>   | Jan 2002 – continue   |
| Xiv  | <b>Project Director, Umear Basha Institute of Information Technology (UBIT), University of Karachi . Now Director (UBIT/DCS)</b>   | April 2002 – March 2009. Now Director 6March 2009<br>Continue |
| Xv   | <b>Project Director, Establishment of High Speed Fiber Optic Based LAN with Wireless Computing Support at University of Karachi</b><br><b>Project Director, University of Karachi Information Technology Trust</b> | September 2003 – continue<br>2004 - Continue                  |
| Xvi  | <b>Member Charter Inspection and Evaluation Committee, Education and Literacy Department, Government of Sindh.</b>   | 2004- continue  |
| xvii | <b>Grade BPS-21, awarded by Governor Sindh / Chancellor, University of Karachi.</b>  | 30 <sup>th</sup> Sep, 2006-11 <sup>th</sup> May, 2005         |

xviii	<b>Member, Board of Advanced Studies &amp; Research, University of Karachi.</b>	13 <sup>th</sup> Sep,2007-12 <sup>th</sup> Sept 2010.
xvix	<b>Director, Main Communication Networks, University of Karachi &amp; (Website of University of Karachi)</b>	18 <sup>th</sup> Nov 2006-continue
xx	<b>Chairman, Dept. of Computer Science</b>	1 <sup>ST</sup> March-2008 – Continue
xxi	<b>Award of Meritorious Professor and grade BPS-22 by Governor of Sindh / Chancellor, University of Karachi.</b>	12 <sup>th</sup> May-2006(in BPS 21 and in PBS 22 from-May 2008 Continue
xxii	<b>Director / Chairman ; DCS-UBIT, UoK</b>	03 <sup>rd</sup> March 2009-continue
xxii	<b>DEAN, Faculty of Science, University of Karachi</b>	07 June 2010- 28 June 2010

## 8. Publications:

More than 100 publications (In the field of Statistics, Mathematics, Numerical Computing, Computer Science, Computer Graphics, Simulation, Econometrics, Operations Research, I.T. Artificial Intelligence and Risk Theory and Insurance, soft computing(Neuro Fuzzy Logic).

## 9. Books:

- i) *The Y2K Problem*, 1999. Department of Computer Science, University of Karachi.
- ii) *DIGITAL CIRCUITS DESIGN USING DESIGN CENTRE SIMULATION PACKAGE*. (Published by Karachi University Press, August 2001)
- iii) *RISK THEORY AND INSURANCE: A STOCHASTIC APPROACH*. (Published by KU Press, January 2003)
- iv) *COST AND MANAGEMENT, ACCOUNTING TECHNIQUES EMPLOYED THE COTTON TEXTILE (RING) SPINNING INDUSTRY OF PAKISTAN.PUBLISHED BY ICMA, PAKISTAN.*

### Sponsored Project Reports(2001-2010)

- (i) Development of Department of Computer Science University of Karachi (2001-2006).Available with Director (DR. S. M. Aqil Burney).
- (ii) High Speed Fiber Optic Network of University of Karachi (2003-2006)
- (iii) UBIT development Project 2002-2008 and Running Report 2009-2010.
- (iv) University of Karachi Information technology Trust (endowment ) 2007-2009(Report)  
For necessary details see [www.burney.net](http://www.burney.net)

## 10. Membership of Professional Organizations:

- i) Professional Networking Chair (International Webmasters Association, Pakistan Chapter) 1997-98
- ii) American Statistical Association (USA) 1979-1994
- iii) Royal Statistical Society (UK) Continue
- iv) Pakistan Computer Society
- v) IEEE-CS (USA) Continue
- vi) ACM (USA) Continue

## 11. Membership of Academic Forums: (Now or Was)

- i) Member Academic Council, Karachi University
- ii) Member Board of Studies, Sir Syed University of Engineering & Technology, Karachi.
- iii) Member Board of Studies as Expert, Computer Science, Shah Abdul Latif University, Sind.
- iv) Member Board of Studies as Expert, Institute of Information Technology, University of Sindh, Jamshoro.
- v) Member of Experts Committee for National Curriculum Revision Committee (NCRC) on the subject of Computer Science (1998), 2004 (HEC).
- vi) Member Board of Studies, Department of Computer Science, University of Baluchistan.
- vii) Member Board of Studies, Dept. of Statistics, University of Karachi.

- viii) Elected member Board of Governors by Academic Council, University of Karachi for Institute in Islamabad affiliated with KU.
- ix) Member Board of Governors, Umeed Basha Institute of Information Technology, University of Karachi. (Nominated by V.C., KU)
- x) Member Sind IT Board
- xi) Chair, CS/IT Curriculum development team for Sind for Sind IT Board
- xii) Member Curriculum Development Team 2004,2008, HEC on CS/IT.
- xiii) Member Board of Governors Sadiq Foundation Nousehro Feroz.
- xiv) Member Board of Studies, IBA, Sukkur.

## 12. Awards

- i) Performance Shield from PAF KIET for helping in establishing the Institute(Sept `00)
- ii) Best Work in IT & Statistics by ISOSS (Islamic Society for Statistical Sciences)
- iii) **NCR IT Excellence Award for IT Educationalist of year 2002(Awarded in January 2003)**
- iv) **Shield Awarded by the Vice Chancellor, University of Karachi on the completion of project High Speed Fiber Based LAN with Wireless Computing Support at UoK.**

## 13. Supervised Software Development Teams

- i) Supervised teams from Dept of Computer Science, for SEARC 1994, XIII South East Asia, Regional Computer Conference at Sheraton Hotel, November 27-30, 1994
- ii) Supervised Teams for A.Q. Khan Software Competition from 1995-99. Teams won many prizes.
- iii) Supervised a Software Project for the Blind "Roshni" which guided special children to read won special prize at A.Q. Khan Software Competition 2000. The project also included development of a printer, which could print in Brail.
- iv) Supervised many such projects 2002-2008.

## 14. Special Assignment by Governor Sind & Chancellor of Universities of Sind:

Acted as co-coordinator for Unified Curriculum for Computer Science/IT for the Universities of Sind. (August 1997-March 1998) *Available on request.*

*Member Chartered Inspection & Evaluation Committee, Government of Sindh. (2004-continue).*

## 15. Research Supervision:

### (Ph.D candidates)

- i) a) Dr. Noor Ahmed Shaikh, now Director Institute Computer Science & Mathematics, University of Sindh. (Completed Ph.D in Computer Science).1996
- b) Dr. Maj. Afzal Saleemi, completed Ph.D in (Computer Science) now at with Pakistan Military Academy Kakool University, Abbotabad.(Completed Ph.D in 2006.
- c) Dr. Tahseen Ahmed Jilani completed Ph.D in Computer Science now Assistant Professor at the Department of Computer Science, University of Karachi.(Completed Ph.D in 2007).
- ii) MS Thesis on Different Networking Paradigms at SSUET.
- iii) BS Thesis in the following domains: Data Mining, AI, ANN, VoIP, Bayesian Networks, Semiotics, Data Warehousing & DSS, Object Oriented Databases, Parallel Virtual Machines.(2002-Continue) List of thesis available.(More than 50 thesis 2003-2008)
- iv) More than 100 MSc/MCS Software & Modeling Projects related with Operations Research, Statistics, MIS, Computer Graphics, OPP, Software Engineering (1994-2003)
- v) Currently supervising 10 candidates for PhD in Temporal Databases & Data Mining Algorithms and Forecasting Using Artificial Neural Networks. Also supervising one M.Phil candidate in Software Development using Java for Data Mining & Similarity Analysis (Queries) List of Ph.D students available on [www.drburney.net](http://www.drburney.net)
- vi) HEC approved Supervisor of Statistics and Computer Science.

## **16. Seminars/Lectures**

Arranged a series of Seminars on DBMS, MIS, Computer Graphics, Office Automation, Advance Computing Systems, Clients/Server Technology, OOP, Networking, Data Warehousing, VoIP, Wireless Computing, Software Configuration Management(SCM), AI, ANN, Data Mining, Fuzzy Logic, Queues, Software Engineering etc. Arranged more than 50 invited lectures during 1994-1998. 2001-02 (For University Staff), Summer Programme, 2002-03 (Network and Web Development programmes)2005-08 (Training for University Teachers), Cyber Crimes & Associated Law, Soft Computing. Information System Control and Audit (Oct 2009)Many Presentation available on my web:www.drburney.net and some will be available on CD.

## **17. Administrative Responsibilities & Projects**

- i) **Registrar, University of Karachi** (Oct 2001 – Sep 2002)
- ii) **Provost, Boys Hostel, University of Karachi** (22 Oct, 1994 – 9 February 1999)
- iii) **Chairman Department of Computer Science University of Karachi**(05 May,1994 to 13 September 2000).
- iv) **Project Director of the Project “Development of Department of Computer Science UoK.**(2002 to 2005).
- v) **Project Director Umaer Basha Institute of Information Technology, (UoK)** 2002 to continue).
- vi) **Project Director High Speed Fiber Optics Network with Wireless Support at UoK.**(1<sup>st</sup> phase).
- vii) **Project Director High Speed Fiber Optics Network with Wireless Support at UoK.**(2<sup>nd</sup> phase).
- viii) **Project Director for Management University of Karachi website [www.uok.edu.pk](http://www.uok.edu.pk)** (2002-2006).
- ix) **Project Supervisor For University Industry Coordination in ICT.**

## **18. Resource Person**

- i) At National Institute of Public Administration (NIPA) 1990-95 for teaching Operations Research, Statistics and Packages.
- ii) At Cabinet Secretariat (Karachi) 1989, 1990, 1993, 1997 for teaching Operations Research, Simulation & Modeling.
- iii) IT/CS and its importance arranged by Computer Friendship Society (of JAPAN) at AVARI Towers in 1996 for college teachers and principals.
- iv) Internet & its uses with Demo at AVARI Towers in 1997 by Computer Friendship Society.
- v) Hamdard University: Lecture of AI with Application at Hotel Regent Plaza, Karachi (1999).
- vi) FAST, Karachi: “Stochastic Process with Application in Computer Science & Insurance” (1994).
- vii) FAST Lahore: IT/CS Education Discussion Group (1998) on IT education in Pakistan.
- viii) Governor House : CS/IT Curriculum in Universities of Sindh presentation at Governor House and a report was submitted (Report available on request).
- ix) Degree College Malir Cant. : “Teaching Computer Science & Curriculum” at college level. (1999).
- x) I.B.A., Karachi: Invited lecture “Strategies for Developing Curriculum” (1997).
- xi) Bazam Science Karachi: Y2K, Computer & related problems. Dr. Saleem-uz-Zaman Center, Karachi (1999).
- xii) Memorial lecture at Institute of Mathematics and Computer Science, Sindh University.
- xiii) Dr. M.N. Talpur Memorial lecture on “Application on Stochastic Process in Computer Science and Insurance Business”. Institute of Mathematics & Computer Science, Sindh University.
- xiv) Member Selection Board of Computer System, Sir Syed University, Karachi.
- xv) Member Board of Studies & Selection Board on Computer Science, Shah Abdul Latif University, Khairpur.
- xvi) Member Board of Studies, Institute of Information Technology, Sindh University.(continue)
- xvii) Govt. Ministry of Education (Curriculum Wing) Member National Evaluation Committee on the subject of Computer Science multiple textbooks and teachers guide (1995).
- xviii) Computer Society of Pakistan seminar on Urdu Software Development Presided the 2<sup>nd</sup> session on invitation CSP and was awarded shield of the Society (September 25, 1999).
- xix) Allama Iqbal Open University for invited lecture on “Modernization of Education using IT” at Silver Jubilee Ceremony of AIQU, Islamabad, November 16, 1999. (A multimedia presentation).
- xx) Member National Curriculum Committee for CS,IT,Software Engineering 2004,HEC,Islamabad.

- xxi) Member National Curriculum Committee for CS/IT/Software Committee 2008-2009. Convener Software Engineering Curriculum committee held at HEC Karachi, April 7-9, 2009.
- xxii) Invited Speaker, (Singapore, ICCSIT, [www.iccsit.org](http://www.iccsit.org)), NUST, Karachi, LUMS, Lahore, Istanbul, Turkey and various other places, conferences seminars. See [www.drburney.net](http://www.drburney.net)

## **20. Research Publications**

### **1980**

1. Burney, S.M. Aqil (1986). Teaching of Queuing Theory. Proceedings, First Statistics Seminar, Department of Statistics, University of Karachi. pp 26-36.

### **1981**

2. Burney, S.M. Aqil (1981). Nazaria-i-Ihtimal oor Zini Amaliat (urdu). Theory of Probability and Stochastic Process, Jadid Science 21, No. 2,3 pp.37-44.

3. Burney, S.M. Aqil and Ghulam Hussain (1981). Finite Difference Calculus and Moments of Some Discrete Probability Distributions. Karachi University Journal of Science. 9(1&2) 33-40.

### **1982**

4. Burney, S.M. Aqil (1982). Statistical Methods Used in Bioavailability Studies. Workshop on Bioavailability of Pharmaceuticals, pp. 34-35. Faculty of Pharmacy, University of Karachi. This work also presented during Second Statistics Seminar (1982). Department of Statistics with some changes under heading "Use Statistical Techniques in Bio-Pharmaceutics"

### **1983**

5. Burney, S.M. Aqil and J.S. Siddiqui (1983). Production of Marine Fish in Pakistan. Proceedings of National Seminar on Statistical Techniques for Under-Developed Areas, pp 61-63. Pakistan Statistical Association, June 4-6, 1983

6. Burney, S.M. Aqil (1983). Some Measures of Risk. Al Zia Statistical Journal 28-29. Institute of Statistics, University of the Punjab, Lahore, Pakistan.

### **1988**

7. Burney, S.M. Aqil and M.A. Hashmi (1987/88). Stochastic Modeling of Insurance Business. Journal of Social Sciences and Humanities, 1 & 2 pp. 69-70.

### **1989**

8. Burney, S.M. Aqil (1989). Simulation of Systems. Application of Mathematics : First Proceedings of UNESCO Regional Workshop. pp. 19-33. Department of Mathematics, Islamia University Bahawalpur. Ed.

### **1990**

9. Burney, S.M. Aqil (1990). Estimation Methods for MA(q) Model. Riazi, Journal of Karachi Mathematics Association (ISSN 0255-7568) pp. 1-12.

10. Hashmi, M.A., Burney, S.M. Aqil and Hussain, G. (1990). Approximating Accumulated Claim Distribution Using Lagurre Polynomials. Pakistan Journal of Statistics. 6(1) pp. 85-92.

11. Burney, S.M. Aqil, Hussain, G. and E. Ahmed (1990). On the Claim Distribution in Insurance. Karachi University Journal of Science. 18 (1 & 2) pp. 61-70.

12. Ahmed, F., and Burney, S.M. Aqil and S. Hussain (1990). Diffused Solar Radiation Estimates from Sunshine Hours & Clearness Index for Karachi Pakistan Energy. Conservation Management Vol. 30, No. 4, pp. 439-447. Pergamon Press, N.Y.

13. Burney, S.M. Aqil (1990). Methods for Approximating Accumulated Claims Distribution, Journal of Islamic Academy of Sciences 3:4 , pp 292-297. Turkey.

**1991**

14. Burney, S.M. Aqil with co-authors (1991). Linear Estimation of the Standard Deviation and their effect on the Analysis of Means, Karachi University Journal of Science, 19(1&2) pp.45-50.
15. Ahmed, F., and Burney, S.M. Aqil (1991). Monthly Average Daily Global Beam and Diffused Solar Radiation and its Correlation with Hours of Bright Sunshine for Karachi, Pakistan. Data Bank, Renewable Energy, Vol. 1, No. 1. 115-118. Pergman Press Great Britain.
16. Khan, M.F. Hayat and Burney, S.M. Aqil (1991). Proximate Determinant of Fertility & Stochastic Model for Analysis of Fertility Data - A Study Proposal. Proceeding of Population and Development Seminar. pp. 239-260. Institute of Population Studies, University of Karachi-Pakistan.

**1992**

17. Burney, S.M. Aqil (1992). "Comparative Study Of Estimation Methods Of The Parameters of VMA(1) VIA Simulation And Construction Of Monte-Carlo Confidence Intervals". Journal of Islamic Academy of Sciences 5;3 158-170,1992 ISBN: 1016-3360(Statistics) Ankara, Turkey
18. Burney, S.M. Aqil, S.A. Akhtar and Shagufta Aslam (1992). Probabilistic Approach to Life Tables of Pakistan, Karachi University Journal of Science. Vol. 20, pp. 91-100, University of Karachi, Pakistan.
19. Burney, S.M. Aqil (1992). Computing Exact Likelihood Function of Vector MA(1) Model. Pakistan Journal of Statistics Vol. 8(1), 51-59, Lahore Pakistan. (Developing algorithm, analysis and comparison with implementation).
20. Ghulam Hussain and Burney, S.M. Aqil (1992). Kolmogrov-Simernov Type Test for Pareto Distribution when Parameters are unknown. Proceeding of Third Islamic Countries Conference on Statistical Sciences at Rabat Morocco (August 25-29, 1992) Vol. V, pp. 255-260. Editor Dr. Munir Ahmed, ICCS, Awami Complex, Usman Block, New Garden Town, Lahore, Pakistan. (Computer Simulation & Modeling on VAX 2000 machine).

**1993**

21. Burney, S.M. Aqil., M.A.Hashmi and A.J.Siddiqui (1993). Claim Number Process in Insurance Business. Journal of Social Science and Humanities, Vol. 1 & 2, pp.12-22, Karachi University.
22. Burney, S.M. Aqil (1993). Applications of Stochastic Process in Computer Science and Risk Theory & Insurance. Invited Lectures through UGC (pp. 1-30) Institute of Mathematics & Computer Science, Sindh University.

**1994**

23. Ghulam Hussain and Burney, S.M. Aqil (1994). Kolmogrov-Smirnov Type Test statistics for the Gompertz Distribution when Parameters are unknown. (2nd) Proceeding ICSS-IV, Lahore, Pakistan. August 27-31, Vol.8. pp. 439-446. (Simulation & Modeling)
24. Ghulam Hussain and Burney, S.M.Aqil (1994). Kolmogrov-Smirnov Type Test for the Gompertz Distribution when Parameters are unknown (first). Proceeding Fifth Statistics Seminar-1994. Pp. 163-169. Department of Statistics, University of Karachi. (Simulation & Modeling).
25. S.E. Ahmed, S.M. Khan and Burney, S.M. Aqil (1994). Estimating Function of a Parameter. Industrial Mathematics, The Journal of the Industrial Mathematics Society, USA, Vol. 44. Part.
26. M.A. Hashmi and Burney, S.M. Aqil (1994). Reinsurance Treaties : A statistical Approach Proceedings Fifth Statistics Seminar, Department of Statistics, University of Karachi, pp. 123-134.
27. Noor Ahmed Shaikh and Burney, S.M. Aqil (1994). Empirical Queuing Model: A study of Countess Dufferein Hospital Record of Maternity Patients. Journal of Social Sciences, University of Sindh, Jamshoro.
28. Burney, S.M. Aqil (1994). Computer Science at School Level. Report on : Computer Education Curriculum Development Workshop. Section 2.3. Orangi Pilot Project. 18th, 19th, Sept., 1994.

29. Burney, S.M. Aqil., Noor A. Shaikh and Asif Ali G. Kazi (1994). A Optimal Profit Policy for the M/M/m Machine Interference Model. *Journal of Science Res.* Vol. XXIII, No. 1 & 2, pp. 125-142. (University of Punjab). (O.R. Simulation & Modeling)

#### 1995

30. Asim Jamal Siddiqui, Burney, S.M. Aqil and M. Naseem Iqbal (1995). Precision of Unequal Probability Sampling in Finite Population. *Karachi University Journal of Science*, Vol. 23 (1&2) pp. 47-54.

31. Noor A. Shaikh, Burney, S.M. Aqil and Asif Ali G.Kazi (1995). Review of Literature on Machine Repair Problem (MRP) *Sindh University Research Journal (Sci.Sr.)* Vol. 27(2) pp. 109-121.

32. Burney, S.M. Aqil and Sohail Burkati (1995). Benthic Dynamics of a Rocky Beach Macroinvertebrates - I. Diversity Indices and Biomass Assessment of Buleji, Karachi (Arabian Sea). *Marine Research*, 4(1) : 53-61.

33. Barkati, S. And Burney, S.M. Aqil (1995). Benthic Dynamics of Rocky Beach Macroinvertebrates-II. Cyclical Changes in biomass at various tidal heights at Buleji, Karachi (Arabian Sea) *marine Research*, 4(1) : 63-76.

34. Burney, S.M. Aqil (1995). Measures of Central Tendency in News-MCB Stock Exchange Price Index. Pp. 12-31. Developed by Vital Information Services (Pvt) Limited, Karachi.

35. Shaikh, Noor Ahmed, S.M. Aqil Burney and Asif Ali G. Kazi (1995). Review of Literature on Machine Repair Problem (MRP). *Sindh University Research Journal (Sci.Sr.)* Vol. 27 (2), pp. 109-121.

#### 1996

36. Ghulam Hussain, Burney, S.M. Aqil and Asim Jamal (1996). Moments of Polya-Eggerberger Distribution using Finite Difference Calculus, *Karachi University Journal of Science*, Vol. 24(2) pp.81-84.

37. Burney, S.M Aqil (1996). Information Masters. (In Fortnightly Feature: Careerwise on 'Information Technology'). *Dawn Saturday*, August 10, 1996.

38. Burney, S.M.Aqil (1996). Online Newspapers. *Monthly Magazine Computech*' July 1996, pp.17. Internet e-mail [lt@abc.khi.sdnpk.undp.org](mailto:lt@abc.khi.sdnpk.undp.org).

39. Burney, S.M Aqil (1996). Viruses in 32 bit Environments! *Computech*. September 1996. Pp.20. [lt@abc.khi.sdnpk.undp.org](mailto:lt@abc.khi.sdnpk.undp.org).

40. Burney, S.M. Aqil (1996). To Bridge or Not to Bridge (Networking) *Computech*. October 1996. Pp. 20. [lt@abc.khi.sdnpk.undp.org](mailto:lt@abc.khi.sdnpk.undp.org).

41. Burney, S.M. Aqil (1996). Know all Thy Protocols (Networking) *Computech*. November, 1996. Pp. 20 [lt@abc.khi.sdnpk.undp.org](mailto:lt@abc.khi.sdnpk.undp.org).

42. Burney, S.M. Aqil (1996). When the CPU Speed Fools (Benchmark) *Computech*. December, 1996. Pp.20. [lt@abc.khi.sdnpk.undp.org](mailto:lt@abc.khi.sdnpk.undp.org).

43. Burney, S.M. Aqil (1996). Temporal Software Assessment Techniques. *Computer Application/Programming Section. Proceedings Vol.2 : The Fifty Islamic Countries Conference on Statistical Science* (pp. CP6). Faculty of Mathematics and Natural Sciences, University of Brawijava, Malang, Indonesia. (August 24-31, 1996).

44. Burney, S.M. Aqil (1996). Department of Computer Science, University of Karachi : Recent Developments. *Higher Education News*. Vol. XVI. No.8-9, pp.2, Aug-Sep. 1996, UGC, Islamabad.

45. Book : Burney, S.M. Aqil and M.A. Hashmi (1993) *Risk Theory and Insurance : A Stochastic Approach*. Monograph, University of Karachi. (Report format)

46. Sohail Barkati and Burney, S.M Aqil (1991). Biomass and Species Composition of Litoral Rocky Shore of the Karachi Coast. Sponsored by National Scientific Research and Development Board, Govt. of Pakistan, Islamabad (Through UGC)(Report and Published)
47. Burney, S.M Aqil. , Ejaz Ahmed and Asim Jamal (1991). A Study on the Production, Consumption and Future Forecast. A project sponsor by Faculty of Science, University of Karachi.
48. Burney, S.M Aqil and M.A. Hashmi (1993). Claim Number Process in Insurance Business. Journal of Social Sciences and Humanities. Vol .1&2 pp. 12-22, Karachi University.
49. Book : Published by ICMA (Research Department) on Cost and Management & Accounting Techniques. Employed in the Cotton Textile (Ring) Spinning Industry of Pakistan. Author of Chapter Two "The Survey" as team member of the group. (MIS report)

#### **1997**

50. Barry, M.A., Burney, S.M Aqil and Bhatti, M.I. (1997). Optimum Influence of Initial Observations on Regression Models with AR(2) Errors. Applied Mathematics and Computation. Vol. 82, No. 1 pp. 57-65. North-Holland, U.K.  
(This work was partially supported by the Faculty of Science, University of Karachi).
51. Burney, S.M Aqil (1997). How to buy All-in-one Modems? Computech January, 1997, pp. 13-14. Internet e-mail it@abc.khi.sdnpk.undp.org.
52. Burney, S.M Aqil (1997). Your Guide to the ISDN Technology (ISDN). Computech March, 1997. Pp. 15-16. Internet e-mail it@abc.khi.sdnpk.undp.org.
53. Burney, S.M Aqil (1998). Software Quality : Metrics and Models. 23rd International Nathiagali Summer College on Physics and Contemporary Needs. 02 June - 04 July, 1998, Nathiagali (Poster session).

#### **1998**

54. Burney, S.M Aqil (1998). Exploring Computer Science and Information Technology. DAWN, Sept. 29, 1998.
55. Burney, S.M Aqil., M. Altaf Mukati and N. Bari Qureshi (1998). Workshop on Microprocessor Experiments. pp. 1-60. Department of Computer Science, University of Karachi.(book)

#### **1999**

56. Burney, S.M Aqil (1999). Artificial Neural Networks and Predictive Data Mining. (to be published).(Report with Sima Ishaq DCS UOk)
57. Burney, S.M Aqil (1999). An Overview of Software Projects of KU-DCS. (Report to be published).
58. Burney, S.M Aqil (1999). Stochastic search in artificial intelligence. Presented at ISSOS 6th Conference at Lahore, Punjab University. To be published in the proceeding. (Abstract No. 112, pp.63)
59. Burney, S.M Aqil (1999). Noor-ul-Hassan and Ghulam Hussain (1999). Computer Simulated Probability Distribution of Electricity Demand Forecast for Pakistan. Accepted for publication in Pakistan Business Review (January, 2000).
60. Burney, S.M Aqil (1999) and A. Mukati (1999). Route-Optimization Through Optimum Spanning Tree Method. ISSOS, 6th Conference. (Abstract 129). To be published with Algorithms for Travelers Salesman Problem Revisited (Abstract 114 ISSOS Lahore 1999).
61. Burney, S.M Aqil (1999) using (1999). Data Compression using Statistical Structure. (Abstract 130, ISSOS, 1999).

62. Burney, S.M Aqil, Amir Ahmed Khan and Umair Ahmed (1999). Y2K : The Coming Computer Crises : An Overview with February 30, 2000 Problem. Department of Computer Science, University of Karachi 2000 (Published).

#### **2000**

63. Burney, S.M Aqil, Badar Sami, Altaf M., and Nasir Ali (2000). Future of IT : Parallel Virtual Machines. The First International Workshop on Distributed Computing, Communication and Applications. May 8-10, 2000 IWDRCA 2000. International Islamic University, Islamabad, DCS and (collaboration with Tokyo Institute of Technology, Japan & IEEE).

64. Burney, S.M Aqil (2000). Binary Search and Cache Memory. KUTS (Report DCS UOK).

65. Burney, S.M Aqil (2000). Proceedings of Workshop on Distributed Computing, Communication and Applications. Publication chair. May 8-10, 2000 IWDRCA 2000. International Islamic University, Islamabad, DCS and (collaboration with Tokyo Institute of Technology, Japan & IEEE).

66. Burney, S.M. Aqil (2000). Intelligent Knowledge Management on Internet. Presented at Mathematical Conference at the Institute of Mathematics and Computer Science, University of Sind Jamshoro Sind (Nov.20-22, 2000)

#### **2001**

67. Burney, S.M. Aqil ; Jilani, Tehseen Ahmed(2001). Artificial Neural Networks Methods of Forecasting for Karachi Stock Exchange, Dept. of Computer Science & Dept. of Statistics, University of Karachi.(Project Report Available on request)(Also see 56 above.)

#### **2002**

68. Burney, S.M. Aqil; Naseem, M. A Comparative Study of Real Time Audio Compression Techniques based on Fourier & Wavelet Transformation. IEEE-CS Karachi Chapter Conference, 22 Dec, 2002

69. Burney, S.M. Aqil; Khurram M. Perceptual Analysis Measurement System for End-to-End Network Speech Quality". Accepted for Publication at International Islamic Countries Conference on Statistical Sciences, Bahrain, March 2004, IEEE KIIT Technology.

70. Burney, S.M. Aqil; Burney, Fahad; Manzoor, Adnan. Statistics and Data Mining: Similarities and differences. Accepted for Publication at International Islamic Countries Conference on Statistical Sciences, Bahrain, March 2004

#### **2003**

71. S.M. Aqil Burney; M.Sadiq Ali Khan; M.Khurram. Multislot Cell Scheduling Algorithm in ATM Switching Networks. Accepted and Published at IWTIT 2003 Organized by Dept. of Computer Science, International Islamic University, Islamabad.

72. S.M.Aqil Burney; Adnan Manzoor; Fahad Burney. Similarities and Differences in Statistics and Data Mining. Accepted for Publication at International Workshop on Frontiers of Information Technology Islamabad Pakistan organized by COMSATS Institute of Information Technology.

73. S.M.Aqil Burney; Tahseen A. Jilani Supervised Artificial Neural Network for Karachi Stock Exchange Share Rates Forecasting" Accepted at Artificial Intelligence and Neural Network Conference .Department of Computer Engineering Canakkle University ,TurkeyJuly2-4,2003 TAINN-2003.

74. S.M.Aqil Burney(2003) Introduction to Stochastic Processes and their Applications in Insurance and Computer Science. Dr.M.N.M. Talpur Memorial Lecture. Published by Institute of Mathematics and Computer Science University of Sindh, Jamshoro.

#### **2004**

75.(i) S.M.Aqil Burney; Asadullah Malik. QOS Management for Mobile Internet Services by Optimization of System Efficiency , Capacity , Production Ratio and Handoff Rate.(Report)

(ii) Aqil Burney S. M. and Asadullah Malik (2004) Cellular Multimedia Network Management by Optimizing Efficiency, QoS Level and Capacity. International Networking and Communication Conference 11-13<sup>th</sup> June 2004, IEEE Communication Society pp. 99-104. ISBN 0-7803-8325-7. Lahore University of Management Sciences, Pakistan.

75(iii) Aqil Burney S. M. and et al. (2004) Multislot Scheduling Algorithms in ATM Networks. INCC 2004. pp.89-98. ISBN 0-7803-835-7. LUMS Lahore, Pakistan.

76. S.M. Aqil Burney, Tahseen A. Jilani & Cemal Ardil (2004) Levenberg-Marquardt Algorithm for Karachi Stock Exchange Share Rate Forecasting. Journal of Computational Intelligence. Canakkale University, Turkey.

## 2005

77. Aqil Burney, S.M. et al, (2005), A Brief History of Logic: Application of Logic in Computer Science and Information Technology, in proc. of the National Conference on Information Technology and Applications (NCITA) April 21-22, 2005, Balochistan University of Information Technology and Management Sciences, Quetta, Pakistan.

78. Aqil Burney, S.M. et al, (2005), Approximate Bounded Knowledge Extraction using Type-I Fuzzy Logic, in proc. of the 5th World Enformatika Conference, WEC'05, August 26-28, 2005 in Prague, Czech Republic. ISBN: 975-98458-6-5. ISSN (e): 1305-5313.

79. Aqil Burney, S.M. et al, (2005) Optimal neuronal complexity using wavelet based multiresolution analysis for Type-I fuzzy neural networks. 4<sup>th</sup> WSEAS Int. Conference on Computational Intelligence, Man-Machine Systems and Cybernetics, Miami Florida, USA Nov. 17-19 2005 pp 210-216.

## 2006

80. Aqil Burney, S.M. et al, (2006), Approximate Knowledge Extraction Using Multi-resolution Analysis for Type-I Fuzzy Neural Networks, published in ICEAS-2006, Islamabad, Pakistan. PP. 464-469. accessible through IEEE-Xplore, USA.

81. Aqil Burney, S.M. et al, (2006), Wavelet Based SARIMA Models for Forecasting Natural Gas Demand. Business Review Vol.1, No.1, ISSN 1990-6587, IBA, Karachi-Pakistan. PP 134-139.

82. Aqil Burney, S.M. and Nadeem Mahmood, (2006), A brief History of Mathematical Logic and Applications of Logic in CS/IT. Karachi University Journal of Science Vol.34(1) July 2006, PP 61-75. ISSN No.0250-5363

## 2007

83. Aqil Burney S. M., Jilani T. A. and Ardil C. (2007a), "Multivariate High Order Fuzzy Time Series Forecasting for Car Road Accidents", International Journal of Computational Intelligence, 4(1), pp 15-20, ISSN 1304-2386.

84. Aqil Burney S. M. and Jilani T. A. (2007), M-Factor High Order Fuzzy Time Series Forecasting for Road Accident Data, Accepted in IEEE-IFSA, 18-21 June, Cancun- Mexico. Published in Analysis and Design of Intelligent Systems Using Fuzzy Logic and Soft Computing, Advances in Soft Computing, 41, Springer-Verlag.

85. Aqil Burney S. M. and Jilani T. A. and (2007), New Method of Learning and Knowledge Management in Type-I Fuzzy Neural Networks, Accepted in IEEE-IFSA, 18-21 June, World Congress, Cancun- Mexico. Published in Theoretical Advances and Applications of Fuzzy Logic and Soft Computing; Advances in Soft Computing, 42, Springer-Verlag.

86. Aqil Burney S. M. and Jilani T. A. (2007), Multivariate Stochastic Fuzzy Forecasting Models, In Expert Systems with Applications, ESWA, to appear in 37(2) in late 2008 or 2009.

87. Aqil Burney S. M., Jilani T. A. and Ardil C. (2007), Fuzzy Metric approach for Fuzzy time Series Forecasting Based on Frequency Density Based Partitioning, Proceedings of World Academy of Science, Engineering and Technology vol. 23, August, ISSN 1307-6884.

88. Aqil Burney S.M. and Syed Akhtar Raza (2007). Monte Carlo Simulation and Prediction of Internet load using Conditional mean and unconditional variances model. Proceedings of the 9<sup>th</sup> Islamic Countries Conference on Statistical Sciences, pp. 1751-1761 ICCS-IX, 12-14 Dec. 2007, Malaysia.

## 2008

89. Aqil Burney S. M. and Jilani T. A. (2008), "A Refined Fuzzy Time Series Forecasting Model For Stock Market Forecasting", **Physica A-** vol. 387 (Statistical Mechanics with Applications), pp. 2857–2862, **Elsevier Publishers**.

90. Aqil Burney S. M. and Jilani T. A. (2008), "Multivariate Stochastic Fuzzy Forecasting Models", Expert Systems With Applications (ESWA), vol. 35, pp. 691-700, **Elsevier Publishers**.

91. Aqil Burney S. M. and Jilani T. A. (2008), "Multiclass Bilateral-Weighted Fuzzy Support Vector Machine to Evaluate Financial Strength Credit Rating", To appear in Proceedings of **IEEE-ICCSIT 2008**, International Conference on Computer Science and Information Technology 2008, (ICCSIT 2008), Singapore August 29 - September 2, 2008. <http://www.iccsit.org/>

92. Aqil Burney S. M., Jilani T. A., and Ardil C. (2008), "A New Quantile Based Fuzzy Time Series Forecasting Model", International Journal of Intelligent Systems and Technologies 3;4 © [www.waset.org](http://www.waset.org) Fall 2008, pp201-207 Conference on Computer Sciences, World Congress on Science, Engineering and Technology.

93. Aqil Burney S. M and Arfa Maqsood,(2008) "Study of Inflation in Pakistan Using Statistical Approach" 4<sup>th</sup> International Statistical (ISSOS), University of Gujrat, Hafiz Hayat Campus, Pakistan.(Presented to be published elsewhere).

94. Aqil Burney S. M and Nadeem Mahmood (2008), " Emerging Trends in Temporal Databases With Illustrations" Vol. 15, pp.201-212 ISBN 978-969-8858-04-9,4<sup>th</sup> International Statistical (ISSOS), University of Gujrat, Hafiz Hayat Campus, Pakistan

## 2009

95. Aqil Burney, S. M. ,and Akhter Raza(2009) Simulation and analysis of Self-Similar Network traffic using WBFGN. Second International Conference on Environmental and Computer Science,Dubai,UAE,28-30 Dec. 2009.IEEE Computer Society,10662 Los Vaqueros Circle,P>O> Box 3014 Los Alamtos CA 90720-1314,USA.(ISBN 978-0-7695-3937-9.

96. Aqil Burney,S.M. and Naadeem ,Mand Kamran Ahsan.(2009)A Logical Temporal Relational Data Model.(accepted for Publication in IJCSI (IBSN 1694-0814.

## 2010

97. Aqil Burney, S.M. ,Nadeem Mahmood and Kamran Ahsan(2010)TempR-PDM: A Conceptual Temporal Relational Model for Managing Patient Data.The 9<sup>th</sup> WSEAS International Conference on Artificial Intelligence , Knowledge Engineering and Data Base at University of Cambridge ,UK, Feb. 20-22,2010.

98. Aqil Burney ,S.M Nadeem Mahmood and Kamran Ahsan (2010); A Logical Temporal Relational Data Model. International journal of computer science issues, Vol.7, issue 1. No.1. pp 1-9 ISSN: 1694 -0814,

99. Aqil Burney, S.M.Nadeem Mahmood and Kamran Ahsan (2010); Temp R-PDM: A Conceptual Temporal Relational Model for Managing Patient Data . In Proceeding of the 9<sup>th</sup> WSEAS International Conference on Artificial intelligence, Knowledge Engineering and Data Bases (AIKED'10) at University of Cambridge , U.k ,Feb.20 -22-2010 ,pp .237-243

100. Aqil Burney, ,Nadeem Khan Mahmood Tahseen Jilani and Hussain Saleem , 2010 WSEAS transactions on information science and applications ,iisn: 1790 -0832.

101. Zamin Khan"A systematic and statistical approach to design a low noise amplifier in sub – micron CMOS technology " WMSCI 2010, OPRLANDO FLORIDA,

102. Aqil Burney, Akhtar Raza Syed and Afzal SALEMI,2010; Fast clustering of self-similar network traffic using wavelet, international journal of computer science issues Vol. 7 issue 3 May 2010 ISSN 1694-0814.

103. Aqil Burney , Hussain Saleem, Nadeem Mahmood and Tahseen Jilani, 2010 ; Evolving Traceability management Ontology for patient data in Hospital Environment,3<sup>rd</sup> IEEE international conference on COMPUTER SCIENCE AND INFORMATION Technology (IEEE ICCSIT 2010) July 9-11,2010 chengdu , China.

104. S.M. Aqil Burney, Syed Asif Ali, 2010; Conversion of Heterogeneous Education System (HeES) into Homogeneous Education System (HoES) for ease of Disables using Information Technology, International Conference on Computer Design and Applications (ICCDA 2010) (IEEE, IACSIT) June25-27, 2010, Qinhuangdao, China.
105. Aqil Burney, s.M. Nadeem Mahmood, Tahseen Jilani and Hussain Saleem (2010). Conceptual Fuzzy Temporal Relational Model (FTRM) for Patient Data WSEAS Transactions on Information Science and Applications, IISN 1790-0832.
106. Aqil Burney, S.M. Nadeem Mahmood and Zain Abbas (2010). Information and Communication Technology in Healthcare Management Systems: Prospects for Developing Countries. International Journal of Computer Application (0975-8887) Volume 4-No. 2, July 2010. Published By Foundation of Computer Science.

## References

### **Professor Dr. Pirzada Qasim**

Vice Chancellor,  
University of Karachi  
[vc@uok.edu.pk](mailto:vc@uok.edu.pk)

### **Professor Dr. B. D. Ripley**

Department of Statistics,  
University of Oxford  
[ripley@stats.ox.ac.uk](mailto:ripley@stats.ox.ac.uk)

### **Professor Dr. Muhammad Qaisar**

Vice Chancellor,  
Federal Urdu University,  
Gulshan-e-Iqbal, Karachi.

### **Professor. Dr. Ahmad Zaki Abu Bakar**

Director,  
Universiti Teknologi Malaysia,

### **Professor Dr. Khalid Siddiqui**

Department of Computer Science,  
State University of New York, Fredonia  
[siddiqui@cs.fredonia.edu](mailto:siddiqui@cs.fredonia.edu)

### **Professor Dr. Munir Ahmad**

Dean Faculty of Mathematical Sciences  
The University of Lahore  
1-k.m. Raiwind Road  
Lahore, Pakistan  
[drmunir@brain.net.pk](mailto:drmunir@brain.net.pk)