# Papers by Bell Laboratories Authors

## **CHEMISTRY**

Impact Strength of Polymers 2: The Effect of Cold Working and Residual Stresses in Polycarbonates.

B.S. Thakkar, L.J. Broutman and S. Kalpakjian, Conference Proceedings: Society of Plastics Engineers, 36th Annual Technical Conference, 24 (April 24, 1978), pp. 295–303.

Ionizing Radiation. G.M. Wilkening, Patty's Industrial Hygiene and Toxicology General Principles, 1 (1978) pp. 441-512.

Noble Gas Compounds, 1962-1976. D.T. Hawkins, W.E. Falconer, and N. Bartlett, Plenum Press, N.Y., (1978), p. 179.

Nonionizing Radiation. G.M. Wilkening, Patty's Industrial Hygiene and Toxicology General Principles, 1 (1978), pp. 359-440.

## COMPUTING

An Approach to the Selection and Control of Program Modules in Transaction Processing.

A.Z. Lieberman, Proc. Natl. Conf. Info. Syst. Inform. Develop. (February, 1978), pp. 138.

Architecture of a Modular Network.—The Bancs Network. K.L. Leung, Proceedings of the 17th IEEE Computer Society International Conference, (September 1978), pp. 212-220.

Data Base Subject Index. H.H. Teitelbaum and D.T. Hawkins, On Line, 2, No. 2, (April 1978), pp. 16-21.

An Error Analysis for a Rolling Year Traffic Data Base. C.E. Johnson, IEEE Int. Conf. Commun. Conf. Rel., 1, (June 4, 1978), pp. 5.1.1-5.1.5.

File Format for Data Exchange Between Graphic Data Bases. A.G. Gross, Proc. Fifteenth Des Automation Conf., (June 1978), pp. 54-59.

Multiple Data Base Searching: Techniques and Pitfalls. D.T. Hawkins, On Line, 2, No. 2, (April 1978), pp. 9-15.

PL/I Language Summary. R.F. Rosin, ACM SIGPLAN History of Programming Languages Conf., (June 1, 1978), pp. 225–226.

Unconventional Uses of On-Line Retrieval Systems. D.T. Hawkins, J. Amer. Soc. Inform. Sci., 29, No. 4, (July 1978), p. 209.

Verification and Design Aspects of True Concurrency.

Ann. ACM Symp. Princ. Prog. Lang., (Jan. 1978), pp. 171–175.

Workshop Report: The New and the Not So New. M.F. Slana and G.G. Dumas, Computer, 11, No. 3, (March 1978) pp. 47-51.

# **ELECTRICAL AND ELECTRONIC ENGINEERING**

An Approximate Method to Estimate an Upper Bound on the Effect of Multipath Delay Distortion on Digital Transmission. W.C. Jakes, Jr., IEEE Int. Commun. Conf. Rec., 3 (1978), pp. 47.1.1-47.1.5.

The D4 Channel Bank Codec. D.A. Spires, IEEE Trans. Circuits and Syst., CAS-25, (July 1978), pp. 468-475.

On the Design of Quantizers for DPCM Coders: Influence of the Subjective Testing Methodology. C.B. Rubinstein and J.O. Limb, IEEE Trans. Commun., 26, No. 5, (May 1978), pp. 565–572.

A Digital Codec Simulation Facility. W.R. Daumer, IEEE Trans. Commun., COM-26, (May 1978), pp. 665-669.

Direct Polar Display of Subnanosecond Millimeter-Wave Switching Transients at 300 Mbit/s. F. Bosch and S. Cheng, IEEE Trans. Microw. Theory Tech., MTT-26, No. 1, (January 1978), pp. 24-27.

The Evolution of Techniques for Data Communication Over Voice-Band Channels.

E.R. Kretzmer, IEEE Commun. Soc. Mag., 16, No. 1, pp. 10-14.

A Fault Tolerant Memory for Duplex Systems. W.T. Hartwell, C.W. Hoffner, W.N. Toy, IEEE Trans. Rel., R-27, (June 1978), pp. 134-138.

Gaussian Power Model for Optical Fiber Splices. C.M. Miller and S.C. Mettler, Proceedings of Conference on Laser and Electrooptical Systems, (February 7, 1978), pp. 36–37.

Heat Conduction in the Cable Insulation of Force-Cooled Underground Transmission Lines.

J.V. Sanders, L.R. Glicksman, W.M. Rohsenow, P. Koci, and M. Buckweitz, PAS-97, (January-February 1978), pp. 134-139.

An Implicit Enumeration Algorithm for Sequencing Polices Applied to Telephone Switching.

L.J. Ackerman, H. Luss, and R.S. Berkowitz, IEEE Trans. Syst. Man. Cybern., 8 (April 1978), pp. 296–300.

LAMPAC-A High Density Printed Wiring Board for General Application. V. L. Brown, Proc. First Printed World Conv. Ckt., London, England, *I* (June 5, 1978), pp. 24.1-24.15.

Microprocessors in Telecommunication Systems. D.C. Stanzione, Proc. IEEE, 66, No. 2, (February 1978), pp. 192–199.

Multiparameter Multiport Sensitivity Measure. M.J. Chien, 1978 IEEE Int. Symp. Ckts. Syst., New York, (May 17, 1978), pp. 1040-1045.

Statistical Modeling for Circuit Design. E.M. Butler, Conference Record of Electro/78, 5 (May 23, 1978), pp. 1-5.

Sufficient Criteria for PCIR Stability in Linear 2-Port Networks in Terms of Qualitative Data. J.D. Williams and N.N. Puni, 1978 IEEE International Symposium on Circuits and Systems Proceedings, 78CH135-1, CAS (May 1978), pp. 638-641.

#### MECHANICAL AND CIVIL ENGINEERING

Experimental and Analytical Investigation of Self-Excited Chatter Vibrations in Metal Cutting. N. Saravanja-Fabris and A.F. D'Souza, J. Mech. Des., 100 (January 1978), pp. 92-99.

## **PHYSICS**

Calculation of Per-Unit-Volume RF Scattering Cross Sections in the Radar Aurora.

J. Minkoff, Can. J. Phys., 56 (February 1978), pp. 280-287.

Calorimetric Measurements of Absorption and Scattering Losses in Optical Fibers. F.T. Stone, W.B. Gardner, and C.R. Lovelace, Opt. Lett., 2 (Feburary 1978), pp. 48–50.

CCITT No. 6 (And Other) Common Channel Signaling Systems. Network Management Signals.

J.S. Ryan, Conference Record Sem. Tele. Switch. Signal. Tech., Singapore, (April 17–28 1978), pp. 9-1-9-13.

Comparison of Cyclofusion in Central and Peripheral Vision. M.T. Sullivan and A.E. Kertesz, Proc. Ann. Conf. Assn. Res. Vision Opthal. Mol., Sarasota, Florida, (April 1978), p. 140.

Digital Transmission Network Maintenance Aspects. W. Bleickardt, Proc. Ann. Rel. Maintain. Symp., Los Angeles, Calif., IEEE Catalog No. 77CH1308-6R, (January 17-19, 1978), pp. 460-464.

A Guide to Conduit Selection.

J.W. Peters, Tel. Eng. Manage., (September 1, 1978), pp. 116-121.

Measured Performance of a High Capacity 6GHz Digital Radio System. W.T. Barnett, ICC '78 Conference Record, 3 (June 4-7, 1978), pp. 47.4.1-47.4.6.

Mechanized Activity Tracking and Fill Monitoring in the Loop Plant. G.W. Aughenbaugh and N.H. Noe, The International Symposium on Subscriber Loops and Services, (1978), pp. 85–89.

On-Line Information Retrieval Bibliography. D.T. Hawkins, On-Line Review, 2 (1978), pp. 63-106.

Plant Engineering in a Phone Center Environment. R. Sherman, Proceedings of International Symposium on Subscriber Loops and Services, (March 1978), pp. 90-93. The Reflections of a Former High Energy Physicist Doing Industrial Applied Mathematics. R.A. Mercer, Proc. 39th A.I.P. Conference, American Institute of Physics, New York, N.Y., (1978), pp. 193-196.

Results of an Experiment to Detect for Field-Normal Plasma Line Scattering in the Auroral Ionsphere. J. Minkoff, M. Laviola, R. Tsunoda, and R. Presnell, Radio Sci., 13, No. 3, (1978), pp. 577-580.

The Role of the ITU and CCITT in Telecommunications. J.S. Ryan, Commun. Trans. Tech. Switch. Syst. Sem. Princeton, Univ., (March 20, 1978), pp. 2-1-2-6.

Spectrum Management in the Loop Plant. R.K. Even, J. Kreutzberg, G. Miller, and L.M. Smith, The International Symposium on Subscriber Loops and Services, (February 1978), pp. 234–238.

A Study of the Effects of Mobile Telephone Use on Driving Behavior. A.J. Kames, 28th IEEE Veh. Technol. Conf., Denver, Colorado, 78CH1297-IVT, (March 22-24, 1978), p. 537.

Two Conferences Address Local Digital Switching and Transmission in Zurich and Atlanta.

R.W. Wyndrum, Jr., Communications Society Magazine, 16 (July 1978), p. 23-24.

Underwater Sound Arrival Angle Estimation by Multiple Cross Correlation Measurements.

H.J. Young, IEEE International Conference on Acoustics, Speech & Signal Processing Record, (April 10-12, 1978), pp. 659-664.

## SYSTEMS ENGINEERING AND OPERATIONS RESEARCH

The Output of Multiserver Queuing Systems. C.D. Pack, Oper. Res. 26 (May-June 1978), pp. 492-509.