

# Subject Index for Papers in Volume 17

Each index term below is accompanied by a page number and an author's name. With that name in the Author Index are the title of the paper and the names of coauthors, if any.

| Subject                           | Author       | Page |
|-----------------------------------|--------------|------|
| Algorithms                        |              |      |
| Array theory                      | More         | 135  |
| Deadline scheduling               | Chamberlin   | 263  |
| Page allocation strategies        | Chamberlin   | 404  |
| Program paging characterization   | Bard         | 387  |
| Analytical models                 |              |      |
| Computer interference             | Chang        | 13   |
| EEG signals                       | Bohlin       | 194  |
| Open-addressing file space        | van der Pool | 106  |
| Page allocation strategies        | Chamberlin   | 404  |
| Page exception characterization   | Lewis        | 86   |
| Predator-prey populations         | Gazis        | 47   |
| Pre-emptive priority dispatching  | Anderson     | 533  |
| Steady-state file space           | van der Pool | 27   |
| Arrays                            |              |      |
| Axioms and theorems               | More         | 135  |
| General, operators and functions  | Ghandour     | 335  |
| Automata theory                   |              |      |
| Reversible computation            | Bennett      | 525  |
| Biomedical studies                |              |      |
| Digital x-ray subtraction         | Chow         | 206  |
| Human trauma patterns             | Goldwyn      | 230  |
| Modeling EEG signals              | Bohlin       | 194  |
| Motorneuron action potential      | Dodge        | 219  |
| Circuit technology                |              |      |
| Charge-coupled device performance | Patrin       | 241  |
| Digital-to-analog converters      | Hellwarth    | 54   |
| IGFET theory                      | Kennedy      | 2    |
| n-Channel IGFET characteristics   | Critchlow    | 430  |
| Communications technology         |              |      |
| Automatic equalizers              | Karnaugh     | 176  |
| Decision-feedback receiver        | Kobayashi    | 413  |
| Compiling and interpreting        |              |      |
| APLGOL                            | Kelley       | 69   |
| Computation                       |              |      |
| Bounds for weight balanced trees  | Rissanen     | 101  |
| Cauchy's problem                  | Gerber       | 314  |
| Gamma distribution estimators     | Stacy        | 115  |
| Graph partitioning                | Donath       | 420  |
| Light in Kerr liquids             | Shimizu      | 286  |

|                                   |               |     |
|-----------------------------------|---------------|-----|
| Modified IGFET model              | Kennedy       | 2   |
| Nonlinear diffusion equation      | Canosa        | 307 |
| Physical limitations              | Bennett       | 525 |
| Theory of arrays                  | More          | 135 |
| Data conversion                   |               |     |
| Digital-to-analog                 | Hellwarth     | 54  |
| Data structures                   |               |     |
| APL shared variables              | Lathwell      | 353 |
| Data base decomposition           | Delobel       | 374 |
| General arrays                    | Ghandour      | 335 |
| Theory of arrays                  | More          | 135 |
| Data transmission                 |               |     |
| Automatic equalizers              | Karnaugh      | 176 |
| Decision-feedback receiver        | Kobayashi     | 413 |
| Disk files                        |               |     |
| Open-addressing file space        | van der Pool  | 106 |
| Steady-state file space           | van der Pool  | 27  |
| Electrophotography                |               |     |
| Sensitometry                      | Schechtman    | 500 |
| Environment                       |               |     |
| Predator-prey model               | Gazis         | 47  |
| Equalizers                        |               |     |
| Automatic                         | Karnaugh      | 176 |
| Strong intersymbol interference   | Kobayashi     | 413 |
| Films                             |               |     |
| Amorphous, bubble-domain          | Chaudhari     | 66  |
| Refractive-index characterization | Warnecke      | 256 |
| Optical measurements              | Hauge         | 472 |
| Graph theory                      |               |     |
| Partitioning lower bounds         | Donath        | 420 |
| Weight balanced trees             | Rissanen      | 101 |
| Imaging technology                |               |     |
| Digital x-ray subtraction         | Chow          | 206 |
| Instrumentation                   |               |     |
| Electrophotographic sensitometry  | Schechtman    | 500 |
| Semiconductor dislocation         | Matthews      | 426 |
| Thin-film refractive index        | Warnecke      | 256 |
| Laboratory automation             |               |     |
| Electrophotographic sensitometry  | Schechtman    | 500 |
| Materials                         |               |     |
| Aluminum nitride resistor         | Rutz          | 61  |
| Amorphous metal film              | Chaudhari     | 66  |
| Dislocations in $Gd_3Ga_5O_{12}$  | Matthews      | 426 |
| Mathematics (applied)             |               |     |
| Boolean data base                 | Delobel       | 374 |
| Cauchy's problem                  | Gerber        | 314 |
| Computer interference analysis    | Chang         | 13  |
| Derivation of conductance matrix  | Ho            | 249 |
| FET theory                        | Kennedy       | 2   |
| Gamma distribution estimators     | Stacy         | 115 |
| Graph partitioning                | Donath        | 420 |
| Human trauma patterns             | Goldwyn       | 230 |
| Light in Kerr liquids             | Shimizu       | 286 |
| MNOS memory device theory         | Ferris-Prabhu | 125 |
| Modeling EEG signals              | Bohlin        | 194 |
| Motorneuron action potential      | Dodge         | 219 |
| Nonlinear diffusion equation      | Canosa        | 307 |
| Open-addressing file space        | van der Pool  | 106 |

|                                           |               |     |                                           |               |     |
|-------------------------------------------|---------------|-----|-------------------------------------------|---------------|-----|
| Page exception characterization           | Lewis         | 86  | Queuing theory                            |               |     |
| Partial differential equations            | Gerber        | 314 | Computer interference analysis            | Chang         | 13  |
| Predator-prey model                       | Gazis         | 47  | Pre-emptive priority dispatching model    | Anderson      | 533 |
| Pre-emptive priority dispatching model    | Anderson      | 533 | Semiconductor devices                     |               |     |
| Semiconductor acoustoelectric attenuation | Lew           | 270 | Aluminum nitride resistor                 | Rutz          | 61  |
| Steady-state file space allocation        | van der Pool  | 27  | Amorphous metal film bubble-domain device | Chaudhari     | 66  |
| Superlattice transport properties         | Price         | 39  | Charge-coupled memory                     | Patrin        | 241 |
| Measurement                               |               |     | IGFET theory                              | Kennedy       | 2   |
| Electrophotographic sensitometry          | Schechtman    | 500 | Mask measurements                         | Kallmeyer     | 238 |
| Ellipsometers                             | Hauge         | 472 | MNOS memory                               | Ferris-Prabhu | 125 |
| Hole defects                              | Flamholz      | 509 | n-Channel IGFET                           | Critchlow     | 430 |
| LSI masks                                 | Kallmeyer     | 490 | Space-charge-limited transistors          | Magdo         | 443 |
| Memory hierarchies                        |               |     | Superlattice transport properties         | Price         | 39  |
| Page allocation strategies                | Chamberlin    | 404 | Simulation                                |               |     |
| Page exception characterization           | Lewis         | 86  | Lossless transmission lines               | Ho            | 249 |
| Page fault measure                        | Bard          | 387 | Motorneuron action potential              | Dodge         | 219 |
| Microelectronics                          |               |     | Open-addressing file space                | van der Pool  | 106 |
| Aluminum nitride resistor                 | Rutz          | 61  | Solid-state physics                       |               |     |
| Amorphous metal film bubble-domain device | Chaudhari     | 66  | Charge-coupled devices                    | Patrin        | 241 |
| Charge-coupled device development         | Patrin        | 241 | Dislocations in $Gd_3Ga_5O_{12}$          | Matthews      | 426 |
| FET theory                                | Kennedy       | 2   | IGFET theory                              | Kennedy       | 2   |
| MNOS devices                              | Ferris-Prabhu | 125 | MNOS devices                              | Ferris-Prabhu | 125 |
| n-Channel IGFET                           | Critchlow     | 430 | Semiconductor acoustoelectric attenuation | Lew           | 245 |
| Space-charge-limited transistors          | Magdo         | 443 | Space-charge-limited transistors          | Magdo         | 443 |
| Operating systems                         |               |     | Superlattice transport properties         | Price         | 39  |
| Deadline scheduling                       | Chamberlin    | 263 | System configuration and architecture     |               |     |
| Page allocation strategies                | Chamberlin    | 404 | APL time sharing                          | Lathwell      | 353 |
| Page exception characterization           | Lewis         | 86  | Boolean data base                         | Delobel       | 374 |
| Pre-emptive priority dispatching model    | Anderson      | 533 | Computer interference analysis            | Chang         | 13  |
| Program paging characterization           | Bard          | 387 | Deadline scheduling                       | Chamberlin    | 263 |
| Response time characterization            | Silverman     | 394 | Design of APL                             | Falkoff       | 324 |
| Optical science and technology            |               |     | Open-addressing file space                | van der Pool  | 106 |
| Automated ellipsometer                    | Hauge         | 472 | Response time characterization            | Silverman     | 394 |
| Defect detection                          | Flamholz      | 509 | Steady-state file space                   | van der Pool  | 27  |
| Dislocation detection                     | Matthews      | 426 | Theoretical physics                       |               |     |
| Geometrical optics                        | Chastang      | 519 | Limitations on computing                  | Bennett       | 525 |
| Precision measurements                    | Kallmeyer     | 490 | Superlattice transport properties         | Price         | 39  |
| Refractive index in thin films            | Warnecke      | 256 | Transistors                               |               |     |
| Self-focusing beams                       | Shimizu       | 286 | IGFET theory                              | Kennedy       | 2   |
| Spacing measurement                       | Chastang      | 519 | n-Channel IGFET                           | Critchlow     | 430 |
| Spatial filters                           | Flamholz      | 509 | Space-charge-limited                      | Magdo         | 443 |
| Programming and program languages         |               |     | Transmission lines                        |               |     |
| APL shared variables                      | Lathwell      | 353 | Computer-aided analysis                   | Ho            | 249 |
| APLGOL                                    | Kelley        | 69  | Shock waves                               | Peng          | 299 |
| Data base decomposition                   | Delobel       | 374 | Wave propagation                          |               |     |
| Design of APL                             | Falkoff       | 324 | Electromagnetic shock profiles            | Peng          | 299 |
| General arrays                            | Ghandour      | 335 | Light in Kerr liquids                     | Shimizu       | 286 |
| Theory of arrays                          | More          | 135 |                                           |               |     |

