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Nelson H. F. Beebe  
University of Utah  
Department of Mathematics, 110 LCB  
155 S 1400 E RM 233  
Salt Lake City, UT 84112-0090  
USA

Tel: +1 801 581 5254  
FAX: +1 801 581 4148

E-mail: [beebe@math.utah.edu](mailto:beebe@math.utah.edu), [beebe@acm.org](mailto:beebe@acm.org),  
[beebe@computer.org](mailto:beebe@computer.org) (Internet)  
WWW URL: <http://www.math.utah.edu/~beebe/>

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## Title word cross-reference

$-1/2, 1/2, 3/2, 5/2$  [942].  $0 - 1$  [498].  $1$  [1127].  $2$   
[1059, 1265, 1228, 1406, 1226, 1161].  $2^p - 1$  [925].  $3$  [792, 1406, 1403, 1466].  $64$   
[1565].  $A - B$  [784].  $A - \lambda B$  [785].  $a = \pm 2^q \pm 2^r$  [995].  $ab + cd$  [1438].  $\mathbf{Ax} = \mathbf{b}$   
[351].  $AX^2 + BX + C = 0$  [415].  $AXB^T + CXD^T = E$  [1071, 753, 752].  $\beta$   
[1515].  $C^1$  [1114, 660, 683].  $C^2$  [683, 682, 286].  $E_n(x)$  [437].  $\ell_1$  [283, 316, 315].  
 $F$  [803, 802, 617, 12].  $f(x)$  [403].  $F_2$  [1565].  $H_p$  [453, 452].  $hp$  [1433, 1432].  
 $h \rightarrow \infty$  [445].  $i$  [105].  $I_0$  [150].  $I_1(x)/I_0(x)$  [336, 332].  $I_{1.5}(x)/I_{0.5}(x)$   
[336, 332].  $I_\nu(x)$  [126, 125, 207].  $i$ th [30].  $J_\nu(x)$  [126, 125, 207].  $k$  [789, 1515].  
 $k < m$  [1515].  $Ki_n(x)$  [438, 437].  $L_1$  [282, 281, 317, 314, 908].  $l_2$  [1455].  $L_\infty$   
[512].  $LDL^T$  [1535].  $m$  [1515].  $MDM^T$  [876].  $N$  [1180, 105, 30, 1455, 213].  
 $O(\log_2 k)$  [789].  $O(n(1 + \log(N/n)))$  [841].  $O(n^{1/2}\tau)$  [616].  $\omega$  [1362].  $\pm 2^{k_1} \pm 2^{k_2}$   
[925].  $Q$  [1048, 1555, 1420].  $QR$  [1545, 1499, 1460, 1505, 1552, 953, 952, 1412].  
 $rc$  [804, 19, 79].  $r \times c$  [542].  $s$  [1347].  $T$  [1543, 1036, 14, 15, 338, 339, 228].  
 $U(a, x)$  [1165, 1164].  $v$  [566, 619].  $V(a, x)$  [1165, 1164].  $\varphi$  [1285, 1364].

$W(a, x)$  [1348].  $x_{n+1} = f(x_n)$  [149].  $x \geq 0, \nu \geq 0$  [126, 125, 207].

**-Adaptive** [1433, 1432]. **-bit** [1565]. **-body** [1180]. **-Cell** [789]. **-concave** [1036]. **-D** [1059, 1127]. **-Dimensional** [792, 213]. **-Distribution** [802, 14, 338, 228]. **-Function** [1420]. **-Functions** [1364, 1285]. **-Hermite** [682]. **-Interpolation** [683]. **-Linear** [1565]. **-matrices** [1048]. **-Matrix** [1543]. **-Norms** [1455]. **-Percentiles** [803]. **-Preconditioned** [1545]. **-Quantiles** [15, 339]. **-Splines** [566, 619]. **-Test** [617, 12]. **-Vectors** [1455].

**1** [1006]. **100** [62]. **13** [583]. **149** [3, 174]. **179** [4, 94].

**2.0** [1490]. **2.5** [1236]. **2003** [1419, 1365, 1224, 1298]. **219** [5, 155]. **236** [6, 58]. **246** [7, 60]. **259** [8, 141]. **284** [9, 115]. **299** [10, 116]. **2C** [387]. **2D** [895, 638]. **2Sum** [1538].

**3** [1292]. **30** [1]. **334** [11]. **346** [12]. **349** [68, 13]. **395** [14, 228]. **396** [15, 228]. **3D** [896]. **3m** [1541].

**4.0** [1185]. **408** [195, 16, 154]. **409** [173, 77]. **424** [229, 17]. **433** [18, 95]. **434** [79, 19]. **435** [20, 196]. **450** [104, 21]. **467** [22]. **474** [23, 230]. **475** [69, 80, 25]. **479** [26, 81]. **483** [59, 27]. **486** [117, 28, 129]. **487** [151, 29, 82]. **489** [105, 30]. **49** [194, 2]. **490** [31, 83]. **493** [49]. **494** [55]. **495** [56]. **496** [57, 118]. **497** [66]. **498** [67]. **499** [75]. **4m** [1541].

**500** [130, 76]. **501** [77]. **502** [78]. **503** [91]. **504** [92]. **505** [93]. **506** [101]. **507** [102]. **508** [112]. **509** [113]. **510** [114]. **511** [126, 207]. **512** [127]. **513** [128]. **514** [136]. **515** [137, 1209]. **516** [138]. **517** [139]. **518** [150]. **519** [151]. **520** [152]. **521** [153]. **522** [163]. **523** [164]. **524** [171]. **525** [172]. **526** [181]. **527** [182]. **528** [183, 983]. **529** [184]. **530** [192]. **531** [193]. **532** [203]. **533** [204]. **534** [205]. **535** [206]. **536** [215]. **537** [216]. **538** [217]. **539** [1107, 238]. **540** [760, 239]. **541** [240]. **542** [253]. **543** [254]. **544** [255]. **545** [256]. **546** [269]. **547** [270]. **548** [271]. **549** [272]. **550** [273]. **551** [282]. **552** [283]. **553** [284]. **554** [285]. **555** [286]. **556** [299]. **557** [300]. **558** [301]. **559** [302]. **560** [303]. **561** [304]. **562** [305]. **563** [316]. **564** [317]. **565** [326]. **566** [829, 327]. **567** [328]. **568** [1585]. **569** [334]. **570** [335]. **571** [336]. **572** [337]. **573** [348]. **574** [349]. **575** [350]. **576** [351]. **577** [352]. **578** [362]. **579** [363]. **580** [364]. **581** [371]. **582** [378]. **583** [379]. **584** [380]. **585** [386]. **586** [387]. **587** [388]. **588** [392]. **589** [393]. **590** [394]. **591** [395]. **592** [403]. **593** [404]. **594** [405]. **595** [406]. **596** [413]. **597** [414]. **598** [415]. **599** [416].

**600** [417]. **601** [425]. **602** [427]. **603** [429]. **604** [430]. **605** [431]. **606** [433]. **607** [434]. **608** [436]. **609** [438]. **610** [439]. **611** [440]. **612** [443]. **613** [450]. **614** [453]. **615** [457]. **616** [463]. **617** [467]. **618** [470]. **619** [471]. **620** [693, 473]. **621** [476]. **622** [959, 478]. **623** [480]. **624** [481]. **625** [483]. **626**

[485]. **627** [492]. **628** [493]. **629** [494]. **630** [496, 651]. **631** [497]. **632** [498]. **633** [502]. **634** [509]. **635** [512]. **636** [522]. **637** [524]. **638** [525]. **639** [1066, 529]. **64-bit** [1239]. **640** [530]. **641** [540]. **642** [541]. **643** [804, 542]. **644** [551, 694, 871, 1222]. **645** [552]. **646** [553]. **647** [560]. **648** [563]. **649** [567]. **650** [570]. **651** [577]. **652** [580]. **653** [581]. **654** [582]. **655** [589]. **656** [592]. **657** [594, 672]. **658** [596]. **659** [599, 1079]. **65th** [1009]. **660** [604]. **661** [605]. **662** [608, 695]. **663** [609]. **664** [614]. **665** [620]. **666** [622]. **667** [625]. **668** [627]. **669** [633, 725]. **670** [634]. **671** [638]. **672** [641]. **673** [643]. **674** [626]. **675** [649]. **676** [659]. **677** [660]. **678** [662]. **679** [664]. **680** [667]. **681** [675]. **682** [676]. **683** [678]. **684** [683]. **685** [689]. **686** [691]. **687** [696]. **688** [707]. **689** [708]. **690** [709]. **691** [711]. **692** [714]. **693** [715]. **694** [716]. **695** [717]. **696** [719]. **697** [721]. **698** [728]. **699** [729].

**700** [733, 731]. **701** [735]. **702** [744, 982]. **703** [746]. **704** [750]. **705** [753, 1071]. **706** [759, 958]. **707** [761]. **708** [834, 763]. **709** [764]. **710** [765]. **711** [767]. **712** [769]. **713** [781]. **714** [773]. **715** [774, 891]. **716** [778, 978]. **717** [780]. **718** [787]. **719** [791]. **720** [792]. **721** [796]. **722** [799]. **723** [1031, 800, 910]. **724** [803]. **725** [809]. **726** [813, 962]. **727** [815]. **728** [817]. **729** [820]. **730** [821]. **731** [824]. **732** [827]. **733** [828]. **734** [832, 961]. **735** [835]. **736** [837]. **737** [839]. **738** [842]. **739** [844]. **740** [850]. **741** [851]. **742** [856]. **743** [860]. **744** [862]. **745** [863, 927]. **746** [864]. **747** [866]. **748** [867]. **749** [869]. **750** [873]. **751** [878, 979]. **752** [879, 980]. **753** [881]. **754** [885]. **755** [887]. **756** [888]. **757** [894]. **758** [895]. **759** [896]. **760** [898]. **761** [899, 1002, 965]. **762** [900]. **763** [901]. **764** [911]. **765** [915]. **766** [916]. **767** [917]. **768** [920]. **769** [1095, 921]. **77** [1003, 1179, 1485, 1200, 753, 983, 917, 1068, 1071, 839, 1037]. **770** [924]. **771** [932]. **772** [933]. **773** [934]. **774** [936]. **775** [937]. **776** [938]. **777** [939]. **778** [940]. **779** [942]. **780** [946]. **781** [950]. **782** [953]. **783** [954]. **784** [956]. **785** [957]. **786** [963]. **787** [967, 966]. **789** [974]. **790** [975]. **791** [976]. **792** [977]. **793** [987]. **794** [988]. **795** [989]. **796** [991]. **797** [993]. **798** [994]. **799** [1001].

**800** [1003]. **801** [1007]. **802** [1008]. **803** [1015]. **804** [1021]. **805** [1022]. **806** [1023, 1032]. **807** [1030]. **808** [1035]. **809** [1037]. **810** [1040]. **811** [1041]. **812** [1044]. **813** [1047]. **814** [1050]. **815** [1053, 1169]. **816** [1058]. **817** [1059]. **818** [1065]. **819** [1068]. **820** [1069]. **821** [1070]. **822** [1075]. **823** [1082]. **824** [1090]. **825** [1092]. **826** [1093]. **827** [1094]. **828** [1101]. **829** [1102]. **830** [1107]. **831** [1111]. **832** [1113]. **833** [1114]. **834** [1115]. **835** [1116]. **836** [1122]. **837** [1123]. **838** [1129]. **839** [1130]. **840** [1137]. **841** [1138]. **842** [1141]. **843** [1142]. **844** [1143]. **845** [1144]. **846** [1157]. **847** [1158]. **848** [1159]. **849** [1160]. **850** [1165]. **851** [1166]. **852** [1167]. **853** [1168]. **854** [1179]. **855** [1184]. **856** [1185]. **857** [1189]. **858** [1190]. **859** [1191]. **860** [1192]. **861** [1193]. **862** [1194]. **863** [1200]. **864** [1201]. **865** [1202]. **866** [1208]. **867** [1214]. **868** [1215]. **869** [1221]. **870** [1226]. **871** [1227]. **872** [1228]. **873** [1233]. **874** [1237]. **875** [1238]. **876** [1243]. **877** [1244]. **878**

[1250]. **879** [1251]. **880** [1252]. **881** [1257]. **882** [1258]. **883** [1259]. **884** [1260]. **885** [1264]. **886** [1265]. **887** [1266]. **888** [1267]. **889** [1268]. **890** [1273]. **891** [1278]. **892** [1279]. **893** [1280]. **894** [1285]. **895** [1288]. **896** [1289]. **897** [1290]. **898** [1304]. **899** [1305].

**90** [1191, 870, 831, 1193, 1408, 1096, 961, 901, 913, 1050]. **900** [1306]. **901** [1307]. **902** [1317]. **903** [1318]. **904** [1328]. **905** [1329]. **906** [1330]. **907** [1331]. **908** [1332]. **909** [1339]. **910** [1340]. **911** [1341]. **912** [1342]. **913** [1347]. **914** [1348]. **915** [1350]. **916** [1357]. **917** [1362]. **918** [1363]. **919** [1364]. **920** [1369]. **921** [1370]. **922** [1371]. **923** [1372]. **924** [1377]. **925** [1378]. **926** [1386]. **927** [1387]. **928** [1393]. **929** [1399]. **930** [1400]. **931** [1405]. **932** [1406]. **933** [1407]. **934** [1408]. **935** [1414]. **936** [1415]. **937** [1416]. **938** [1417]. **939** [1420]. **940** [1421]. **941** [1422]. **942** [1423]. **947** [1436]. **95** [1325, 1065, 1197, 1202, 1279, 1153, 1224]. **95/2003** [1224]. **954** [1461]. **958** [1476]. **959** [1477]. **960** [1484]. **961** [1485]. **962** [1486]. **966** [1511]. **967** [1512]. **969** [1521]. **970** [1522]. **971** [1523]. **972** [1524]. **973** [1532]. **974** [1533]. **978** [1546]. **979** [1551]. **980** [1552]. **981** [1553]. **982** [1554]. **983** [1555]. **986** [1558].

**A1** [171, 257, 328]. **ABBPACK** [750]. **ABD** [1191]. **ABDPACK** [750]. **Absolute** [457, 445]. **abstract** [1281]. **abstraction** [1224]. **Abstractions** [1519]. **Accelerated** [1517, 387, 857]. **Accelerating** [1380]. **Acceleration** [427, 426]. **Accelerators** [1479, 1501]. **Acceptance** [464]. **Acceptance-Complement** [464]. **Access** [614]. **Accumulating** [1170]. **Accumulator** [1421]. **Accumulator-Based** [1421]. **Accumulators** [122]. **Accuracy** [721, 720, 474, 1239, 700, 393, 1545, 534, 977, 898, 899, 1002]. **Accurate** [53, 576, 1013, 1461, 698, 1294, 1220, 679, 775, 1557, 1078, 1235, 1210]. **ACETAF** [1089]. **Achieving** [1239]. **ACM** [18, 23, 274, 11, 7, 22, 1, 9, 30, 20, 6, 8, 17, 31, 2, 1444, 10, 14, 15, 1057, 583, 5, 218, 365, 419, 459, 507, 544, 574, 618, 645, 687, 726, 4, 21, 19, 16, 3, 12, 26, 29, 977, 28, 27, 25, 518, 693, 473]. **ACRITH** [534]. **Activities** [1530]. **ACTS** [1145, 1146]. **AD** [1134]. **Ada** [874]. **Adams** [777, 402, 199, 247]. **ADAPT** [172]. **adapting** [983]. **Adaptive** [668, 1469, 727, 728, 759, 792, 265, 1276, 348, 347, 912, 340, 322, 407, 1321, 1261, 1571, 213, 387, 46, 1514, 658, 1433, 1432, 1486, 278, 646, 70, 172, 462, 451, 1581, 1567, 1322, 208, 420, 1356, 970, 895, 896, 958, 1215, 1091, 1077, 1127, 1237]. **adaptive-grid** [895, 896]. **add** [1078]. **Addendum** [227]. **Addition** [532, 600, 1344]. **Additive** [1536]. **ADiGator** [1556]. **ADiJaC** [1504]. **Adjoint** [827, 969, 1457, 1055, 1001]. **adjustment** [1275]. **ADMIT** [1006]. **ADMIT-1** [1006]. **ADOL** [887]. **ADOL-C** [887]. **Advanced** [1145, 1146]. **Advances** [1067]. **Affine** [833]. **Affine-Scaling** [833]. **Aggressive** [1460]. **Aided** [549]. **Aids** [557]. **Airy** [1129, 1128, 1068, 67, 353]. **AIZ** [1068]. **Algebra**

[1061, 227, 1060, 397, 408, 714, 713, 1562, 592, 628, 591, 664, 663, 931, 1064, 1263, 1026, 1577, 1052, 581, 238, 237, 609, 1449, 1551, 132, 1132, 1131, 1281].

**Algebraic** [53, 1544, 1325, 71, 1014, 461, 1443, 1440, 47, 120, 109, 1150, 996].

**Algorithm**

[18, 23, 564, 467, 466, 625, 624, 757, 821, 1429, 410, 300, 295, 1469, 182, 584, 906, 401, 11, 1430, 236, 127, 727, 759, 792, 297, 577, 7, 1544, 22, 105, 188, 496, 764, 916, 1520, 313, 371, 370, 798, 265, 804, 223, 579, 653, 1431, 520, 415, 1483, 348, 347, 1459, 460, 1545, 179, 164, 162, 1, 1428, 1494, 149, 427, 426, 1502, 9, 30, 142, 838, 1451, 20, 1543, 623, 206, 396, 486, 1499, 6, 8, 1470, 407, 17, 292, 113, 1468, 31, 567, 123, 1460, 742, 395, 2, 10, 14, 15, 1582, 1516, 583, 1571].

**Algorithm** [303, 298, 213, 5, 57, 118, 124, 215, 214, 1450, 1339, 1509, 382, 1523, 1017, 1335, 499, 647, 1495, 4, 1537, 21, 19, 406, 346, 138, 16, 1474, 3, 572, 601, 1349, 12, 685, 1443, 812, 1364, 1471, 739, 1503, 1583, 26, 369, 686, 358, 640, 159, 845, 29, 862, 744, 740, 588, 614, 1453, 331, 512, 1522, 1329, 488, 1511, 28, 565, 606, 1458, 192, 502, 27, 286, 857, 1556, 493, 1452, 25, 1487, 1557, 1570, 442, 1123, 1140, 1194, 1219, 1345, 1344, 1122, 1121, 1188, 1193, 958, 1168, 1403, 1091, 1313, 1390, 1405, 1290, 1285, 1058]. **algorithm**

[1092, 1159, 1296, 1377, 282, 803, 696, 416, 181, 231, 721, 898, 899, 1304, 867, 735, 1021, 1184, 467, 625, 1477, 1123, 821, 1191, 126, 207, 299, 438, 439, 441, 551, 678, 694, 871, 95, 230, 392, 1031, 1546, 457, 300, 334, 91, 494, 967, 1243, 829, 1288, 1194, 1094, 938, 733, 791, 1040, 182, 56, 283, 351, 860, 316, 509, 1214, 1003, 1179, 1485, 127, 1238, 728, 759, 792, 994, 1143, 1059, 709, 302, 1047, 953, 1030, 708, 824, 895, 896, 659, 577, 781, 915, 920, 79, 492, 1137, 634, 932, 599, 842, 950, 171, 257]. **Algorithm** [386, 69, 105, 834, 900, 137, 364, 398, 496, 651, 764, 832, 881, 780, 163, 916, 817, 1265, 352, 271, 873, 633, 746, 1387, 128, 1268, 1318, 139, 371, 1266, 1228, 301, 1416, 844, 804, 414, 620, 773, 799, 774, 194, 470, 522, 911, 1090, 617, 924, 112, 553, 1209, 827, 991, 650, 104, 415, 1122, 1113, 1160, 1331, 1350, 1400, 1002, 1532, 1484, 856, 1200, 348, 582, 763, 429, 610, 864, 397, 408, 714, 1260, 393, 592, 664, 765, 1267, 809, 888, 1142, 362, 184, 350, 1065, 130, 837, 270, 80, 272, 164, 589, 136, 1208, 563, 527, 1193].

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**V4.3** [1113]. **Validated** [1579, 1353, 1089]. **Validation** [661, 541]. **Value** [696, 457, 334, 333, 1368, 932, 903, 633, 632, 680, 746, 745, 777, 1387, 371, 370, 562, 654, 245, 1320, 554, 725, 776, 310, 1554, 621, 1505, 1043, 402]. **Valued** [924, 923]. **Values** [860, 859, 1521, 329, 216, 868, 1475, 1408]. **Variable** [496, 680, 344, 510, 537, 289, 822, 528, 402]. **variable-order** [402]. **Variables** [236, 579, 653, 147, 464, 1358, 1018, 572, 601, 1540, 594, 593, 672, 922, 146, 1452, 960]. **Variance** [266, 395, 343, 1513]. **Variant** [637, 1347]. **Variants** [1384, 1223, 1201]. **Variates** [615, 907, 886]. **Variational** [1254, 1425, 1182, 1211]. **Various** [1292, 1505]. **VARMA** [1250, 1249]. **Varying** [680]. **VPF** [1477]. **Vector** [1479, 1477, 1106, 728, 166, 137, 558, 823, 1561, 1525, 838, 447, 880, 1209]. **vectorizable** [895, 896]. **Vectorize** [1014]. **Vectorized** [770, 781, 1564]. **Vectors** [984, 329, 1455]. **Verified** [1019]. **Verifier** [431]. **Versatile** [225]. **Version** [1369]. **Versus** [409, 46, 528]. **vertex** [1118, 1246]. **Very** [1334]. **via** [772, 1268, 1575, 71, 1434, 1425, 1346, 1232, 1541, 1472, 1556]. **View** [44]. **Virtual** [362, 361, 1278]. **Visible** [69, 80, 25, 259]. **visit** [1107]. **visualizing** [1012]. **VLUGR2** [895]. **VLUGR3** [896]. **Voigt** [1487, 1357]. **Vol** [630]. **Volterra** [197, 708, 492]. **Volume** [1573, 1512, 1496, 1345, 1157]. **Voronoi** [1509, 933]. **Vortex** [1291]. **VTDIRECT95** [1290, 1453].

**W** [860, 859]. **W-Function** [860, 859]. **Wallace** [1588]. **WAPR** [860]. **wave** [1137]. **Wavelet** [1493, 835, 1399]. **Way** [215, 214, 1513]. **weak** [1409]. **Weakly** [916]. **Weeks** [608, 607, 695]. **Weierstrass** [272]. **Weight** [640, 641, 1213, 1214]. **Weighted** [659, 1574, 566, 619, 255, 251, 1200, 1221]. **Weights** [589, 450, 1137]. **Well** [805, 1081]. **well-distributed** [1081]. **Weyl** [671]. **while** [1239]. **Wide** [1427]. **Winograd** [1276]. **Within** [690]. **Without** [139]. **Wolfe** [1393]. **Word** [1481, 1263, 1550]. **Word-Size** [1481, 1263]. **workqueuing** [1232]. **Workstations** [718]. **WorkStream** [1497]. **World** [41]. **worst** [32]. **Wrapper** [1419]. **Wright** [1362]. **written** [887].

**XMP** [357]. **XNETLIB** [854]. **xorshift** [1491].

**Year** [630]. **Yorke** [286].

**Z** [164, 527, 183, 260, 304, 75, 215, 273, 203, 60, 81]. **Zero** [63, 350, 108, 497, 536, 762, 893]. **Zero-Free** [350]. **Zero-One** [108]. **Zerofinding** [39]. **Zeros** [867, 49, 556, 286, 890, 1128, 1405]. **Ziv** [1397].

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**Hanson:1981:APE**

- [1585] David R. Hanson. Algorithm 568: PDS—a portable directory system. *ACM Transactions on Programming Languages and Systems*, 3(2):162–167, April 1981. CODEN ATPSDT. ISSN 0164-0925 (print), 1558-4593 (electronic).

**Bays:1990:CIR**

- [1586] Carter Bays. C364. Improving a random number generator: a comparison between two shuffling methods. *Journal of Statistical Computation and Simulation*, 36(1):57–59, May 1990. CODEN JSCSAJ. ISSN 0094-9655 (print), 1026-7778 (electronic), 1563-5163. URL <http://www.tandfonline.com/doi/abs/10.1080/00949659008811264>. See [1584, 73] for the two nearly-identical shuffling algorithms. This paper explains why the first does not lengthen the generator period, or much

reduce the lattice structure of linear congruential generators, but the second improves both dramatically.

**ACM:2002:CSE**

- [1587] ACM. CALGO special edition CD. CD-ROM organized as a Web site., 2002. ISBN 1-58113-333-2. US\$99.95 (member), US\$159.95 (nonmember), US\$199.95 (library). ACM order number 201001.

**Brent:2008:SCC**

- [1588] Richard P. Brent. Some comments on C. S. Wallace's random number generators. *The Computer Journal*, 51(5):579–584, February 2008. CODEN CMPJA6. ISSN 0010-4620 (print), 1460-2067 (electronic). See [886].