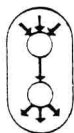


THE 1994 IEEE INTERNATIONAL CONFERENCE ON NEURAL NETWORKS

IEEE WORLD CONGRESS ON COMPUTATIONAL INTELLIGENCE

June 27 - June 29, 1994



IEEE
NEURAL
NETWORKS
COUNCIL

Walt Disney World Dolphin Hotel

Orlando, Florida



Volume III

Page 1295-2003

江苏工业学院图书馆

藏书章

The 1994 IEEE International Conference on Neural Networks

Copyright and Reprint Permission: Abstracting is permitted with credit to the source. Libraries are permitted to photocopy beyond the limit of U.S. copyright law for private use of patrons those articles in this volume that carry a code at the bottom of the first page, provided the per-copy fee indicated in the code is paid through the Copyright Clearance Center, 27 Congress Street, Salem, MA 01970. Instructors are permitted to photocopy isolated articles for non-commercial classroom use without fee. For other copying, reprint, or republication permission, write to IEEE Copyright Manager, IEEE Service Center, 445 Hoes Lane, P.O. Box 1331, Piscataway, NJ 08855-1331. All rights reserved. Copyright 1994 for the Institute of Electrical and Electronics Engineers, Inc.

IEEE Catalog Number: 94CH3429-8

ISBN Softbound: 0-7803-1901-x

Casebound: 0-7803-1902-8

Microfiche: 0-7803-1903-6

Library of Congress Number: 94-75611

Additional copies of this publication are available from

IEEE Service Center

445 Hoes Lane

P.O. Box 1331

Piscataway, NJ 08855-1331

1-800-678-IEEE

Authors Index

- Abaye, A. 3393
 Abbas, Hazem M.101
 Abbey, J.802
 Abel, C. 1842
 Abellard, P. 3375
 Abiev, R. 1644
 Abraham-Fuchs, K. 467
 Abusland, A. 1860
 Acevedo-Sotoc, Isabel 1525
 Acosta, L. 4583
 Adelsberger-Mangan, D. 2245
 Adjei, O. 3156
 Adkins, K. 1871
 Adler, M. 4288
 Agrawal, A. 11777
 Ahalt, S. 1871
 Ahmad, J. 3667
 Ahn, Jesusung 692
 Aitken, A. 828
 Akaho, S. 275
 Akamatsu, Norio 540
 Akers, L. 1821
 Akima, Yoshinuo 3067
 Albert, S. 3530
 Albesano, Dario 4400
 Albright, J. 498
 Albuquerque, A. -3900
 Alder, M. 616,3184, 4259
 Aleksander, I.
 Alguindigue, Dr. Isreal 3312
 Alicata, F. 2264, 2272
 Aliev, R.A. 1644
 Aliev, R.R. 1644
 Alippi, C. 4571
 Alix, Dr. D. 452
 Allen, F. 1291
 Almeida, L. 66
 Alpsan, D. 3512
 Alpsan, Dr. Doghan 567
 Amari, S. 787, 1159
 Amoozegar, Farid 3932
 An, P.E. 2465
 Anderson, T. 4466, 4502
 Andreou, A. 1903
 Andrew, L. 4159
 Angeniol, B. 3587
 Ansari, N. 1777, 3577, 4699
 Antsaklis, P.
 Anzai, Y. 125, 368
 Aound, M. 4645
 Arai, F. 3770
 Aravindan, P. 725
 Arcand, J. 1519
 Arena, P.
 Arisawa, M. 155, 3686
 Armitage, W. 836
 Arreguit, X. 1883
 Arseneau, J. Brant 3888
 Arulambalam, A. 3577
 Asano, N. 4333
 Asanovic, K.
 Ashenayi, K. 3461
 Askew, C. 2616
 Aslam-Mir, S. 2465
 Asogawa, Shizuo 540
 Asoh, H. 275
 Atiya, Amir 1454
 Atkins, Stephen-2673
 Atsumi, Yoshihiro 3800
 Auda, G. 1301
 Augusteijn, Marijke F. 2726, 4300
 Aussem, Alex 2482
 Auret, Y. 2679
 Awata, M. 1929
 Ayala, G.F. 2264, 2272
 Azimi-Sadjadi, M. 3277, 4084, 4321, 4327
 Baba, N. 1340, 2690
 Baba, Norio 811
 Babu, G. 4661, 4672
 Bachauskene, M. 2938
 Badgero, M. 3986
 Bae, Byeong 2639
 Bae, J. 3431
 Bagninski, B. 2732
 Bahrami, Mohammad 2655
 Baird, L. 2448
 Baker, Walter 2673
 Baldanza, C. 3790
 Balkarey, Yuri I. 4370
 Balkin, T. -3521
 Ballard, D. 4409
 Balmar, J.F. 3375
 Balwinski, S. 3521
 Bandler, W. 4487
 Bang, S. 1923, 2046, 3369
 Baozong, Y. 4133
 Baram, Y. 4175
 Barhen, J. 2869, 4592
 Barranco, B. 1912
 Barro, S. 3938
 Bartal, Yair 3744
 Bartana, I. 1987
 Bartczak, A. 2103
 Bartfai, G. 940
 Baskomurecu, G. 1103
 Bass, E. 2355, 2524
 Bastani, F. 521
 Bastian, A. 3256
 Batuc, C. 2605
 Bauknecht, H. 719
 Baum, C.
 Bayer, H. 719
 Bayoumi, M. 4750
 Bayoumi, Mohamed M. 101
 Bazoon, M. 3525
 Beck, J.
 Behun, B. 3222
 Belenky, G. 521
 Benitez-Diaz, D. 1415
 Benvenuto, N. 309
 Beom, H. 2709
 Berger, M. 4514
 Berger, T. 2009
 Bergman, L. 2938
 Bernard, G. 3655
 Bersini, H. 1307, 2476
 Berteis, K. 1381
 Berthold, M. 4470
 Bhadkarnkar, N. 1866
 Bhat, N. 2389
 Bhavsar, Virendra 1409
 Bi, Guangguo 622
 Bi, Hao 622
 Bibyk, S. 1842, 1871
 Bieszczad, A. 1313
 Bigus, Joseph 2442
 Billakana, S.R. 3507
 Bim, E. 3750
 Bing, G. 2530
 Bingxian, H. 1181
 Bingmeier, M. 3921
 Bisi, F. 3790
 Bisset, D. 4349
 Bisset, D.L. 1386, 1465
 Bitner, D. 175
 Bjorn, 1186
 Blackman, D. 1830
 Bluff, K. 1749
 Bogdan, M. 1959
 Bondarenko, V.E. 1018
 Bonner, R. 3461
 Boonyanit, Kan 20
 Boram, Y. 3032
 Bose, N.K. 239
 Bourbakis, M. 2803
 Bouzerdoum, A. 918
 Boyd, J. 2175
 Branca, A. 4359
 Branco, A. 3846
 Branton, N.M. 477
 Brattoli, M. 3846, 4359
 Bremont, J. 2233
 Bright, V. -2250
 Brockmann, W. 1607
 Brown, G. 2291
 Brown, M. 1335, 2465
 Brown, R. 3222, 3693
 Brunet, P. 4473
 Bruschini, C. 790
 Buck, J. 2389
 Buesher, K.
 Bugmann, G. 2239
 Burel, G. 2948
 Burke, H. 2213
 Burkhardt, D. 3156
 Buttarazzi, B. 4061
 Cabrera, S. 299
 Caelli, T. 4033
 Cagnoni, S. 762
 Cahay, Marc 2089
 Cai, Y. 3116
 Campbell, S. 964
 Card, H. 1889, 2004
 Carmona, R. 1877
 Carothers, J. 1939, 4676
 Carpenter, G.
 Carrabina, J. 1415
 Carson, J. 1907
 Carvalho, A. 4349
 Casselman, F. 3409
 Castanie, F. 395
 Catfolis, T. 3238
 Caudell, T. 1235
 Caulfield, H. 1291
 Celebi, S. 4497
 Chae, H. 2596
 Chahande, A.I.3507
 Chak, C.K. 2854
 Chakravarthy, S. 897
 Challoor, R. 1654
 Challoor, Rajab 4028
 Chan, K. 681
 Chan, L. 290, 1674, 2058
 Chan, M. 4483
 Chan, W. 290
 Chandrasekaran, V. 4033
 Chang, B. 3499
 Chang, F. 2592
 Chang, Gao-Wei 1943
 Chang, J. 1056
 Chang, P. 3605
 Chang, R. 3369, 3381
 Chang, Ray-I 4123
 Chang, W. 4163
 Charalambous, Chris 3629
 Charitou, Andreas 3629
 Charlson, E. 3499
 Charterjee, C. 4095
 Chellappa, R. 4022
 Chen, B.Y. 3862
 Chen, C. 1175, 2592
 Chen, C.H. 1199
 Chen, C.Y. 3078
 Chen, Caisheng 2108
 Chen, Carl 4613
 Chen, CL Philip 781
 Chen, D. 4072
 Chen, E-Liang 13104
 Chen, H. 3641
 Chen, O. 817, 2009
 Chen, Pi-Fuay 2842
 Chen, Qiyang 1169
 Chen, W. 4597
 Chen, Y. 107
 Chen, Z. 2512
 Chen, Zhong-Yu 1022, 1068
 Cheng, Chih-Cheng 850
 Cheng, G. 649
 Cheng, Hui 425
 Cheng, L. V-3982
 Cheng, L.M. 1546, 4038
 Cheng, Y. 797, 4635
 Cherruel, G. 2679
 Chesmore, E. 3307
 Cheung, J. 1175, 930
 Chhabra, A. 3774
 Chiang, C. 1-119
 Chiu, C. 333
 Chiu, Chi-Tien 3662
 Cho, H. 2709
 Cho, S. 2381
 Cho, Seongwon 692
 Cho, Yoo-Kun 4283
 Choi, J. 1226
 Choi, Jin 1359
 Choi, T. 4724
 Choong, P. 1438, 3516
 Chow, C. 431
 Chow, Ching-Hua 3505
 Chow, Mo-yeun 44
 Chow, Mo-yuen 600
 Christodoulou, C. 2239
 Chu, C. 431
 Chu, G. 3342
 Chua, L.O. 1917
 Chung, C. 675
 Chung, F. 1595, 4597
 Chung, Pau-Choo 1092, 3104
 Cios, K. 2185
 Clanci, E. 3326
 Clark, D. 1654
 Clarke, L. 3437
 Clarkson, T. 2239
 Clemens, Laura E. 4300
 Clifton, D. 1121
 Cloete, I. 295
 Codrington, C. 339
 Codrington, C. 555, 72
 Codrington, Craig W. 736
 Coetzee, F. 453
 Coghill, G. 714, 4640
 Cohen, Dr. Alex 4370
 Colak, S. 1885, 1955
 Colina-Morles, E. 2494
 Concepcion, V.
 Condarcure, T. 2684
 Conde, T. 3552
 Constantinides, A.G. 4553
 Convertino, G. 3846, 4359
 Cooper, J. 2166
 Coowanitwong, Vasana 251
 Coronado, J. 2848, 4012
 Corral, Juan 4113
 Corredra, J. 4588
 Costa, M. 2901, 4232

Authors Index

- Cotta-Ramusino, A. 3790
 Creany, M. 4431
 Crestani, Fabio 3426
 Crucianu, M. 4405
 Cruz, Jr., Jose 3806
 Cuevas, W. 483
 Cuffaro, A. 1115
 Cui, C. 3342, 3525
 D'Antone, I. 3790
 da Rocha, Armando 1571
 Dagher, Issam 1626
 Dagli, D. 3184
 Dahanayake, B.W. 572
 Daly, J. 2103
 Darnell, M. 3307
 Darwish, A. 856
 Das, R. 2808
 Das, S. 2808
 Das, Sanjoy 4623
 Dasgupta, S. 113
 Daud, T. 1907
 Daugherty, Kim 2303
 Davies, E.R. 4316
 Davis, E.R. 4265
 Dayhoff, J. 1273
 de Carvalho, L. 3738
 de Faria Leao, Beatriz 1726
 de Oliveira, E. 3900
 de Padua Braga, A.
 de Wei, A. 2209
 De-wen, Hu 2793
 DeAngelis, C. 1213
 Decaestecker, C. 263
 Declercq, Michel 2064
 Deco, G. 686
 deFigueiredo, R. 2922
 Deiss, S. 1217
 Del Boca, Adrian 3098
 Delgado-Frias, J. 1397, 4518, 4523
 Delgado-Frias, Jose G. 2078
 Delgado-Restituto, M. 1993
 Delgado-Restituto, M. 3973
 Delopoulos, A. 4055
 Demura, K. 125, 868
 Denzler, J. 4457
 Der, R. 645
 Der., R. 2472
 Dereay, W. El 477
 deSilva, C. 1438, 3516, 4259
 Dhawan, A. 641
 Dhawan, Atam 3352, 3872
 DiDomenico, E. 2556
 Dietrich, E. 2339
 Dillon, T. 1600
 Dinstein, I. 3472, 3540
 Distant, A.-3846, 4359
 Dlay, S. 2122
 Doermann, D. 4022
 Dolenko, B. 1889
 Dominguez, R. 1877
 Donald, J. 1821
 Dong, L. 1542
 Dong, W. 464, 3271
 Donham, C. 1830, 1836
 Donne, J. 2327
 Dorigo, M. 887
 Douglas, R. 1848
 Drouhard, JeanPierre 4294
 Du, J. 181
 Duong, T. 1907
 Dupont, F. 2679
 Durand, S. 2321
 Edmonds, A. IV-3156
 Edwards, T. 1903
 Eis, K. 4327
 El-Hawary, M. 2361, 4730
 El-Jaroudi, A. 360
 El-Kabbany, G. 1695
 El-Sattar, A.A. 2545
 El-Shafii, M. 2550
 El-Sharkawi, M. 3724
 Eldracher, M. 2732
 Eldredge, James 2097
 Elias, John 2028
 Elinson, Mordukh I. 4370
 ElMaraghy, H. 12765
 Elmasry, M.I. 517, 4479
 Elmastry, M.I. 401
 Elsherif, H. 535
 Elsimary, H. 856
 Eltoft, T. 2922
 Elwasif, W. 3398
 Englisch, H. 3170
 Enokihara, M. 2415
 Erdem, M. 1103, 1130
 Erten, G. 4746
 Espejo, S. 1877
 Estevez, P. 1783
 Etremad, K. 4022, 4415
 Ethan Cheng, Y. 903
 Etienne-Cummings, R. 1830, 1836
 Extebarria, Victor 2562
 Eun, Changsoo 3582
 Evans, M. 2837
 Everitt, D. 3592
 Evikhov, Michael G. 4370
 Fairhurst, M. 4349
 Fairhurst, M.C. 1386
 Fakhr, W. 401
 Falas, Tasos-3629
 Fan, J. 1619, 3601, 4269
 Fan, L.T. 3137
 Fang, W. 366
 Farrokhi, M. 413
 Fatmi, H. 3667
 Faulkner, V.W. 3507
 Fausett, L. 3398
 Fechner, T. 3915
 Feldkamp, L. 2377
 Feldkamp, L. 2488
 Feldman, J.
 Fellman, R. 2297
 Fellrath, P. 1818
 Feltham, R. 3546, 4090
 Feng, Dr. Geng 2854
 Feng, X. 3693, 4483
 Fernando, S. 1830
 Feroz, Ehsan 425
 Feuring, Th. 1686
 Fiala, John C. 2759
 Fiez, T. 1842
 Figueras, Anthony 4613
 Fijany, A. 4592
 Filho, A. 996
 Filippi, E. 2901, 4232
 Firenze, Federico 653
 Furman, C. 2985
 Fischer, G. 2074
 Fischl, R. 3719
 Fisher, J. 12934
 Fisher, W. 1191
 Fitzpatrick, T. 3530
 Flachs, B. 1098
 Fletcher, J. 204
 Flotzinger, D. 2890, 3448
 Flynn, M. 1098
 Fomin, T. 731, 2282, 2777, 4380
 Fong, H. 4353
 Fortuna, L.
 Fowler, J. 1871
 Francein, R. 4508
 Franquelo, L. 2040
 Freeman, D. 3409
 Fu, H. 119
 Fu, L. 1484
 Fu, LiMin 1550, 1793
 Fuente, A. 4588
 Fujii, M. 4210
 Fujii, T. 3216
 Fukuda, T. 1566, 3770
 Fukumi, M. 4390
 Fukumizu, Kenji 777
 Fulkerson, B. 3184
 Fummi, F. 4571
 Furuya, T. 3122
 Gader, P. V-4006
 Gaio, Mauro 1658
 Gaitanis, N. 3866
 Galan, R. 2203, 2661
 Galitsky, B. 2268
 Gaivan, J. 2643, 3226
 Ganapathy, V. 3646
 Garga, A.K. 239
 Gargano, M. 3634
 Garis, H. 1714
 Garside, J. 3222
 Gasos, J. 3256
 Gassen, D. 1939
 Gaudiano, P. 2848
 Gegout, C. 546
 Gelenbe, E. 4681
 Gelenbe, R. 3996
 Gelfand, S. 555
 Gelli, Kiran 4028
 Gemello, Roberto 4400
 Georgopoulos, M. 1222, 2137
 Georgopoulos, Michael 756
 Geva, S. 2419
 Ghista, D.N. 567
 Ghorbani, Ali A. 1409
 Ghosal, S. 3816
 Ghosh, J. 897
 Gibson, G. 912
 Giles, C. 1267
 Giles, C.L. 1732
 Gilkey, R. 4502
 Girod, J. 2233
 Glazos, M. 4547
 Glesner, M. 407, 1589, 1804
 Godbout, Mario 4294
 Goel, S. 4198
 Goh, Anthony 3322
 Gohara, K. 980
 Golden, Bruce L. 4535
 Goldenberg, A. 2737
 Gomez-Ramirez, E. 2112
 Gomide, F. 4508
 Gonzalez-Rodriguez, M. 1415
 Goode, Paul 44
 Goodman, P. 2213
 Goodman, R. 193
 Gopalsamy, K. 976
 Gorgui-Naguib, R. V4431
 Gonnensky, D. 2574, 2737
 Gouhara, K. 4333
 Govind, R. 4635
 Graettinger, T. 2389
 Graine, S. 845
 Graves, S. 4337
 Graziani, S.
 Green, R. 1213
 Greenberg, S. 4216
 Greenough, Mike 606
 Gresser, J. 704
 Grigoriu, T. 1115
 Grim, P. 2174
 Groen, F. 2787
 Guazzelli, Alex 1726
 Guerrero, Miguel 4113
 Guest, C. 1263
 Guiliati, S. 2869
 Gunther, Holger 3094
 Gunzinger, A. 3961
 Gupta, M. 175, 11443
 Gupta, M.M. 2518
 Gupta, N. 4309
 Gur, M. 2991
 Guterman, H. 3472, 3540, 4216
 Guzman, R. 483
 Gyurcsik, R. 1364
 Haft, M. 467
 Hagwara, Masafumi 1062, 1080
 Haikonen, P. 746
 Haigamuge, S. 407, 1589
 Hamad, D. 2985
 Hamalainen, Ari 659
 Hambaba, M. 535, 2179
 Hameenanti, T. 4676
 Hamilton, A. 4583
 Hammel, Sherry 3178
 Han, I. 3978
 Han, M. 742, 4650
 Hanagandi, V.
 Handa, H. 2690
 Handler, T. 3056
 Hang, ChangChieh 38
 Hannah, I. 4265, 4316
 Hao, Jianbin 3250
 Haque, A. 1175, 930
 Hara, K. 2997
 Hara, V. 2667
 Harauz, G. 3525
 Hare, Mary 2303
 Haroun, B. 2859
 Harris, C.J. 1335, 2465
 Harris, J. 1894
 Hasegawa, Y. 1566
 Hashem, S. 1507
 Hashida, M. 2415
 Hassoun, M. 1247
 Hassoun, M. 3761
 Hatano, H. 3122
 Hatano, S. 3122
 Hattori, Motonobu 1062, 1080
 Hawley, John 3894
 He, Yongbao 1632
 Healy, M. 1235
 Hegazi, N. 1695
 Hegt, H. 1885
 Hegt, Hans 1955
 Heileman, G. 1222
 Heileman, Gregory 756
 Heinen, J. 4483
 Heinz, A. 1755
 Heit, B. 2233
 Hemminger, T. 3003
 Herrmann, M. 2472
 Heskes, T. 508
 Heywood, M. 489
 Hidalgo, H. 3387
 Hiemstra, Y. 3170
 Higasa, Hiromasa 2649
 Hillion, A. 3452
 Himmelblau, David M. 3244
 Hiramatsu, A. 3611

Authors Index

- Hirose, A. 3173
 Hirose, Ryan 1963
 Ho, C.S. 2137
 Ho, F. 437
 Ho Park, J. 4724
 Hoang, D. 1560
 Hochet, Bertrand 2064
 Hodjat, Babak 2333
 Hoen, K. 1854
 Holden, S. 327
 Holler, M. 1186
 Honda, Takashi 3154
 Hong, S. 2500
 Hong, X. 3403
 Hong Suh, I. 2781
 Hongo, S.
 Horne, B. 1267
 Hosomi, A. 275
 Hou, E. 1777
 Houck, M. 3261
 Houstis, E. 2197
 Howells, G. 1386
 Howitt, I. 3571
 Hoyt, J. 4493
 Hruska, S. 1484, 1487
 Hrycej, Tomas 2962
 Hsia, T. 3571
 Hsiao, P. 3381
 Hsiao, Pei-Yung 4123
 Hsu, Hui-huang 1793
 Hu, C. 3020
 Hu, J. 4693
 Hu, Y. 2297, 461
 Huang, Juxin 756
 Huang, Kou-Yuan 561, 1650
 Huang, S. 3724
 Huang, T.H. 578
 Huertas, J. 1912
 Hui, S. 4547
 Hulme, C. 2291
 Hummels, D. 3050
 Humpert, B. 470
 Hung, H. 627
 Hung, Y.S. 960
 Hurst, R. 3461
 Hutchings, Brad 2097
 Hwang, Boon C. 2580
 Hwang, C.J. 3078
 Hwang, D. 742
 Hwang, Hee-Yeung 4283, 4306
 Hwang, Heeyeung 692
 Hwang, J. 1222, 1325, 4066
 Hyland, P. 2291
 Hylander, P. 1825
 Ibrahim, A. 4321
 Ichiba, Hideo 3800
 Ichimura, T. 3534
 Ide, T. 2367
 Idesawa, M. 2309
 Iijima, Nobukazu 1529
 Ikeda, K. 1159
 Ikononopoulos, A. 3703
 Imai, K. V3909
 Innocenti, M. 3796
 Inoue, N. 1743
 Inoue, T. 3956
 Ioannou, P. 3363
 Irwin, G. 2429
 Ishibuchi, Hisao 2907, 3457
 Ishida, Y. 4448
 Ishida, Yoshihisa 3154
 Ishigame, A. 4704
 Ishigami, H. 1566
 Ishii, K. 3216
 Ishii, N. 1537
 Ishikawa, M. 354, 1810
 Isik, C. 413
 Ismail, M. 1842
 Isotani, Sadao 3900
 Israel, P. 1721
 Iwahori, Y. 1537
 Iyengar, S. 4623
 Jagannathan, S. 2831, 2837, 4766
 Jagota, A. 1044
 Jain, A. 4374
 Jain, Anil K. 2967
 Jain, R. 4072
 Jakubowicz, O. 4247
 Janer, C. 2040
 Janko, J. 4502
 Jaramillo-Moran, Miguei 1525
 Jean, J. 4198
 Jegannathan, S. 4154
 Jeon, Gi 2639
 Jeon, J. 2596
 Jeong, Hong 4442
 Jimenez, A. 2203, 2661
 Jin, L. 1443
 Jin'no, K. 992
 Johnson, J. 1279
 Johnson, Walter H. 4370
 Jones, R. 1020
 Jones, S. 1969, 3840
 Jones, T. 1560, 4006
 Jorgensen, C.
 Joshi, A. 2197
 Joutsensalo, J. 637
 Jumper, E. 441
 Junbo, F. 1619, 4269
 Justice, S. 1842
 Kabrisky, M. 2250
 Kadono, T. 4243
 Kahla, M. 395
 Kahles, B. 4457
 Kajjura, M. 125, 868
 Kakazu, Y. 1498, 3877
 Kalman, B. 167
 Kalmar, Zs. 1815
 Kalouptsidis, N. 2911
 Kamata, H. 4448
 Kamel, M. 401, 437, 517, 1301
 Kamimura, R. 143
 Kamimura, Ryotaro 588, 594
 Kaminska, B. 4645
 Kanaya, M. 1929
 Kandil, S. 2550
 Kane, J. 1987
 Kane, R. 3190
 Kappel, G. 3905
 Karayiannis, N. 1577
 Karayiannis, Nicolaos 32
 Karhunen, J. 1241
 Karjala, Thomas W. 3244
 Karmas, D. 285, 3866
 Karu, K. 4374
 Kaski, K. 1149
 Kato, T. 4237
 Katsumata, Kouichi 3154
 Kawada, Masatake 1529
 Kawamoto, M. 221
 Kawamoto, S. 4704
 Kawanabe, M. 787
 Kaylani, T. 113
 Kaznachey, D. 1044
 Keller, I. 3915
 Keller, J. 4006
 Keilmeyer, I.Lt. David 4226
 Kemeny, S. 1907
 Ker, Jar-Shone 1943
 Kerrigan, D. 3409
 Kersten, D. 4343
 Kertesz, Attila 4145
 Kertesz, V. V4145
 Kettler, W. 3336
 Khai, M. 2599
 Kharouf, P. 3693
 Khorasani, K. 1115, 1403, 2956
 Khoshgoftaar, Taghi 3295
 Khotanzad, A. 3393
 Khunasaraphan, C. 1513
 Kia, S. 714
 Kiessling, A. 4457
 Kil, Rhee 1359
 Kim, Chong Sang 692
 Kim, D. 4650
 Kim, Dong-Kyu 4283
 Kim, H. 903
 Kim, Hyeoncheol 1550
 Kim, I. 4755
 Kim, I. 2084
 Kim, J. VI-4755
 Kim, J. 1427, 2535, 2596, 2709, 4220, 4559
 Kim, J.H. 907
 Kim, Jinsung 1787
 Kim, Jongwan 692
 Kim, S. 951, 2500, 2885
 Kimura, Y. 149, 3852
 King, F. 3950
 Kinget, P. 1899, 1949
 Kinouchi, Y. 2407
 Kirschning, I. 4437
 Kita, H. 1319, 2254, 2813
 Kitagawa, H. 4619
 Kitamura, M. 3207
 Klauer, B. 2052
 Koch, M. 2979
 Koczy, L.
 Koffi, R. 4044
 Koh, K. 2709
 Kolen, J. 1375
 Kollias, S. 4055
 Koiluri, S. 2149
 Kemoda, A. 508
 Kompe, R. 4457
 Kondo, K. 4448
 Konig, A. 1804
 Konstenius, J. 3671
 Kormos, D. 4017
 Kosanovich, K.
 Kothari, Ravi 2089
 Kotsas, P. 4017
 Koutroumbas, K. 2911
 Kovacs, I. 2282
 Kowalczyk, A. 3038
 Kozma, R. 3207
 Kremer, Martin 3872
 Kreinovich, V. 299
 Kremer, Stefan 3015
 Krishnamoorthy, A. 1998
 Kruse, Rudolf 1638
 Krzyzak, Adam 1209
 Ku, C. 4724
 Kumara, S. 1532
 Kuntkekar, B. 3143
 Kuncicky, D. 1481, 1484
 Kuntimad, G. 1285
 Kuo, J. 3131
 Kuo, J.B. 3862
 Kuo, R. 11532
 Kuo, Yau-Hwang 1943
 Kurita, T. 275
 Kuroe, Y. 2819
 Kwok, T. 198
 Kwon, Hee-Yong 4306
 Kwon, Taek 425
 Kwong, Chung-Ping 1068
 Kwoon, Y. 4220
 Lacaille, J. 924
 Lacher, R. 366
 Lacher, R.C. 1766
 LAI, W.K. 4640
 Lainiotis, D. 2344, 4710, 4736
 Lam, K. 4607
 Lam, K.P. 2143
 Lam, S. 960
 Lampinen, J. 3812
 Lande, T. 1860
 Lane, S. 3409
 Lang, S. 3301
 Lange, J. 1355
 Lau, S. 4384
 Lay, S. 1325
 Le, Daniel X. 3009
 Le Chiara, Giuseppe 2952
 LeBor, Dr. C. 3452
 Lee, A. 3982
 Lee, Alex W.H. 4038
 Lee, Bong-Kyu 4283
 Lee, C. I-675, 4650
 Lee, H. 2191
 Lee, Hahn-Ming 1583
 Lee, Heong-Ho 4283
 Lee, Heung-Ho 4306
 Lee, J. 2500
 Lee, Jyh-Ping 1137
 Lee, K. 2355, 2524, 2568, 3490, 4724
 Lee, Kun Chang 1787
 Lee, S. 2411, 2423, 2696
 Lee, S. 2535, 3088
 Lee, T. 1595, 4597
 LEE, Y. 956
 Lee, Y. 986
 Leephakpreeda, T. 2605
 Leermik, L. 1257
 Leiss, E. 107
 Leopold, Jurgen 3094
 Lera, G. 2643
 Lerner, B. 3472, 3540
 Leung, S. 892
 Levine, D. 2172
 Levinstein, M. 3472
 Levy, William 2245
 Lewis, F. 2539, 4766
 Lewis, J. 2797
 Li, Fu 88, 1680
 Li, Q. 708
 Li, S. 107
 Li, X. 2153, 2454
 Liang, F. 2765
 Liang, P. 3110
 Liang, X. 181
 Liano, K. 513
 Lie, T. 1760, 2916
 Lightbody, G. 2429
 Liljenstrom, H. 970
 Lim, G. 4259
 Lin, C. 360, 419, 797, 903
 Lin, Genghis 3201
 Lin, J. 1056
 Lin, J.N. 1668
 Lin, Jie 3744
 Lin, Senmao 2108
 Lin, T. 1267
 Lin, W. 627, 4518, 4523

Authors Index

- Ling, Bo 3834
 Liou, J.J. 2137
 Liou, R. 3277, 4327
 Lippe, W.-M. 1686
 Lister, R. 84
 Liu, B. 2400
 Liu, Bin-Da 1943
 Liu, W. 1056
 Liu, X. 22, 649
 Liu, Ying 4139
 Liu, Yu-cheng 1109
 Lo, J. 1-836, 2074, 2149
 Ioh, N. 526
 Lohiser, B. 1842
 Long, Y. 4750
 Lont, J. 350
 Lopez, L. 2749
 Lopez-Aligue, Francisco 1525
 Lonnec, A. 671, 731, 1815, 2282, 2777, 4380
 Love, James 3283
 Low, K. 4384
 Lowe, D. 1197, 3623
 Lu, B. 1319
 Lu, Bing-Hui 1583
 Lu, G. 4761
 Lu, W. 3828
 Lucking, W. 3307
 Ludeman, L. 4078
 Ludi, J. 295
 Ludwig, D. 1907
 Luebbers, P. 4278
 Lui, H. 4220, 4384
 Lui, Alexander 376
 Luik, A. 892
 Luo, Jiyang 781
 Luo, R. 2703
 Lure, F. 4180
 Lursinap, C. 279
 Lursinsap, C. 1513
 Lursinsap, Chidchanok 251
 Ly, S. 1226
 Machado, Ricardo 1571
 MacMillan, J. 4571
 Madarasmi, S. 4343
 Madeline, Jacques 1658
 Madsen, Per Printz 4541
 Maekawa, S. 1050, 2813
 Magley, D. 3409
 Mah, R. ???-0
 Mahoney, B. 2173
 Mahowald, M. 1848
 Maifret, R. 3375
 Maillard, E. 704, 766, 1772
 Malakooti, B. 665
 Malferrari, L. 3790
 Malmqvist, K. 2938
 Mana, Franco 4400
 Mandel, J. 3816
 Manduca, A. 3990
 Mange, D. 2321
 Mansour, M. 2545, 2550
 Mao, Jianchang 2967
 Mao, M.W. 3862
 Mao, Yimin 622
 Maratukulam, D. 3393
 Marcade, E. 3587
 Marchal, P. 2321
 Marczell, Zs. 2282
 Marino, M. 2661
 Martin, C. 305
 Martin, G. 2233
 Martin, K. 1848
 Martinetz, T. 645
 Martinez, Dominique 3597
 Martinez, G. 2203
 Masa, P. 1854
 Mashali, S. 856
 Mashaly, H. 2545
 Massengill, L. 1975
 Mastriani, Ph.D., Mario 582
 Matia, F. 2203
 Matsuda, Satoshi 4563
 Matsumura, Shigenori 2649
 Matsuo, K. 1810
 Matsuo, K. 221
 Matsuo, Toshinobu 3154
 Matsuyama, Y. 187, 4000
 Mayol-Cuevas, W. 2112
 Mayorga, M. 4078
 Mazzanti, P. 3790
 Mbamalu, G. 4730
 McCann, P. 167
 McCormack, Daniel 606
 McCullough, C. 2350
 McGonigal, M. 3495
 McInerney, M. 641
 McKenzie, P. 616
 McLaughlin, R. 1654
 McLaughlin, Robert 4028
 McLaughlin, R. 4288
 McMillin, B. 3828
 McNeill, D. 1889, 2004
 Meador, J. 1825
 Means, R. 10
 Medina, E. 483
 Medsker, L. 1470, 1484
 Meert, K. 3822
 Mehrotra, K. 333
 Mehrotra, K. 2191
 Mei, R. 2530
 Melax, Stan 3015
 Mendez, J. 4583
 Meng, M. 2743
 Meng, Y. 4269
 Menozzi, Alberico 44
 Merat, F. 3024
 Merchant, R. 3730
 Merkl, D. 3905
 Meyer-Base, A. 2436
 Miftakhov, R.N. 2258
 Migliore, M. 2264, 2272
 Miikkulainen, R. 802
 Milgram, M. 3190
 Millar, D. 3326
 Miller, B. 3024
 Miller, G. 3461
 Miller, W. 526
 Miller, III, W.T. 2771
 Millsrom, N. 3409
 Minagawa, M. 3877
 Ming, Y. 1542
 Mingyu, F. 3601
 Miramonti, J. 4006
 Miura, S. 1230
 Mitsui, H. 3756
 Mitsui, Hideo 1529
 Miyazaki, Akihito 2907, 3457
 Mjolsness, E. 4601
 Mjolsness, Eric 4629
 Mogami, Yoshio 811
 Mohammed, O. 3730
 Mohan, C. 333, 2191
 Monades, M. 555, 72
 Mohiddin, S. 1600
 Moll, M. 802
 Monaco, Frank 2117
 Montalvo, A. 1364
 Moody, J.
 Morasso, Pietro 653, 3127
 Moreno, L. 4583
 Morgan, N. 4462
 Morgan, N. ???-0
 Mori, T. 2819
 Morita, M. 1032
 Motter, M. 3232
 Mouchot, M. 1772
 Mouchot, M.C. 4044
 Moya, M. 2979
 Mrsic-Flogel, Janko 3196
 Mueller, P. III-1830, 1836
 Mulawka, J. 840
 Muller, Tibor 4145
 Muller, U. 1, 3961
 Mulligan, Jr., J.H. 3806
 Mundie, D. 1975
 Murakami, K. 4619
 Murata, N. 1159
 Murgu, A. 2667
 Murry, M. 4661, 4672
 Muscato, G. ???-0
 Musico, P. 3790
 Myeong, H. 4559
 Myler, H. 1121
 Myllymaki, P. 1493
 Nachtsheim, Philip 257
 Nagashino, H. 2407
 Naguib, R. 2122
 Nakagawa, Masao 1062, 1080
 Nakagawa, T. 4619
 Nakai, Y. 2819
 Nakanishi, S. 143
 Nakano, R. 4687
 Nakayama, H. 187
 Nakayama, K. 149, 1163, 2997, 3909, 4237
 Nam, K. 4220
 Napolitano, M. 3796
 Narayan, S. 50
 Narendran, R. 3646
 Natori, Naotake 2875
 Nauck, Detlef 1638
 Navarro, V. 3738
 Naylor, D. 1969
 Nazuno, J. 483
 Neely, W. Shields 2022
 Negatu, A. 1044
 Neiss, E. 3056
 Neittaanmaki, P. 2667
 Nel, A. 2209
 Nestor, D. 3693
 Netti, Chalapathy 4425
 Netto, M. 1000, 1691, 3750
 Neumerkel, D. 3915
 Ng, S. 392
 Ngoledia, J. 2122
 Nguyen, Chung 3178
 Nichani, Sanjay 4107
 Nicodemus, S. 78
 Nie, Junghong 3164
 Niederjoun, R. 4483
 Niemann, H. 4457
 Nikiforuk, P. 1443
 Nikolopoulos, C. 1818
 Nilsson, K. 2938
 Niranjan, M. 2034
 Nishikawa, Y. 1319, 2254, 2813, 4169, 4390
 Nishimura, K. 1163
 Nishimura, Kazuo 2875
 Nitta, Tooru I-269, 934, 2895
 Nix, D. 55
 Noakes, P. 489
 Nocera, P. 4421
 Nogami, Takeki 3800
 Noordewier, M. 3332
 Norcio, A.F. 1169
 Northmore, David 2028
 Noth, E. 4457
 Novato, S. 3900
 Novelli, P. 3790
 O'Brien, Frank 3178
 O'Dowd, G. 3461
 Oblow, E. 791
 Obradovic, D. 686
 Obradovic, Z. 204
 Odorico, F. 3790
 Oe, S. 2415
 Ogawa, Hidemitsu 551
 Ogunfunmi, T. 3559
 Oh, H. 2070
 Oh, S. 956, 986
 Oh, Se-Young 2754
 Ohkawa, Kazuya 2825
 Ohm, T. 2500
 Okabe, Y. 1556, 1783
 Okuhara, K. 4119
 Okuno, T. 1498
 Olah, B. 61
 Omar, S. 1654
 Omar, Syed 4028
 Omatu, S. 2599
 Omatu, S. 2367, 4243, 4390
 Omatu, Sigeru 2649, 4154
 Omlin, C. 1267, 1732
 Omori, T. 2227
 Onami, S. 4243
 Onoda, T. 3766
 Ortega, J. 2040
 Osaki, S. 4119
 Otawara, K. 3137
 Owczko, Y. 4655
 Ozawa, S. 1340
 Ozdamar, O. 567
 Ozguner, U. 2327
 Ozturk, Y. 1103, 1130
 Pados, D. 321
 Page, E. 50
 Palaniswami, M. 3592, 4033, 4159
 Palmieri, F. 1258
 Pandya, A. 2407, 4278, 4473
 Pao, Y. 3697, 4718
 Papaikononou, A. 872
 Papanoti-Kazakos, P. 321
 Pappu, S. 4601
 Paradis, R. 2339
 Park, C. 2411
 Park, D. 1459, 3730
 Park, Dong 1626, 3098, 4613
 Park, G. 4718
 Park, Hyoung 2754
 Park, J. 1842, 4650, 4650
 Park, S. 4755
 Park, S. 3358
 Park, Y. I-94, 2568, 2928
 Parkinson, W. ???-0
 Parris, F. 1721
 Parry, M. 4571
 Parsini, T. 2383
 Parthasarathy, G. 4101
 Passero, E. 2901, 4232
 Passaseo, M. 790
 Pastravanu, O. 4766
 Patel, D. 4265, 4316
 Patel, R. 2859, 2859, 2956

Authors Index

- Partichis, C.S. 3478
 Partison, T. 918
 Paulos, J. 1364
 Pearson, J.K. 1465
 Pechanek, G. 1397, 4518, 4523
 Pechanek, G.G. 1381
 Pechanek, Ph.D., Gerald G. 2078
 Pecharanin, N. 3756
 Pecharanin, Narade 3067
 Peiris, Vincent 2064
 Pelillo, Marcello 1006
 Pelletier, S. 1519
 Pelzl, J. 3336
 Peng, M. 4309
 Perantonis, S. 285, 3866
 Perez-Illarbe, M. 2643, 3226
 Pernas, F. 4012
 Perng Chen, Y. 187
 Perov, Polievkt 4370
 Peterson, Allen 28
 Petridis, V. 872
 Petrowski, A. 1981
 Pfeiffermann, A. 407, 1589
 Pfister, M. 2223
 Pfurtscheller, G. 2890, 3448
 Pham, C. 2093, 3559
 Phuvan, S. 2394
 Piazza, F. 309
 Picart, D. 3348
 Piche, Stephen 245
 Piessens, L. 3693
 Piguot, C. 2321
 Pineiro, J. 4583
 Pinera, C. 4473
 Piovoso, M. ???-0
 Pipingas, A. 1749
 Pirano, D. 4017
 Piuri, V. 4571
 Platanotis, K. 2344, 4710, 4736
 Poehmüller, W. 407, 1589
 Polhill, J. 2285
 Pollack, J. 1375
 Pong, T. 4343
 Ponnambalam, S.G. 725
 Poo, Gee-Swee 4396
 Posthoff, C. 3420
 Potlapalli, H. 2703
 Portier, I. 2948
 Powers, Edward 3582
 Prakasam, V. 3655
 Pratt, L. 1-78, 3332
 Pregenzer, M. 3448
 Pregenzer, Martin 2890
 Principe, J. 806, 2934, 3131, 3232, 4497
 Principe, Jose C. 1793
 Privitera, Claudio 3127
 Prokhorov, D. 1028
 Puechmorel, S. 395
 Purushothaman, G. 1577
 Puskorius, G. 2488
 Qi-Ying, Xiao 2793
 Qian, Gang 2089
 Qian, W. 3437
 Quelavoine, R. 4421
 Quero, J. 2040
 Raafat, H. 1301
 Raetz, C. 3003
 Rajpal, N. 3634
 Ramamoorthy, P. 1421
 Ramesh, N. 3061
 Ranganath, H. 1285
 Rangarajan, A. 4601
 Rangarajan, Anand 4629
 Ranka, S. 333, 2191
 Rao, D. 175
 Rao, D.H. 2518
 Rao, N. 791
 Rao, S. 3143
 Raschhofer, R. 304
 Rauch, H. 1191
 Raveendran, P. 4154
 Ray, Sylvian R. 2315
 Rayburn, D. 3530
 Raza, H. 3363
 Rea, H. 2797
 Recht, M. 4017
 Redmond, D. 3521
 Reed, J. 3571
 Regameri, M. 1691
 Regueiro, C.V. 3938
 Reid, J. 2250
 Reifman, Dr. Jaques 1449
 Reinke, D. 4327
 Reinschmidt, Kenneth 3834
 Renders, J. 2476
 Revell, N. 3856
 Reyes, C. 4487
 Reynolds, Albert 3289
 Richmond, B. 4017
 Rocha, A. 1691
 Rodriguez-Vazquez, A. 1877, 3973
 Rodriguez-Vazquez, A. 1993
 Rogers, S. 2250
 Rogers, Steven 305
 Rojas, Raul 233
 Romaniuk, Steve G. 1331, 1710
 Romem, Y. 3472
 Romen, Y. 3540
 Romsdahl, H. 1203
 Romsdahl, Harlan 3894
 Ronald, Edmund 531
 Rosen, B. 4687
 Rosen, D. 2213
 Rosenberg, B. 3472
 Rosenfeld, E. 2160
 Rosenstiel, W. 1959
 Roska, T. 1917
 Ross, J.
 Rossi, F. 546
 Roy, C. 3409
 Roy, S. 503
 Roychowdhury, V. 4095
 Rozgonyi, T. 4380
 Rubin, M. 1613
 Ruck, Dennis 305
 Ryu, Y. 3431
 Sabourin, Robert 4294
 Sacha, J. 2185
 Saerens, M. 2476
 Saito, T. 1935
 Saito, T. 992
 Saitta, Lorenza 2952
 Sako, H. 3071
 Sakuma, M. 3207
 Salam, F. 2070, 4746
 Salome, T. 1307
 Salu, Yehuda 4772
 Samatsu, T. 1391
 Sami, M. 4571
 Sammut, K. 3840
 Sanchez, E. 3938
 Sanchez, J. 4583
 Sano, H. 1537
 Sanz, R. 2203
 Sanz-Gonzalez, Jose 1799
 Saratchandran, P. 3950
 Sarkar, D. 131
 Sarukkar, R. 4409
 Sasai, T. 187
 Sasaki, M. 3956
 Sato, Atsushi 161
 Sato, Y. 3122
 Saryadas, A. 3641
 Saunders, C. 1907
 Sawai, H. 4253
 Sbarbaro, D. 4567
 Scagliione, L. 3415
 Schaffner, M. 2842
 Schaweiski, S. 3420
 Schizas, C.N. 3478
 Schlang, M. 467
 Schlosser, M. 3420
 Schmeiser, B. 1507
 Schmitt, M.
 Schneider, C. 1889
 Schneider, R. 1889
 Schnorrenberg, F. 3478
 Schoenauer, Marc 531
 Schuit, A. 3044
 Schumacher, W. 3944
 Schweikert, P. 407, 1589
 Sciuto, D. 4571
 Sebag, Marne 531
 Seijas, Juan 1799
 Sekine, O. 2254
 Senda, Y. 992
 Seo, J. 1427
 Seres, I. 2282
 Sergiou, A. 3478
 Serrano, T. 1912
 Sethi, I. 3061
 Setono, R. 4761
 Shadafan, R. 2034
 Shadpey, F. 2956
 Shaffer, Keith 2276
 Shaham, Y. 3521
 Shanaan, S. 856
 Shahrzad, Hormoz 2333
 Shams, S. 4655
 Sharaf, A. 1760, 2550, 2916
 Sharaf, A.M. 2545
 Shawe-Taylor, J. 345
 Sheedvash, S. 4321
 Sheng, Chengke 1109
 Sheu, B. 817, 1923, 2009, 2046, 3369
 Shi, B.E. 1917
 Shibata, K. 1556
 Shibata, T. 1566
 Shibata, Takanori 2825
 Shigeta, Kazuo
 Shimizu, Eiji
 Shimizu, H. 771
 Shimoji, S. 3088
 Shin, Yoan 1433
 Shinohara, Y. 2415
 Shinozawa, K. 4210
 Shirai, H. 4704
 Shirazi, M. 1050
 Shizawa, Masahiko 137
 Shmurun, A. 1186
 Shono, K. 2093
 Si, J. 2400
 Silberstein, R.B. 1749
 Silva, F. 66
 Silvestri, G. 3796
 Sing, H. 3521
 Sira-Ramirez, H. 2419
 Sirisaengtaksin, O. 299
 Site, J. 2419
 Siy, P. 4693
 Smid, J. 1346
 Smith, S. 3780
 So, Y. 681
 Solaiman, B. 766, 1772, 3348, 3452, 4044
 Soliman, H. 2550
 Soliman, H.S. 4163
 Somasundaram, M.V. 3646
 Sone, M. 3756
 Sone, Mototaka 1529, 3067
 Sonehara, N. 4210
 Song, I. 3431
 Song, S.M. 1668
 Soo, Y. 2973
 Specht, D. 1203
 Speckmann, H. 1959
 Spehl, J. 3336
 Sperdu, A. 1143
 Spracklen, C.T. 17
 Spracklen, Tim 3888
 Srivastava, A. 3786
 Srivastava, V. 876
 Stacey, D. 3342, 3525
 Stachowitz, Rolf 3894
 Starita, A. 1143
 Starr, F. 3056
 Stauffer, A. 2321
 Stevenson, M. 823
 Steyaert, M. 1899, 1949
 Stone, D. 2159
 Stone, J. 84
 Stonick, V. 453
 Strauss, R. 3261
 Strom, V. 4457
 Su, Zhongren 2108
 Sudhakar, R. 4278
 Suh, S. VI-4650
 Sultan, M. 1695
 Sum, J. 1674
 Sun, B. 459, 3211
 Sun, Hong 1351, 3883
 Sun, R. 1475, 1484
 Sun, Yung-Nien 1092
 Sundararajan, N. 3950
 Sundareshan, M. 2616, 2684
 Sundareshan, Malur 3932
 Sung, A.H. 4163
 Sungar, M. 3996
 Swiniarski, R. 3387
 Syu, I. 3301
 Syu, M. 3265
 Szabo, Robert 3295
 Szajner, J. 3750
 Szepesvari, Cs. 61, 671, 1738, 1815, 2777
 Taguchi, Akira 1529
 Tai, Heng-Ming 3289
 Takagi, T. 143
 Takahashi, Hirokazu 3067
 Takeda, F. 4243
 Takefuji, Yoshiyasu 4667
 Tam, S. 1186
 Tamaki, U. 3216
 Tan, M. 4000
 Tan, S. 38
 Tan, Shaohua 370, 3250
 Tanahashi, N. 3484
 Tanaka, Hideo 3457
 Tanaka, M. 1929

Authors Index

- Tanaka, M. 2093
 Tanaka, T. 3770
 Tanie, Kazuo 2825
 Taniguchi, T. 4704
 Tanprasert, T. 1513
 Tao, T. 3926, 3967
 Tascillo, A. 2460, 2803
 Tavan, P. 698
 Taylor, Ian 606
 Taylor, J. 2239
 Tazaki, E. 1743, 3534
 Teeter, Jason 44, 600
 Teng, C. 1295
 Tenhagen, A. 1686
 Tenorio, Manoel F. 447, 736
 Terada, K. 4243
 Terman, D. 945
 Terrill, S. 3592
 Tetko, Igor V. 376
 Tezaur, R. 3816
 Thakoor, A. 1907
 Thole, P. 1959
 Thoma, George R. 3009
 Thomas, M. 3521
 Thome, Antonio G. 447, 736
 Thorne, D. 3221
 Thornton, C. 633
 Thrower, James P. 44
 Tian, Q. 4384
 Tianren, Yioa 1351
 Tierney, J. 3856
 Tirakis, A. 4055
 Tirri, H. 1493
 Tjoa, A. 3905
 Tomabechi, H. 4437
 Tong, C. 4607
 Tong, CW 2143
 Toomarian, N. 4592
 Toris, D. 2737
 Towsey, M. 567
 Tracy, L. 3332
 Tran, M. 1907
 Tran, Tho Cong 2842
 Trevino, E. 3387
 Triantafyllou, George 2078
 Tsai, C.T. 1092, 3104
 Tsai, Chang-Rong 1074
 Tsai, D. 3484
 Tsai, Wu-Yuan 3289
 Tsao, G. 3265
 Tseng, L.Y. 578
 Tseng, Y. 4066
 Tsot, A. 567
 Tsoukalas, L. 3703
 Tsukumo, Jun 161
 Tsutsumi, K. 1340
 Tufts, D. 708
 Uchikawa, Y. 980, 980
 Uchikawa, Y. 4333
 Uchino, E. 1391
 Ueno, F. 3956
 Uhrig, R. 3703
 Uhrig, Robert E. 3312, 3744
 Ulug, M.E. 1662
 Uneyama, S. 275
 Uncini, A. 309
 Uppuluri, V. 791
 Urton, A.R.M. 572
 Vaccari, D. 2217
 Vakhutinsky, Andrew I. 4535
 Valle, Montserrat 1525
 Valli, G. 762
 Van de Merckt, T. 263
 van der Smagt, P. 2787
 Van der Spiegel, J. 1830, 1836
 van het Groenewoud, F. 2787
 Van Hulle, Marc 3597
 Van Hulle, Marc M. 4365
 van Keulen, E. 1885
 Van Keulen, E. 1955
 Vanderbeek, R. 2131
 Vandewalle, Joos 3250
 Vanhaia, J. 1149
 Varoufakis, S. 285
 Vassiliadis, S. 4518
 Vassiliadis, S. 1381, 1397, 4523
 Vassiliadis, Stamatios 2078
 Vedantham, S. 4623
 Vedula, S. 4746
 Velasco, J. 2203
 Veltri, R. 3461
 Vemuri, V. 3571
 Venkataraman, S. 2869
 Verikas, Antanas 2938
 Verma, B. 840
 Verona, F. 3796
 Villmann, T. 645
 Vinz, B. 4337
 Vipin, M. 876
 Vishwakarma, Keshav P. 3674
 Vitela, Javier 1449
 Vittoz, E. 1883
 Vladimirov, P. 2611
 Vogt, M. 3944
 Voigt, H. 1355
 von Rosenberg, M. 612
 Vonder-Haar, T. 4327
 Wah, B. 1295
 Walczak, Steven 3680
 Waldron, M. 951, 2885
 Waldschmidt, K. 2052
 Wallace, J.G. 1749
 Wallinga, H. 1854
 Walsh, N.E. 3507
 Wan, K. 4384
 Wang, C. 806
 Wang, Chia-Jiu 1963, 3505
 Wang, Chua-Chin 1074, 1137
 Wang, D. 945, 3148
 Wang, DeLiang 964
 Wang, G. 4699
 Wang, Gou-Jen 850
 Wang, J. 2506, 2715, 2973
 Wang, Jung-Hua 3201
 Wang, K. 4452
 Wang, M. 1012
 Wang, Pei-Zhuang 38
 Wang, S. 2973
 Wang, Xin 494
 Wang, Yeou-Fang 3806
 Wang, Z. 832
 Wantanapongse, P. 279
 Washburne, Ted 3894
 Watada, J. 1-155, 3686
 Watanabe, E. 771
 Watanabe, Sumio 777
 Watanabe, T. 2720
 Watta, P. 3761
 Wawrzyniak, J.
 Wechsler, H.
 Wechsler, H. 4493
 Wechsler, Harry 3009
 Wee, B. 751
 Weeks, A. 1121
 Weerawarana, S. 2197
 Weierich, P. 612
 Weigl, K. 391
 Weir, M. 2285
 Wen, Rong-Chang 1943
 Wendt, M. 2052
 Weng, J. 4204
 Weng, W. 1403
 Wheeler, Kevin 3352
 White, H. 2175
 Whittington, G. 17
 Wickersham, I. 862
 Wiegand, A. 55
 Wiegand, A. 3786
 Wiegner, W. 508
 Wieske, Lothar 4049
 Wilamowski, B. 1125
 Wilcox, G. 22
 Wildberger, A. 2373
 Williams, L. 2131
 Wilson, C.L. 3657
 Wingate, D.L. 2258
 Withagen, H. 1885, 1955, 2015, 2128
 Wojciechowski, E. 2217
 Wolf, D. 1355
 Wolfe, W. 4571
 Wollmer, P. 3504
 Won Kim, T. 2781
 Wong, W. 2454
 Wong, W.S. 2153
 Wong, Y. 4186
 Wood, H.C. 2518
 Wu, C.J. 1086
 Wu, Chwan-Hwa 2022
 Wu, F. 3318
 Wu, G. 2506, 2715
 Wu, L. 419
 Wu, J. 649, 4169
 Wu, T. 2046
 Wu, X. 970, 1939
 Wunsch, D. 2018
 Wurst, K.H. 2720
 Xia, S. 181
 Xiao, R. 4084
 Xiaoming, Wan 1351
 Xing, G. 1369, 3546, 4090
 Xu, L. 1252
 Xu, L. 315
 Xu, Lei 1209
 Xu, Q. 3828
 Xu, W.L. 2720
 Xu, Zong-Ben 1022
 Xue, K. 4198
 Xueqin, Z. 3403
 Yabuta, T. 2628
 Yacoub, Meziane 1503
 Yadiid-Pecht, O. 2991
 Yagi, T. 4333
 Yamada, T. 2628, 4687
 Yamagishi, N. 2227
 Yamakawa, T. 1391
 Yamamoto, H. 2407
 Yamasaki, Kazutaka 551
 Yang, J. 2596, 3358
 Yang, S.Q. 2720
 Yang, Y. 4635
 Yang, Z. 665
 Yao, Tian-ren 3883
 Yao, Y. 2743
 Yeh, B. 3605
 Yeh, Zong-Mu 2586
 Yen, G. 2622
 Yen, Gary 1038
 Yesidirek, A. 2539
 Yeung, D. 198, 4353
 Yih, Y. 1507
 Yip, Percy P.C. 4667
 Yiwei, C. 521
 Yokoi, H. 3877
 Yokoi, K. 980
 Yokoi, Yoshihide 3800
 Yokoyama, Y. 3207
 Yoon, B. 1766
 Yoon, H.S. 3083
 Yoon, T. 4220
 Yoroizawa, I.
 Yoshida, K. 3534
 Yoshiyuki, Usami 4529
 You, S. 1325, 4149
 Young, D. 1546, 3982
 Young, F. 2058
 Youssef, H. 3363
 Yu, Vsevolod 376
 Yu, X. 526
 Yu, Xia-Hu 209
 Yu, Yi 370
 Yusof, R. 2599
 Yuwono, B. 3148
 Zaghloul, M.E. 2276
 Zaghw, A. 464, 3271
 Zak, S. 4547
 Zalama, E. 2848
 Zaman, R. 2018
 Zaverucha, G. 3738
 Zell, A. 719
 Zeng, Shuang 1632
 Zeng, Z. 193
 Zhan, Jian 88, 1680
 Zhang, Byoung-Tak 215
 Zhang, C. 1012
 Zhang, D. 517, 4479
 Zhang, S. 4553
 Zhang, Shuqun 2108
 Zhang, W. 2361
 Zhang, Xinghu 38
 Zhang, Yitong
 Zhang, Z. 459, 3211
 Zhao, R. 4635
 Zheng, B. 3437
 Zheng-zhi, Wang 2793
 Zhenjiang, M. 4133
 Zhong, X. 2797
 Zhongliang, J. 3403
 Zhou, Hong 3505
 Zhu, H. 3956
 Zhu, X. 4553
 Zhu, Y. 1459
 Zickenheiner, S. 2052
 Zoppoli, R. 2383
 Zuben, F. 1000, 3750
 Zuffa, M. 3790
 Zufiria, Pedro 4113
 Zurada, J. II-1125, 2633
 Zwahlen, Helmut 4226

ICNN TABLE OF CONTENTS

VOLUME I

FAST LEARNING FOR NEURAL NETWORKS-INVITED SESSION

A HIGH PERFORMANCE NEURAL NET SIMULATION ENVIRONMENT	1
<i>U. Muller - Swiss Federal Institute of Technology, SWITZERLAND</i>	
A SUPERCOMPUTER FOR NEURAL COMPUTATION	5
<i>N. Morgan - International Computer Science</i>	
HIGH SPEED PARALLEL HARDWARE PERFORMANCE ISSUES FOR NEURAL NETWORK APPLICATIONS.....	10
<i>R. Means - HNC, Inc., USA</i>	
EMULATION ON THE CNAPS MASSIVELY PARALLEL MICROPROCESSOR	
<i>not available at time of print</i>	
AN EFFICIENT MULTIPROCESSOR MAPPING ALGORITHM FOR THE KOHONEN FEATURE MAP AND ITS DERIVATIVE MODELS	17
<i>G. Whittington, C.T. Spracklen - University of Aberdeen, UK</i>	
BENCHMARKING OF THE CM-5 AND THE CRAY MACHINES WITH A VERY LARGE BACKPROPAGATION NEURAL NETWORK	22
<i>X. Liu, G. Wilcox - University of Minnesota, USA</i>	

SUPERVISED LEARNING

REDUCING THE NUMBER OF MULTIPLIES IN BACKPROPAGATION	23
<i>Kan Boonyanit - LSI Logic Corporation, USA</i>	
<i>Allen Peterson - STAR Lab, Department of Electrical Engineering, USA</i>	
ACCELERATING THE TRAINING OF FEED-FORWARD NEURAL NETWORKS USING GENERALIZED HEBBIAN RULES FOR INITIALIZING THE INTERNAL REPRESENTATIONS	32
<i>Nicolaos Karayiannis - Department of Electrical Engineering, University of Houston, USA</i>	
THE DELTA RULE AND LEARNING FOR MIN-MAX NEURAL NETWORKS	38
<i>Xinghu Zhang, ChangChieh Hang, Pei-Zhuang Wang, S. Tan - National University of Singapore, SINGAPORE</i>	
BERNOULLI ERROR MEASURE APPROACH TO TRAIN FEEDFORWARD ARTIFICIAL NEURAL NETWORKS FOR CLASSIFICATION PROBLEMS	44
<i>Mo-yeun Chow, Paul Goode, Alberico Menozzi, Jason Teeter, James P. Thrower</i>	
<i>North Carolina State University, USA</i>	
OPTIMIZING LOCALITY OF DATA REPRESENTATION IN MLP NETWORKS	50
<i>S. Narayan, E. Page - Clemson University, USA</i>	
ESTIMATING THE MEAN AND VARIANCE OF THE TARGET PROBABILITY DISTRIBUTION	53
<i>D. Nix, A. Wiegand - University of Colorado at Boulder, USA</i>	
COMPLEXITY OF LEARNING: THE CASE OF EVERYDAY NEURAL NETWORKS	61
<i>B. Olah, Cs. Szepesvari - Institute of Isotopes, HUNGARY</i>	
ON THE STABILITY OF SYMMETRIC ADAPTIVE DECORRELATION	66
<i>F. Silva, L. Almeida - INESC/IST, PORTUGAL</i>	
PROJECTION-BASED METHODS FOR STEPSIZE ADAPTATION AND THEIR APPLICATION TO THE TRAINING OF FEEDFORWARD ARTIFICIAL NEURAL NETWORKS	72
<i>C. Codrington, M. Mohandes - Purdue University, USA</i>	

CASE STUDIES IN THE USE OF A HYPERPLANE ANIMATOR FOR NEURAL NETWORK RESEARCH	78
<i>L. Pratt, S. Nicodemus - Colorado School of Mines, USA</i>	
ON THE RELATIVE TIME COMPLEXITIES OF STANDARD AND CONJUGATE GRADIENT BACK PROPAGATION	84
<i>J. Stone, R. Lister - University of Sussex, ENGLAND</i>	
A NEW APPROACH IN MULTILAYER PERCEPTRON-FORWARD PROPAGATION (FP)	88
<i>Jian Zhan, Fu Li - Portland State University, USA</i>	
A MAPPING FROM LINEAR TREE CLASSIFIERS TO NEURAL NET CLASSIFIERS	94
<i>Y. Park - Kyung Hee University, KOREA</i>	
ANTI-HEBBIAN RULE FOR FASTER BACKPROPAGATION LEARNING.....	101
<i>Mohamed M. Bayoumi, Hazem M. Abbas - Department of Electrical Engineering, Queen's University at Kingston, CANADA</i>	
GMDP: A NOVEL UNIFIED NEURON MODEL FOR MULTILAYER FEEDFORWARD NEURAL NETWORKS	107
<i>S. Li, E. Leiss - University of Houston, USA Y. Chen - Western Atlas Software, USA</i>	
WEIGHT INITIALIZATION OF MLP CLASSIFIERS USING BOUNDARY-PRESERVING PATTERNS	113
<i>T. Kaylani, S. Dasgupta - Temple University, USA</i>	
A DIVIDE-AND-CONQUER METHODOLOGY FOR MODULAR SUPERVISED NEURAL NETWORK DESIGN	119
<i>H. Fu - National Chiao-Tung University, TAIWAN C. Chiang - Industrial Technology Research Institute, TAIWAN</i>	
THE SOLAR ALGORITHM	125
<i>K. Demura, M. Kajiura, Y. Anzai - Keio University, JAPAN</i>	
RANDOMNESS IN GENERALIZATION ABILITY: A SOURCE TO IMPROVE IT?	131
<i>D. Sarkar - University of Miami, USA</i>	
REGULARIZATION NETWORKS FOR APPROXIMATING MULTI-VALUED FUNCTIONS: LEARNING AMBIGUOUS INPUT-OUTPUT MAPPINGS FROM EXAMPLES	137
<i>Masahiko Shizawa - ATR Human Information Processing Research Laboratories, Advanced Telecommunications Research, JAPAN</i>	
IMPROVING GENERALIZATION PERFORMANCE BY INFORMATION MINIMIZATION	143
<i>R. Kamimura, T. Takagi, S. Nakanishi - Tokai University, JAPAN</i>	
OPTIMIZATION OF ACTIVATION FUNCTIONS IN MULTILAYER NEURAL NETWORK APPLIED TO PATTERN CLASSIFICATION.....	149
<i>K. Nakayama, Y. Kimura - Kanazawa University, JAPAN</i>	
ENHANCED BACK-PROPAGATION LEARNING AND ITS APPLICATION TO BUSINESS EVALUATION	155
<i>J. Watada, M. Arisawa - Osaka Institute of Technology, JAPAN</i>	
A CRITERION FOR TRAINING REFERENCE VECTORS AND IMPROVED VECTOR QUANTIZATION	161
<i>Atsushi Sato, Jun Tsukumo - Information Technology Research Laboratories, NEC Corporation, JAPAN</i>	
PARALLEL TRAINING OF SIMPLE RECURRENT NEURAL NETWORKS	167
<i>P. McCann, B. Kalman - Washington University, USA</i>	

FEEDBACK-ERROR LEARNING SCHEME USING RECURRENT NEURAL NETWORKS FOR NONLINEAR DYNAMIC SYSTEMS	175
<i>D. Rao, D. Bitner, M. Gupta - University of Saskatchewan, CANADA</i>	
METHOD OF DIGGING TUNNELS HORIZONTALLY INTO THE ERROR HYPERSURFACE TO SPEED UP TRAINING AND TO ESCAPE FROM LOCAL MINIMA	181
<i>X. Liang - Peking University and Tsinghua University, P.R. CHINA</i>	
<i>S. Xia, J. Du - Tsinghua University, P.R. CHINA</i>	
PENALIZED LEARNING AS MULTIPLE OBJECT OPTIMIZATION	187
<i>Y. Matsuyama - Ibaraki University, JAPAN</i>	
<i>H. Nakayama - Hitachi Ltd., JAPAN</i>	
<i>T. Sasai, Y. Perng Chen - Ibaraki University, JAPAN</i>	
A LEARNING ALGORITHM FOR MULTI-LAYER PERCEPTRONS WITH HARD-LIMITING THRESHOLD UNITS	193
<i>R. Goodman, Z. Zeng - California Institute of Technology USA</i>	
CONSTRUCTIVE NEURAL NETWORKS: SOME PRACTICAL CONSIDERATIONS	198
<i>T. Kwok, D. Yeung - Hong Kong University of Science and Technology, HONG KONG</i>	
CONSTRUCTIVELY LEARNING A NEAR-MINIMAL NEURAL NETWORK ARCHITECTURE	204
<i>J. Fletcher, Z. Obradovic - Washington State University, USA</i>	
EXPLICIT SYNTHESIS OF MULTILAYER PERCEPTRONS USING WALSH EXPANSION	209
<i>Xia-Hu Yu -</i>	
<i>National Communications Research Laboratory, Department of Radio Engineering, P.R. CHINA</i>	
AN INCREMENTAL LEARNING ALGORITHM THAT OPTIMIZES NETWORK SIZE AND SAMPLE SIZE IN ONE TRIAL	215
<i>Byoung-Tak Zhang -</i>	
<i>German National Research Center for Computer Science (GMD), GERMANY</i>	
A NEURAL NET FOR BLIND SEPARATION OF NONSTATIONARY SIGNAL SOURCES	221
<i>K. Matsuoka, M. Kawamoto - Kyusyu Institute of Technology</i>	
IDENTIFICATION OF FLEXIBLE STRUCTURES WITH PIEZO-ELECTRIC SENSORS AND ACTUATORS	Not Available at time of Print
<i>P. Arena, L. Fortuna, S. Graziani, G. Muscato</i>	
THE FRACTAL GEOMETRY OF BACKPROPAGATION	233
<i>Raul Rojas - Freie Universitat Berlin, BERLIN</i>	
STRUCTURE TRAINING OF NEURAL NETWORKS	239
<i>A.K. Garga, N.K. Bose - The Pennsylvania State University, USA</i>	
THE SECOND DERIVATIVE OF A RECURRENT NETWORK	245
<i>Stephen Piche - Microelectronic and Computer Technology Corporation, USA</i>	
ANALYSIS OF INPUT VECTOR SPACE FOR SPEEDING UP LEARNING IN FEEDFORWARD NEURAL NETWORKS	251
<i>Chidchanok Lursinsap - Center for Advanced Computer Studies, University of Southwestern Louisiana, USA</i>	
<i>Vasana Coowaninwong - Department of Mathematics, Chulalongkorn University, THAILAND</i>	
A FIRST ORDER ADAPTIVE LEARNING RATE ALGORITHM FOR BACK PROPAGATION NETWORKS	257
<i>Philip Nachtsheim - Information Sciences Division (NASA ARC), USA</i>	
HOW TO "SECURE" THE DECISIONS OF A NN CLASSIFIER	263
<i>C. Decaestecker, T. Van de Merckt - Universite Libre de Bruxelles, BELGIUM</i>	

STRUCTURE OF LEARNING IN THE COMPLEX NUMBERED BACK-PROPAGATION NETWORK	269
<i>Tohru Nitta - Electrotechnical Laboratory, JAPAN</i>	
A STRUCTURAL LEARNING BY ADDING INDEPENDENT NOISES TO HIDDEN UNITS	275
<i>T. Kurita, H. Asoh, S. Umeyama, S. Akaho, A. Hosomi - Electrotechnical Laboratory, JAPAN</i>	
STUDY ON EFFECT OF DETERMINISTIC LEARNING SEQUENCE	279
<i>C. Lursinap, P. Wantanapongse - Chulalongkorn University, THAILAND</i>	
AN EFFICIENT CONSTRAINED LEARNING ALGORITHM FOR OPTIMAL LINEAR SEPARABILITY OF THE INTERNAL REPRESENTATIONS	285
<i>D. Karras, S. Perantonis, S. Varoufakis - Institute of Information and Telecommunications, GREECE</i>	
TRANSFORMATION OF BACK-PROPAGATION NETWORKS IN MULTIREOLUTION LEARNING	290
<i>W. Chan, L. Chan - Chinese University of Hong Kong, HONG KONG</i>	
DELTA TRAINING STRATEGIES	295
<i>I. Cloete, J. Ludik - University of Stellenbosch, SOUTH AFRICA</i>	
WAVELET NEURAL NETWORKS ARE ASYMPTOTICALLY OPTIMAL APPROXIMATORS FOR FUNCTIONS OF ONE VARIABLE	299
<i>V. Kreinovich, O. Sirisaengtaksin, S. Cabrera - University of Texas at El Paso, USA</i>	
NEURAL NETWORK BAYES ERROR ESTIMATION	305
<i>C. Martin, Steven Rogers, Dennis Ruck - Air Force Institute of Technology, USA</i>	
COMPARISON OF FOUR LEARNING ALGORITHMS FOR MULTILAYER PERCEPTRON WITH FIR SYNAPSES	309
<i>N. Benvenuto - Universita di Padova, ITALY</i>	
<i>F. Piazza, A. Uncini - Universita di Ancona, ITALY</i>	
MULTISSETS MODELING LEARNING: AN UNIFIED THEORY FOR SUPERVISED AND UNSUPERVISED LEARNING	315
<i>L. Xu - The Chinese University of Hong Kong and Peking University, HONG KONG</i>	
A NOTE ON THE ESTIMATION OF THE GENERALIZATION ERROR AND THE PREVENTION OF OVERFITTING	321
<i>D. Pados, P. Papantoni-Kazakos - University of Virginia, USA</i>	
HOW PRACTICAL ARE VC DIMENSION BOUNDS?	327
<i>S. Holden - University of Cambridge, UNITED KINGDOM</i>	
MODIFYING TRAINING ALGORITHMS FOR IMPORVED FAULT TOLERANCE	333
<i>C. Chiu, K. Mehrota, C. Mohan, S. Ranka - Syracuse University, USA</i>	
ADAPTIVE GAIN NETWORKS	339
<i>C Codrington - Purdue University, USA</i>	
INTRODUCING INVARIANCE: A PRINCIPLES APPROACH TO WEIGHT SHARING	345
<i>J Shawe-Taylor - University of London, UK</i>	
A LARGE SCALE NEURAL NETWORK WITH NONLINEAR SYNAPSES	350
<i>J. Lont - Swiss Federal Institute of Technology, SWITZERLAND</i>	
STRUCTURAL LEARNING AND ITS APPLICATIONS TO RULE EXTRACTION	354
<i>M. Ishikawa - Kyushu Institute of Technology, JAPAN</i>	
THE DEPENDENCE IDENTIFICATION NEURAL NETWORK CONSTRUCTION ALGORITHM	End of Vol. VII
<i>J. Moody, P. Antsaklis - University of Notre Dame, USA</i>	

A STUDY ON THE PARTITIONING CAPABILITIES OF TWO-LAYER NEURAL NETWORKS	360
<i>C. Lin, A. El-Jaroudi - University of Pittsburgh, USA</i>	
NETWORK COMPLEXITY AND LEARNING EFFICIENCY OF CONSTRUCTIVE LEARNING ALGORITHMS	366
<i>W. Fang, R. Lacher - Florida State University, USA</i>	
ON-LINE STABLE NONLINEAR MODELLING BY STRUCTURALLY ADAPTIVE NEURAL NETS	370
<i>Shaohua Tan, Yi Yu - Department of Electrical Engineering, National University of Singapore, SINGAPORE</i>	
SIMPLE HEURISTIC METHODS FOR INPUT PARAMETERS' ESTIMATION IN NEURAL NETWORKS	376
<i>Igor V. Tetko, Vsevolod Yu, Alexander Luik - Institute of Bioorganic & Petroleum Chemistry, UKRAINE</i>	
A NOTE ON BACKPROPAGATION, PROJECTION LEARNING, AND FEEDBACK IN NEURAL SYSTEMS	391
<i>K. Weigl - INRIA, FRANCE</i>	
THE MANIFOLD BACK PROPAGATION ALGORITHM	395
<i>S. Puechmorel, M. Kahla, F. Castanie - ENSEEIHT-GAPSE, FRANCE</i>	
MMI TRAINING OF MINIMUM COMPLEXITY ADAPTIVE NEAREST NEIGHBOR CLASSIFIERS	401
<i>W. Fakhir, M. Kamel, M.I. Elmastry - University of Waterloo, CANADA</i>	
RBF AND CBF NEURAL NETWORK LEARNING PROCEDURES	407
<i>W. Poehchmueller, S. Halgamuge, M. Glesner, P. Schweikert, A. Pfeiffermann - Darmstadt University of Technology, GERMANY</i>	
APPLICATION OF PRONY SIGNAL ANALYSIS TO RECURRENT NEURAL NETWORKS	413
<i>C. Isik, M. Farrokhi - Syracuse University, USA</i>	
MAXIMIZING FAULT TOLERANCE IN MULTILAYER NEURAL NETWORKS	419
<i>C. Lin, I. Wu - University of Missouri at Columbia, USA</i>	
PREPROCESSING OF TRAINING FOR BACK PROPAGATION ALGORITHM: HISTOGRAM EQUALIZATION	425
<i>Taek Kwon, Ehsan Feroz, Hui Cheng - University of Minnesota, Duluth, USA</i>	
FAULT-TOLERANCE INCLUSION IN NEURAL NETWORKS BY A CONCURRENT TRAINING ALGORITHM	431
<i>C. Chu, C. Chow - University of Southwestern Louisiana, USA</i>	
REINFORCEMENT LEARNING USING A RECURRENT NEURAL NETWORK	437
<i>F. Ho, M. Kamel - University of Waterloo, CANADA</i>	
A MULTI TEMPORAL TRAINABLE DELAY NEURAL NETWORK	441
<i>E. Jumper - Griffis AFB, USA</i>	
DYNAMIC ADAPTION OF THE ERROR SURFACE FOR THE ACCELERATION OF THE TRAINING OF NEURAL NETWORKS	447
<i>Antonio G. Thome, Manoel F. Tenorio - Purdue University, USA</i>	
BIFURCATIONS IN NONLINEAR NETWORKS INITIALIZED WITH LINEAR NETWORK WEIGHT SOLUTIONS	453
<i>V. Stonick, F. Coetzee - Carnegie Mellon University, USA</i>	
A NEURAL NETWORK MODEL WITH COMPENSATING INPUTS	459
<i>B. Sun, Z. Zhang - China Academy of Electronics and Information Technology, CHINA</i>	
AN AUTOMATED APPROACH FOR SELECTING THE LEARNING RATE AND MOMENTUM IN BACK-PROPAGATION NETWORKS	464
<i>A. Zaghw, W. Dong - Cairo University, EGYPT</i>	
NN-LEARNING WITH BACKPROPAGATION AND ADAPTIVE FILTER TECHNIQUES	470
<i>B. Humbert - University of Houston, USA</i>	

AN UPDATE FUNCTION THAT SPEEDS UP BACKPROPAGATION LEARNING	477
<i>W. El Deredy, N.M. Branston - Institute of Neurology, Queen Square, UK</i>	
EXPERIMENTAL ANALYSIS OF THE RANDOM MEMORY SPACE	483
<i>J. Nazuno, W. Cuevas, R. Guzman, E. Medina - Universidad del Valle De Mexico, MEXICO</i>	
DIRECTED PRODUCT TERM SELECTION IN SIGMA-PI NETWORKS	489
<i>P. Noakes, M. Heywood - University of Essex, U.K.</i>	
AN EFFICIENT TRAINING ALGORITHM FOR MULTILAYER NEURAL NETWORKS BY HOMOTOPY CONTINUATION METHOD	494
<i>Xin Wang - Harbin Institute of Technology, P.R. CHINA</i>	
AN IMPLEMENTATION AND EVALUATION OF THE ART1 NEURAL NETWORK FOR PATTERN RECOGNITION	498
<i>J. Albright - Southern College of Technology, USA</i>	
FACTORS INFLUENCING THE CHOICE OF A LEARNING RATE FOR A BACK-PROPAGATION NEURAL NETWORK	503
<i>S. Roy - Defense Research Establishment Valcartier, CANADA</i>	
SCALING PROPERTIES OF ON-LINE LEARNING WITH MOMENTUM	508
<i>T. Heskes - University of Illinois, USA</i> <i>W. Wiegerinck, A. Komoda - University of Nijmegen, THE NETHERLANDS</i>	
A ROBUST APPROACH TO SUPERVISED LEARNING IN NEURAL NETWORK	513
<i>K. Liano - Pavilion Technologies, USA</i>	
A TRAINING APPROACH BASED ON LINEAR SEPARABILITY ANALYSIS FOR LAYERED PERCEPTRONS	517
<i>D. Zhang, M. Kamel, M.I. Elmasry - University of Waterloo Ontario, CANADA</i>	
FEEDFORWARD NEURAL NETWORKS TO LEARN DRAWING LINES	521
<i>C. Yiwei - Western Atlas Software Houston, USA</i> <i>F. Bastani - University of Houston, USA</i>	
TRAINING HARD-LIMITING NEURONS USING BACK-PROPAGATION ALGORITHM BY UPDATING STEEPNESS FACTORS	526
<i>X. Yu, W. Miller - University of Windsor, CANADA</i> <i>N. Ioh - Oakland University, USA</i>	
FEATURE INDUCTION BY BACKPROPAGATION	531
<i>Edmund Ronald, Marc Schoenauer, Martine Sebag - CMAP, Ecole Polytechnique, FRANCE</i>	
ON MODIFYING THE WEIGHTS IN A MODULAR RECURRENT CONNECTIONIST SYSTEM	535
<i>H. Elsherif, M. Hambaba - Stevens Institute of Technology, USA</i>	
AN EFFICIENT ALGORITHM FOR CLUSTERING DATA AND BEST MODEL SELECTION USING AIC	540
<i>Shizuo Asogawa, Norio Akamatsu -</i> <i>Intelligence Information Engineering Department, Tokushima University, JAPAN</i>	
GEOMETRICAL INITIALIZATION, PARAMETRIZATION AND CONTROL OF MULTILAYER PERCEPTRONS: APPLICATION TO FUNCTION APPROXIMATION	546
<i>F. Rossi, C. Gegout - Ecole Normale Supérieure de Paris, FRANCE</i>	
A CHOOSING METHOD OF TRAINING SETS WHICH PREVENT OVER-LEARNING	551
<i>Kazutaka Yamasaki, Hidemitsu Ogawa - Tokyo Institute of Technology, JAPAN</i>	
TWO ADAPTIVE STEPSIZE RULES FOR GRADIENT DESCENT AND THEIR APPLICATION TO THE TRAINING OF FEEDFORWARD ARTIFICIAL NEURAL NETWORKS	555
<i>S. Gelfand, M. Mohandes, C. Codrington - Purdue University, USA</i>	

SEQUENTIAL CLASSIFICATION BY PERCEPTRONS AND APPLICATION TO NET PRUNING OF MULTILAYER PERCEPTRON	561
<i>Kou-Yuan Huang - National Chiao Tung University, R.O.C.</i>	
ARE MODIFIED BACK-PROPAGATION ALGORITHMS WORTH THE EFFORT?	567
<i>Dr. Doghan Alpsan - U A E University, Department of Medical Physics and Engineering, UNITED ARAB EMIRATES</i>	
<i>M. Towsey - United Arab Emirates University, Department of Medical Physics and Engineering, UNITED ARAB EMIRATES</i>	
<i>O. Ozdamar - Department of Biomedical Engineering, University of Miami, USA</i>	
<i>A. Tsoi - University of Queensland, Queensland, AUSTRALIA</i>	
<i>D.N. Ghista - U A E University, Department of Medical Physics and Engineering, UNITED ARAB EMIRATES</i>	
A NOVEL APPROACH TO FAST LEARNING : SMART NEURAL NETS	572
<i>B.W. Dahanayake, A.R.M. Upton - Division of Neurology, McMaster University, CANADA</i>	
SPEED UN THE LEARNING PROCESS OF FEEDFORWARD NEURAL NETWORKS	578
<i>L.Y. Tseng, T.H. Huang - National Chung Hsing University, R.O.C.</i>	
A FAST AND ROBUST PATTERN RECOGNITION USING A NEW ALGORITHM FOR TRAINING FEED-FORWARD NEURAL NETWORKS	582
<i>Mario Mastriani, Ph.D. - Universidad de Buenos Aires, ARGENTINA</i>	
GENERALIZATION AND C-INFORMATION	588
<i>Ryotaro Kamimura - Information Science Laboratory, Tokai University, JAPAN</i>	
IMPROVING GENERALIZATION PERFORMANCE BY CONTROLLING ALPHA-INFORMATION	594
<i>Ryotaro Kamimura - Information Science Laboratory, Department of Electrical Engineering, Tokai University, JAPAN</i>	
AN ANALYSIS OF WEIGHT DECAY AS A METHODOLOGY OF REDUCING THREE-LAYER FEEDFORWARD ARTIFICIAL NEURAL NETWORKS FOR CLASSIFICATION PROBLEMS	600
<i>Mo-yuen Chow, Jason Teeter - Department of Electrical and Computer Engineering, North Carolina State University, USA</i>	

VOLUME II

UNSUPERVISED LEARNING

S__ART: A MODIFIED ART 2-A ALGORITHM WITH RAPID INTERMEDIATE LEARNING CAPABILITIES	606
<i>Ian Taylor, Mike Greenhough - Department of Physics & Astronomy, UK</i>	
<i>Daniel McCormack - Department of Computing Mathematics, University of Wales, College of Cardiff, UK</i>	
THE USE OF FORMAL MEASURES FOR THE TRAINING OF HIERARCHICAL KOHONEN MAPS	612
<i>P. Weierich, M. von Rosenberg - Bavarian Research Ctr. for Knowledge-Based Systems, GERMANY</i>	
UNSUPERVISED LEARNING: THE DOG RABBIT STRATEGY	616
<i>M. Alder, P. McKenzie - University of Western Australia, AUSTRALIA</i>	
STOCHASTICALLY COMPETITIVE LEARNING ALGORITHM FOR VECTOR QUANTIZER DESIGN	622
<i>Hao Bi, Guangguo Bi, Yimin Mao - Department of Radio Engineering, Southeast University, CHINA</i>	
DYNAMIC HIERARCHICAL SELF-ORGANIZING NEURAL NETWORKS	627
<i>W. Lin, H. Hung - Northwestern University, USA</i>	
UNSUPERVISED LEARNING WITH THE SOFT-MEANS ALGORITHM	633
<i>C. Thornton - University of Sussex, BRIGHTON</i>	
NONLINEAR DATA COMPRESSION AND REPRESENTATION BY COMBINING SELF-ORGANIZING MAP AND SUBSPACE RULE	637
<i>J. Joutsensalo - Helsinki University of Technology, FINLAND</i>	
TRAINING THE SELF-ORGANIZING FEATURE MAP USING HYBRIDS OF GENETIC AND KOHONEN METHODS	641
<i>M. McInerney - Rose-Hulman Institute, USA</i>	
<i>A. Dhawan - University of Cincinnati, USA</i>	
A NEW QUANTITATIVE MEASURE OF TOPOLOGY PRESERVATION IN KOHONEN'S FEATURE MAPS	645
<i>T. Villmann, R. Der - University Leipzig, GERMANY</i>	
<i>T. Martinez - Siemens AG, GERMANY</i>	
MANAGING THE NOISY GLAUCOMATOUS TEST DATA BY SELF ORGANISING MAPS	649
<i>X. Liu, G. Cheng, J. Wu - Birkbeck College, U.K.</i>	
THE "CAPTURE EFFECT": A NEW SELF-ORGANIZING NETWORK FOR "ADAPTIVE RESOLUTION" CLUSTERING IN CHANGING ENVIRONMENTS	653
<i>Federico Firenze, Pietro Morasso - University of Genova, ITALY</i>	
A MEASURE OF DISORDER FOR THE SELF-ORGANIZING MAP	659
<i>Ari Hamalainen - Rolf Nevanlinna Institute, FINLAND</i>	
AN UNSUPERVISED NEURAL NETWORK APPROACH FOR MACHINE-PART CELL DESIGN	665
<i>B. Malakooti, Z. Yang - Case Western Reserve University, USA</i>	
SELF-ORGANIZED LEARNING OF 3 DIMENSIONS	671
<i>Cs. Szepesvari, A. Lorincz - Institute of Isotopes, HUNGARY</i>	
AN UNSUPERVISED NEURAL NETWORK WITH A MEMORY REPLACEMENT EFFECT	675
<i>C. Lee, C. Chung - Hong Kong Polytechnic, HONG KONG</i>	
TOPOLOGICAL PRESERVING NETWORK BY THE EXISTENCE OF LATERAL FEEDBACK	681
<i>Y. So - The Chinese University of Hong Kong, HONG KONG</i>	
<i>K. Chan - The University of Hong Kong, HONG KONG</i>	
LINEAR FEATURE EXTRACTION IN NETWORKS WITH LATERAL CONNECTIONS	686
<i>D. Obradovic, G. Deco - Siemens AG, Corporate Research and Development, GERMANY</i>	