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## Published Papers

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### A Mechanical System Engineering

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A1 Repairing of stress corrosion cracking in overlaying of Inconel 182 by laser surface melting	G. Bao S. Iguro M. Inkyo K. Shinozaki Y. Mahara H. Watanabe	Proceeding of IIW, Doc. IX-2099-04, (2004)
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<b>A12</b> Effects on Inorganic Binder to Improve Strength and Hardness of $\alpha$ +Al18B4O33w/AC4CH alloy Composites	Y. B. Choi J. W. Jung W. J. Park S. C. Huh K. Y. Lee G. Sasaki	Key Eng. Mat., <b>261-263</b> (2004) pp. 1451-1456
<b>A13</b> Modern Trends of Aluminum and Magnesium Alloy Matrix Composites in Japan	G. Sasaki	Proc. of Fifth Joint Canada-Japan Workshop on Composites, (2004) pp. 33-39
<b>A14</b> Development of Coarse and Columnar Ferrite Grains throughout Transformation	Hidegori Kuroki	Journal of the Japan Institute of Metals, <b>68</b> , 5 (2004) pp. 350-352
<b>A15</b> Effect of Minimum Carbon on Coarse Grains in Sintered Iron	Hidegori Kuroki Youichi Tokunaga Hiroyuki Y. Suzuki	PM2004 Conference Proceedings, <b>3</b> (2004) pp. 17-22
<b>A16</b> Assymmetrical Transformation in Different Types of Pure Irons	Hidegori Kuroki	Powder Metallurgy Progress, (2004) pp. 115-117
<b>A17</b> Net Shape Formation of Sub-Micron Alumina with Reduced Flaws by High-Speed Centrifugal Compaction Process	Hiroyuki Y. Suzuki Hidegori Kuroki	Metals and Materials Int., <b>10</b> , 2 (2004) pp. 185-191
<b>A18</b> High Speed Centrifugal Compaction and Sintering of High Alloy Tool Steels	Hiroyuki Y. Suzuki Hidegori Kuroki	Proceedings of EURO PM 2004, (2004) pp. 779-784
<b>A19</b> Development of the robust MHD code using CIP scheme	Nobuhiro Nishino	Journal of Plasma and Fusion Research Series, <b>6</b> (2004)
<b>A20</b> Positron Lifetime Studies of Non-Stoichiometric Defects in the $\gamma$ -Phase Cu-Al and Cu-Ga Alloys	Hiroshi Fukushima Shinsuke Yokote	Materials Science Forum, <b>445 &amp; 446</b> (2004) pp. 81-83
<b>A21</b> HREM Observation of Twin Boundary-dislocation Junction in Polycrystalline Silicon	Isamu Kuchiwaki Takahiro Hirabayashi Hiroshi Fukushima	Proc. 8th Asia-Pacific Conference on Electron Microscopy, (2004) pp. 487-488
<b>A22</b> In Situ HREM Studies of Solidification Phenomena in the Liquid State P-doped Silicon	Hiroshi Fukushima Isamu Kuchiwaki Takahiro Hirabayashi	Proc. 8th Asia-Pacific Conference on Electron Microscopy, (2004) pp. 673-674
<b>A23</b> Pressure History at the Thrust Wall of a Simplified Pulse Detonation Engine	Takuma Endo Jiro Kasahara Akiko Matsuo Kazuaki Inaba Shigeru Sato Toshitaka Fujiwara	AIAA Journal, <b>42</b> , 9 (2004) pp. 1921-1930
<b>A24</b> Imaging of Vapor/Liquid Distributions of Split-Injected Diesel Sprays in a 2-D Model Combustion Chamber	Yuyin Zhang Keiya Nishida	Combustion Science and Technology, <b>176</b> , 9 (2004) pp. 1465-1491
<b>A25</b> Effect of Injection Temporal-Splitting on Characteristics of Fuel-Air Mixture Formation in a Common Rail Diesel Spray	Yuyin Zhang Keiya Nishida	Proceedings of the I MECH E, Part D, Journal of Automobile Engineering, <b>218</b> , 3 (2004) pp. 323-331
<b>A26</b> Characterization of Initial Spray From a D.I. Gasoline Injector by Holography and Laser Diffraction Method	Tie Li Keiya Nishida Hiroyuki Hiroyasu	Atomization and Sprays, <b>14</b> , 5 (2004) pp. 477-494
<b>A27</b> An Insight into Effect of Split Injection on Mixture Formation and Combustion of DI Gasoline Engines	Tie Li Keiya Nishida Yuyin Zhang Masahisa Yamakawa Hiroyuki Hiroyasu	SAE Paper, 2004-01-1949 (2004) pp. 1-8
<b>A28</b> Enhancement of Stratified Charge for DISI Engines through Split Injection -Effect and Its Mechanism-	Tie Li Keiya Nishida Yuyin Zhang Tuyoshi Onoe Hiroyuki Hiroyasu	Proceedings of the Sixth International Symposium on Diagnostics and Modeling of Combustion in Internal Combustion Engines (COMODIA 2004), (2004) pp. 1-7



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<b>A38</b> Deep underground measurements of Co60 in steel exposed to the Hiroshima atomic bomb	M. Hult J. Gasparro R. Vasselli K. Shizuma M. Hoshi D. Arnold S. Neumaier	Applied Radiation and Isotopes, <b>61</b> (2004) pp. 173-177
<b>A39</b> Finite Element Stress Response Analysis and Strength Estimation of Butt Adhesive Joints of Hollow Cylinders Subjected to Impact Torsional Loadings	Toshiyuki SAWA Takahito SUZUKI Shouichi KIDO	Polymer Processing Society Annual Meeting and 20th Anniversary (CD-ROM), (2004)
<b>A40</b> Stress Analysis and Strength Estimation of Bonded Shrink Fitted Joints of Solid Shafts under Push-off Force	Toshiyuki SAWA Masahiro YONENO	Polymer Processing Society Annual Meeting and 20th Anniversary (CD-ROM), (2004)
<b>A41</b> Sealing Performance of Pipe Flange Connections With Shape Memory Allow Gaskets Under Internal Pressure	Teruhisa Tatsuoka Yoshio Takagi Toshiyuki Sawa	Proceedings of 2004 ASME/JSME PRESSURE VESSELS AND PIPING CONFERENCE, Analysis of Bolted Joints, <b>478</b> (2004) pp. 41-48
<b>A42</b> Thermal stress Analysis and Sealing Performance Evaluation of Pipe Flange Connections With Spiral Wound Gaskets Under Elevated Temperature	Toshiyuki SAWA Wataru MAEZAKI	Proceedings of 2004 ASME/JSME Pressure Vessel and piping Conference, Analysis of Bolted Joints, <b>478</b> (2004) pp. 61-66
<b>A43</b> FEM Stress Analysis and Sealing Performance in Bolted Flange Connection With Cover of Pressure Vessel Subjected to Internal Pressure	Toshiyuki SAWA Rie HIGUCHI	Proceedings of 2004 ASME/JSME Pressure Vessel and piping Conference, Analysis of Bolted Joints, <b>478</b> (2004) pp. 81-88
<b>A44</b> Load Factor Based Calculation for Bolt Load and Gasket Load Changes Due to Internal Pressure	Satoshi NAGATA Mitsuhiro SUMOTO Toshiyuki SAWA	Proceedings of 2004 ASME/JSME Pressure Vessel and Piping Conference, Analysis of Bolted Joints, <b>478</b> (2004) pp. 89-96
<b>A45</b> Stress Analysis and the Sealing Performance Evaluation of Pipe Flange Connections With Gaskets Subjected to Internal Pressure and External Bending Moment	Toshiyuki SAWA Wataru MAEZAKI Satoshi NAGATA	Proceeding of 2004 ASME/JSME Pressure Vessel and Piping Conference, Analysis of Bolted Joints, <b>478</b> (2004) pp. 137-144
<b>A46</b> Three-dimensional Finite Element Stress Analysis of Butt Adhesive Joints with Fillers under Static Tensile Loadings	Toshiyuki SAWA Kohei ICHIKAWA	Proceedings of 2004 BEIJING BONDING TECHNOLOGY SYMPOSIUM(CD-ROM), (2004)
<b>A47</b> Stress Analysis of Bonded Shrink Fitted Joints under Push-off Forces	Masahiro YONENO Toshiyuki SAWA	Proceedings of 2004 BEIJING BONDING TECHNOLOGY SYMPOSIUM (CD-ROM), (2004)
<b>A48</b> FEM Stress Analysis and Strength Estimation of Stepped-lap Adhesive Joints of Dissimilar Adherends under Static Tensile Loadings	Toshiyuki Sawa Kohei Ichikawa	Proceedings of 2004 ASME International Mechanical Engineering Congress (CD-ROM), (2004)

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<b>A50</b> Finite Element Stress Analysis and Strength Evaluation of Adhesive Butt Joints of Circular Pipes Combining Coupling Collar With Adhesive Subjected to Internal Pressure, Temperature Change and External	Masahide Katsuo Toshiyuki Sawa	Proceedings of 2004 ASME International Mechanical Engineering Congress (CD-ROM), (2004)
<b>A51</b> A Three-dimensional Axisymmetrical Thermal Stress Analysis of Butt Adhesive Joints of Finite Solid Cylinders	Toshiyuki Sawa Ryota Tanase	Proceedings of 2004 ASME International Mechanical Engineering Congress (CD-ROM), (2004)
<b>A52</b> Finite Element Stress Analysis and Estimation of the Sealing Performance in Pipe Fittings with PTFE Tape for Threaded Connections under Internal Pressure	Mitsutoshi Ishimura Masahide Katsuo Toshiyuki Sawa	Proceedings of 2004 ASME International Mechanical Engineering Congress (CD-ROM), (2004)
<b>A53</b> Stress Analysis and a Method for Designing Bolted Joints	Toshiyuki Sawa	Proceedings of 2004 ASME International Mechanical Engineering Congress (CD-ROM), (2004)
<b>A54</b> Multiscale computational simulation of deformation behavior of TRIP steel with growth of martensitic particles in unit cell by asymptotic homogenization method	Takeshi IWAMOTO	International Journal of Plasticity, <b>20</b> , 4-5 (2004) pp. 841-869
<b>A55</b> Finite element simulation of martensitic transformation in single-crystal TRIP steel based on crystal plasticity with cellular automata approach	Takeshi IWAMOTO Toshio TSUTA	Key Engineering Materials, <b>274-276</b> (2004) pp. 679-684
<b>A56</b> Design and performance of gear pumps with a non-involute tooth profile	Kazuteru Nagamura Kiyotaka Ikejo Florin Gabriel Tutulan	Journal of Engineering Manufacture (IMEchE, UK), <b>218</b> , Part B (2004) pp. 699-711
<b>A57</b> DNS of supersonic transitional and turbulent flows	Hiroshi Maekawa Daisuke Watanabe Kenshi Yamashita	Proc. of IWACOM (Invited Paper), <b>1</b> (2004)
<b>A58</b> Analysis of Submerged Water Jets by Visualization Method (Flow Pattern and self-Induced Vibration of Jet)	Nobukatsu Shimada Hideki Hibara Yukio Ishibashi Masaru Sumida Kouzou Sudo	Journal of Visualization, <b>7</b> , 4 (2004) pp. 281-289
<b>A59</b> Three-dimensional evolution of Structure and acoustic wave generation in a compressible plane wake	Daisuke Watanabe Hiroshi Maekawa	Fluid Dynamics Research, <b>34</b> (2004) pp. 145-165
<b>A60</b> Mach Wave Emission in a Plane Supersonic Jet at High Convective Mach Numbers	Daisuke Watanabe Hiroshi Maekawa	Proc. of 24th Congress of the International Council of the Aeronautical Sciences ICAS2004 (CD-ROM), (2004)
<b>A61</b> Curvature Effects in the Curved Duct for the Compressible Viscous Flow	Kougen Ozaki Hiroshi Maekawa	Proc. of 24th Congress of the International Council of the Aeronautical Sciences ICAS2004 (CD-ROM), (2004)
<b>A62</b> Mathematical Model of Reusability	Takeshi Murayama Shinji Yamamoto Fuminori Oba	Proceedings of 2004 IEEE International Symposium on Electronics and the Environment, (2004) pp. 183-188
<b>A63</b> Real-time Scheduling in Remanufacturing	Takeshi Murayama Hidekazu Tanaka Fuminori Oba	Proceedings of 2004 Japan-U.S.A. Symposium on Flexible Automation, (2004) pp. 1-4
<b>A64</b> Assembly Sequence Planning using K-nearest-neighbor Rule	Takeshi Murayama Toru Eguchi Fuminori Oba	Proceedings of International Conference on Machine Automation, (2004) pp. 155-160

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<b>A66</b> Robust Localization by Fault Diagnosis of Internal Sensor for Mobile Robot	Masafumi Hashimoto Takashi Nakagami Shinji Watanabe Fuminori Oba	Proceeding of 2004 Japan-USA Symposium on Flexible Automation, (2004)
<b>A67</b> Unfalsified control approach to parameter space design of PID controllers	Masami Saeki	Trans. of the Society of Instrument and Control Engineers, <b>40</b> , 4 (2004) pp. 398-404
<b>A68</b> Coaxial control for injection equipments by twin ball screw drive	Kiyoshi Ochi Masami Saeki	The 47th IEEE International Midwest Symposium on Circuits and Systems, (2004) pp. III-145-III-148
<b>A69</b> Gain scheduling controller design for twin rotor hovering system	Makoto Yamashita Masami Saeki Nobutaka Wada Izumi Masubuchi	SICE Annual Conference in Sapporo, (2004) pp. 1196-1201
<b>A70</b> Unfalsified parameter space design of PID controllers for nonlinear plants	Masami Saeki Akihisa Takahashi Osamu Hamada Nobutaka Wada	Proc. of the 2004 IEEE International Conference on Control Applications, (2004) pp. 1521-1526
<b>A71</b> Robust Tracking Control of a Non-holonomic Mobile Robot in the Presence of Disturbances	Nobutaka Wada Masami Saeki Haijun Chen	JSME International Journal Series C, <b>47</b> , 2 (2004) pp. 694-701
<b>A72</b> l2-Gain Analysis of Input Constrained Discrete-Time Linear Systems Using Parameter Dependent Lyapunov Function	Nobutaka Wada Tomonori Oomoto Masami Saeki	Proc. of the 43rd IEEE Conference on Decision & Control, (2004) pp. 1952-1957
<b>A73</b> Robust Model Predictive Control for Linear Parameter Varying Systems using Parameter Dependent Lyapunov Function	Nobutaka Wada Koji Saito Masami Saeki	Proc. of the 47th IEEE Midwest Symposium on Circuits and Systems, (2004) pp. III-133-III-136
<b>A74</b> Realization-Independent Condition for Dissipativity of Descriptor Systems	Izumi Masubuchi	Trans. of the Society of Instrument and Control Engineers, <b>40</b> , 8 (2004) pp. 867-869
<b>A75</b> Computation of Lyapunov Functions for Hybrid Automata via LMIs	Izumi Masubuchi Seiji Yabuki Tokihisa Tsuji	IEICE Transactions on Fundamentals, <b>E87-A</b> , 11 (2004) pp. 2937-2943
<b>A76</b> Dissipativity Inequality for Continuous-Time Descriptor Systems: A Realization-Independent Condition	Izumi Masubuchi	Proc. of 10th IFAC Symposium on Large Scale Systems: Theory and Applications, (2004) pp. 417-420
<b>A77</b> Gain-Scheduled Controller Design Based on Descriptor Representation of LPV Systems: Application to Flight Vehicle Control	Izumi Masubuchi Jun Kato Masami Saeki Atsumi Ohara	Proc. of 43rd IEEE Conference on Decision and Control, (2004) pp. 815-820
<b>A78</b> Touch Sensing for High-speed Spindle Machine Tool	Masahiko Fukuta Yasuo Yamane Katsuhiko Sekiya Tadanori Sugino Norihiko Narutaki	Proc. Int. Conf. on Precision Engineering ( ICoPE2003/04), (2004) pp. 352-357
<b>A79</b> Reduction of Fracture of Work Piece at the Exit of Tool in Machining Powder Compaction of Sintered Steel	Katsuhiko Sekiya Yasuo Yamane	Proc. 7th Int. Conf. on Progress of Machining Technology, (2004) pp. 56-61
<b>A80</b> The Addition of Aluminum and Magnesium to Gray Cast Iron as a Method of Reducing Cermet Tool Wear in High Speed Cutting	Satoshi Furuya Nobuaki Ozone Hiroshi Usuki Yasuo Yamane	Proc. 7th Int. Conf. on Progress of Machining Technology, (2004) pp. 33-37
<b>A81</b> Drilling with MQL Process	Tadashi Makiyama Yasuo Yamane	Proc. 7th Int. Conf. on Progress of Machining Technology, (2004) pp. 169-174



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<b>A83</b> Effect of forming speed on plastic bending of adhesively bonded sheet metals	M. Takiguchi F. Yoshida	JSME International Journal Series A - Solid Mechanics and Material Engineering, <b>47</b> , 1 (2004) pp. 47-53
<b>A84</b> Rate-dependent shear deformation of ductile acrylic adhesive and its constitutive modelling	M. Takiguchi S. Izumi F. Yoshida	Proceedings of the Institution of Mechanical Engineers Part C - Journal of Mechanical Engineering Science, <b>218</b> , 6 (2004) pp. 623-629
<b>A85</b> Determination of plasticity properties of metal surfaces by micro-indentation	F. Yoshida H. Hamasaki	Proceedings of the 2nd International Conference on Tribology in Manufacturing Processes (ICTMP2004), (2004) pp. 347-354
<b>A86</b> Optimum Blank Design for Deep Drawing Using Interaction of High and Low Fidelity Simulation	R. Hino F. Yoshida V.V. Toropov	21st International Congress of Theoretical and Applied Mechanics (ICTAM04) CD-ROM Proceedings, (2004)
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<b>A88</b> Elastic-Plastic Bending Deformation of Adhesively Bonded Sheet Metals in Tensile Lap Shear Tests with Special Reference to Effect of Tensile Speed	M. Takiguchi T. Yoshida F. Yoshida	Key Engineering Materials, <b>274-276</b> (2004) pp. 805-810
<b>A89</b> Strength of Highly Ductile Acrylic Adhesive in Butt-Joint under Combined Tension and Torsion	T. Yoshida M. Takiguchi F. Yoshida	Key Engineering Materials, <b>274-276</b> (2004) pp. 993-998
<b>A90</b> Effect of Strain-Rate and Temperature on Yield Locus for 5083 Aluminum Alloy Sheet	T. Naka Y. Nakayama T. Uemori R. Hino F. Yoshida	Key Engineering Materials, <b>274-276</b> (2004) pp. 937-942
<b>A91</b> Effect of Decarburized Layer of Tool Steel on Delamination Strength of WC-Co Thermally Sprayed Coating	C.Li M.Kato K.Nakasa	Key Engineering Materials, <b>261-263</b> (2004) pp. 447-452
<b>A92</b> Observation of Hydride Formation Behavior on Pure Titanium with and without Nitrogen Ion Implantation	R.Wang Q.Zhang J.Nie M.Kato K.Nakasa	Proceedings of the Third International Conference on Environment Sensitive Cracking and Corrosion Damage, (2004) pp. 45-50
<b>A93</b> Effect of Gas Nitriding on Hydrogen-Induced Cracking on Pure Iron and Cr-Mo Steel	M.G. Mahmoud K.Nakasa M.Kato R.Wang Y.Murakami	Proceedings of the Third International Conference on Environment Sensitive Cracking and Corrosion Damage, (2004) pp. 56-60
<b>A94</b> Observation of Corrosion-Pits Formation and Growth Behavior in SUS304 Stainless Steel by Atomic Force Microscope	Q.Zhang R.Wang M.Kato K.Nakasa	Proceedings of the Third International Conference on Environment Sensitive Cracking and Corrosion Damage, (2004) pp. 185-189
<b>A95</b> Atmospheric Corrosion Resistance of Stainless Steels in the Laboratory Accelerated Seashore Environment	H.Nagano M.G.Mahmoud K.Nakasa	Proceedings of the Third International Conference on Environment Sensitive Cracking and Corrosion Damage, (2004) pp. 168-172

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<b>B14</b> Robust Principal Component Analysis with Adaptive Selection for Tuning Parameters	Isao Higuchi Shinto Eguchi	Journal of Machine Learning Research, <b>5</b> (2004) pp. 453-471
<b>B15</b> Influence of environmental changes on cooperative behavior in the prisoner's dilemma game on an artificial social model	Ichiro Nishizaki Masatoshi Sakawa Hideki Katagiri	Applied Artificial Intelligence, <b>18</b> , 7 (2004) pp. 651-671
<b>B16</b> Development of interactive software for multiobjective decision analysis: MIDASS	Fumiko Seo Ichiro Nishizaki Hidenobu Hamamoto	Cybernetics and Systems 2004, (2004) pp. 475-480
<b>B17</b> Simulation analysis on an artificial society model for selection of financing methods for preservation of the global commons	Ichiro Nishizaki Yoshifumi Ueda Tomohiko Sasaki	The 2004 IEEE International Midwest Symposium on Circuits and Systems (MWSCAS 2004), (2004) pp. III-45-III-48
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<b>B19</b> Multiattribute utility analysis for policy selection and financing for the preservation of the forest	Tomohiro Hayashida Ichiro Nishizaki Yoshifumi Ueda	The 17-th International Conference on Multiple Criteria Decision Making, <b>CD-ROM</b> , (2004)
<b>B20</b> Cost allocation based on the solution concept from fuzzy cooperative games for a production and transportation problem -a case study-	Ichiro Nishizaki Masatoshi Sakawa Hideki Katagiri Yoshio Uemura	Proceedings of the Third International Conference on Nonlinear Analysis and Convex Analysis, (2004) pp. 413-429
<b>B21</b> Fuzzy random bottleneck spanning tree problems using possibility and necessity measures	Hideki Katagiri Masatoshi Sakawa Hiroaki Ishii	European Journal of Operational Research, <b>152</b> , 1 (2004) pp. 88-95
<b>B22</b> On fuzzy random linear knapsack problems	Hideki Katagiri Hiroaki Ishii Masatoshi Sakawa	Central European Journal of Operations Research, <b>12</b> , 1 (2004) pp. 59-70
<b>B23</b> A fuzzy random multiobjective 0-1 programming problem based on the expectation optimization model	Hideki Katagiri Masatoshi Sakawa Kosuke Kato Ichiro Nishizaki	Mathematical and Computer Modelling, <b>40</b> , 3-4 (2004) pp. 411-421
<b>B24</b> A study on fuzzy random minimum spanning tree problems through possibilistic programming and the expectation optimization model	Hideki Katagiri El Bekkaye Mermri Masatoshi Sakawa Kosuke Kato	The 47th IEEE International Midwest Symposium on Circuits and Systems, <b>3</b> (2004) pp. 49-52
<b>B25</b> Interactive decision making for a fuzzy random multiobjective programming problem through the probability maximization model and $M$ - $\alpha$ -Pareto optimality	Hideki Katagiri Masatoshi Sakawa Kosuke Kato Ichiro Nishizaki Hiroki Danjyo	Proceedings of the 17th International Conference on Multiple Criteria Decision Making, <b>CD-ROM</b> (2004)
<b>B26</b> A tabu search algorithm for fuzzy random minimum spanning tree problems through the probability maximization model using possibility and necessity measures	El Bekkaye Mermri Hideki Katagiri Masatoshi Sakawa Kosuke Kato	Proceedings of the 2nd International Conference on Soft Computing and Intelligent Systems, <b>CD-ROM</b> (2004)
<b>B27</b> An interactive satisficing method based on possibilistic and stochastic programming models for fuzzy random multiobjective integer programming problems	Cahit Perkgoz Hideki Katagiri Masatoshi Sakawa Kosuke Kato	Proceedings of the 2nd International Conference on Soft Computing and Intelligent Systems, <b>CD-ROM</b> (2004)

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<b>B29</b> Capacity maximizing MMSE- optimal pilots for wireless OFDM over frequency-selective block Rayleigh-fading channels	Shuichi Ohno Georgios B. Giannakis	IEEE Transactions on Information Theory, <b>50</b> , 9 (2004) pp. 2138-2145
<b>B30</b> Performance of Zero-Forcing Equalizers for Single-Carrier Zero-Padded Transmissions over Multipath Fading Channels	Shuichi Ohno	Proc. of Intl. Conf. on Acoustics, Speech and Signal Processing, <b>4</b> (2004) pp. 1017-1020
<b>B31</b> ML Sequence Estimation for Long ISI Channels with Controllable Complexity	Shuichi Ohno Georgios B. Giannakis	Proc. of IEEE International Conference on Communications, <b>5</b> (2004) pp. 2782-2786
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<b>B33</b> Bit-Rate Maximization for Multiuser OFDM Systems	Hiroyuki Tase Shuichi Ohno Yoshiyuki Otani Takao Hinamoto	Proc. 47th IEEE Midwest Symp. on Circuits and Systems, <b>II</b> (2004) pp. 239-242
<b>B34</b> A BMI-based design of switched PID controllers	Jun Aoyama Katsumi Konishi Toru Yamamoto Takao Hinamoto	Proc. 7th International Symposium on Advanced Control of Chemical Processes, <b>II</b> (2004) pp. 992-997
<b>B35</b> Distributed active noise control systems based on simultaneous equation method	Mitsuji Muneyasu Yumi Wakasugi Ken-ichi Kagawa Kensaku Fujii Takao Hinamoto	IEICE Trans. on Fundamentals, <b>E87-A</b> , 4 (2004) pp. 807-815
<b>B36</b> Synthesis of 3-D separable-denominator state-space digital filters with minimum L2-sensitivity	Takao Hinamoto Yuji Sugie Akimitsu Doi Mitsuji Muneyasu	Multidimensional Systems and Signal Processing, <b>15</b> , 2 (2004) pp. 147-167
<b>B37</b> Minimization of L2-sensitivity for state-space digital filters subject to L2-scaling constraints	Takao Hinamoto Hiroaki Ohnishi Wu-Sheng Lu	Proc. IEEE Int. Symp. on Circuits and Systems, <b>III</b> (2004) pp. 137-140
<b>B38</b> Joint optimization of error feedback and coordinate transformation for roundoff noise minimization in 2-D state-space digital filters	Takao Hinamoto Hiroaki Ohnishi Wu-Sheng Lu	Proc. IEEE Int. Symp. on Circuits and Systems, <b>III</b> (2004) pp. 141-144
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<b>C49</b> A dynamic checkpointing scheme based on reinforcement learning	Hiroyuki Okamura Yuki Nishimura Tadashi Dohi	Proceedings of The 10th International Symposium on Pacific Rim Dependable Computing (PRDC 2004), (2004) pp. 151-158
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<b>C52</b> Estimating the cost-effective checking request policies	Tadashi Dohi Naoto Kaio Shunji Osaki	CD-ROM Abstract Book of Fourth International Conference on Mathematical Methods in Reliability - Methodology and Practice - (MMR 2004), (2004)
<b>C53</b> Optimal testing/maintenance design in a software development project	Koichiro Rinsaka Tadashi Dohi	CD-ROM Abstract Book of Fourth International Conference on Mathematical Methods in Reliability - Methodology and Practice - (MMR 2004), (2004)
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<b>C57</b> Who solved the optimal software release problem based on Markovian software reliability model?	Koichiro Rinsaka Tadashi Dohi	Proceedings of 47th IEEE International Midwest Symposium on Circuit and Systems (MWSCAS 2004), <b>3</b> (2004) pp. 475-478
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<b>C60</b> Analysis of discrete-time software cost model based on NPV approach	Kazuki Iwamoto Tadashi Dohi Naoto Kaio	Advanced Reliability Modeling - Proceedings of 2004 Asian International Workshop on Advanced Reliability Modeling (AIWARM 2004), (2004) pp. 197-204
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<b>E1</b> The Effect of Tensile Fracture Energy on the Size Effect for Shear Strength of Reinforced Concrete Beam Members Utilizing High Strength Concrete	Y.Takaki M.Fujita R.sato	Fracture Mechanics of Concrete Structures, <b>2</b> (2004) pp. 877-885
<b>E2</b> Concrete Containing PFBC Coal Ash: Strength Development as Affected by Curing Temperature	Akifumi Nakashita Shinya Kondo Masa-aki Tanaka Ryoichi Sato	Proceedings of Eighth CAN-MET/ACI International Conference on Flyash, Silica Fume, Slag And Natural Pozzolans in Concrete, Supplementary Papers, (2004) pp. 183-197
<b>E3</b> Properties of High Volume Fly Ash Concrete Containing an Alkali Activator	Kenji Kawai Paweena Jariyathitipong Ryoichi Sato Shigeru Tsuchida	Proceedings of Eighth CAN-MET/ACI International Conference on Flyash, Silica Fume, Slag And Natural Pozzolans in Concrete, Supplementary Papers, (2004) pp. 273-286
<b>E4</b> Bond Behavior of Corroded Reinforcing Bar Under Sustained Load	Hussein Nour-Allah Louis A. Darmawan Ippei Maruyama Ryoichi Sato	Concrete Under Severe Condition, <b>1</b> (2004) pp. 554-561

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<b>E14</b> Expansive Behavior of Expansive High Strength Concrete and Its Induced Stress	Ippei Maruyama Ryoichi Sato Hidetoshi Ito	Proceedings of the International Symposium on Ultra High Performance Concrete, Kassel University Press GmbH, (2004) pp. 601-613
<b>E15</b> Shear Behavior of Reinforced Recycled Concrete Beams	Masaru Sogo Takahisa Sogabe Ippei Maruyama Ryoichi Sato Kenji Kawai	Proceedings of International RILEM Conference on the Use of Recycled Materials in Buildings and Structures, <b>2</b> (2004) pp. 610-618
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<b>E19</b> Improvement of Mechanical Performance of Reinforced High Strength Concrete Beam by Reducing Autogenous Shrinkage	Ryoichi Sato	Proceedings of Braunschweig Bauseminar 2004, Qualitat im Bauwesen, Hrsg. Falkner/Teutsch, iBMB, TU Braunschweig, <b>181</b> (2004) pp. 155-164
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<b>E36</b> Congestion Charge and Return Schemes on Modal Choice between Road and Railroad	Mitsunori Yoshimura Makoto Okumura	International Journal of Urban Sciences, <b>8</b> , 1 (2004) pp. 61-73
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<b>E39</b> Dispersion and dry and wet deposition of PAHs in an atmospheric environment.	Ozaki, N. Nitta, K. Fukushima, T.	Proceedings of 8th International conference on Diffuse/Nonpoint Pollution, Kyoto, Japan., (2004)
<b>E40</b> Runoff and Loads of Nutrients and Heavy Metals from an Urbanized Area.	Fukushima, T. Shirasuna, H. Matsushige, K. Imai, A. Ozaki, N.	Proceedings of 8th International conference on Diffuse/Nonpoint Pollution, Kyoto, Japan., (2004)
<b>E41</b> Eco-physiological interaction between nitrifying bacteria and heterotrophic bacteria in autotrophic nitrifying biofilms as determined by MAR-FISH.	Tomonori Kindaichi Tsukasa Ito Satoshi Okabe	Applied and Environmental Microbiology, <b>70</b> , 3 (2004) pp. 1641-1650
<b>E42</b> Analysis of size distribution and areal cell density of ammonia-oxidizing bacterial microcolonies in relation to substrate microprofile in biofilms.	Satoshi Okabe Tomonori Kindaichi Hisashi Satoh	Biotechnology and Bioengineering, <b>85</b> , 1 (2004) pp. 86-95
<b>E43</b> Effects of hydroxylamine on microbial community structure and function of autotrophic nitrifying biofilms determined by in situ hybridization and the use of microelectrodes.	Tomonori Kindaichi Satoshi Okabe Hisashi Satoh Yoshimasa Watanabe	Water science and technology, <b>49</b> , 11-12 (2004) pp. 61-68
<b>E44</b> A polyphonic approach to study the structure, function, and eco-physiological interactions among community members in autotrophic nitrifying biofilms.	Satoshi Okabe Tomonori Kindaichi Yoshiyuki Nakamura Tsukasa Ito	Proceedings of IWA international conference Biofilms 2004 biofilm structure and activity in Las Vegas., (2004)
<b>E45</b> Establishing community structure and function in complex biofilms.	Satoshi Okabe Tomonori Kindaichi Hisashi Satoh Tsukasa Ito	Proceedings of ISME 10th international symposium on microbial ecology in Cancun., (2004)
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<b>E47</b> Behaviour of suspended sediment in a shallow tidal estuary	Kiyosi Kawanisi	Proc. Sixth Int. Conf. on Hydrodynamics, (2004) pp. 213-218
<b>E48</b> Impact assessment of the Kuroshio meandering on sea levels along the Pacific coast	Katsuaki Komai	Proceedings of International Conference on Civil and Environmental Engineering, (2004) pp. 179-188
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<b>E56</b> Optimising the Design of Freight Network in Java Island	Bona Frazila RUSS Tadashi YAMADA Jun CASTRO	Proceedings of Infrastructure Planning, Japan Society of Civil Engineers, <b>Vol. 30</b> (2004)
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<b>E86</b> Site effects in Hiroshima prefecture, Japan during the 2001 Geiyo earthquake of March 24, 2001	Tatsuo Kanno Kenji Miura Hiroyuki Matsushita	Proceedings of The 13th World Conference on Earthquake Engineering, (2004)
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<b>F12</b> Reference-Pattern Learning and Optimization from an Input-Pattern Stream for Associative-Memory-Based Pattern-Recognition System	Y. Shirakawa H.J. Mattausch T. Koide	Proceedings of the 47th IEEE International Midwest Symposium on Circuits and Systems (MWSCAS 2004), <b>1</b> (2004) pp. 561-564
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<b>F14</b> Analog-Circuit-Component Optimization with Genetic Algorithm	K. Takemura T. Koide H.J. Mattausch T. Tsuji	Proceedings of the 47th IEEE International Midwest Symposium on Circuits and Systems (MWSCAS 2004), <b>1</b> (2004) pp. 489-492
<b>F15</b> Digital Low-Power Real-Time Video Segmentation by Region Growing	T. Morimoto O. Kiriyama H. Adachi T. Koide H.J. Mattausch	Extended Abstracts of the 2004 International Conference on Solid State Devices and Materials (SSDM 2004), (2004) pp. 138-139
<b>F16</b> Automatic Pattern-Learning Architecture Based on Associative Memory and Short/Long Term Storage Concept	Y. Shirakawa M. Mizokami T. Koide H.J. Mattausch	Extended Abstracts of the 2004 International Conference on Solid State Devices and Materials (SSDM 2004), (2004) pp. 362-363
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<b>F21</b> Chip Size and Performance Evaluations of Shared Cache for On-chip Multiprocessors	T. Sasaki T. Inoue N. Omori T. Hironaka H.J. Mattausch T. Koide	Systems & Computers in Japan, (2004)
<b>F22</b> SiO <sub>2</sub> Hole Etching Using Perfluorocarbon Alternative Gas with Small Global Greenhouse Effect	M. Ooka S. Yokoyama	Jpn. J. Appl. Phys. , <b>43</b> , 6A (2004) pp. 3586-3589
<b>F23</b> Anomalous Behavior of Interface Traps of Si MOS Capacitors Contaminated with Organic Molecules	M. Suzuki S. Yokoyama	Extended Abstracts of International Conference on Solid State Devices and Materials, (2004) pp. 530-531
<b>F24</b> Race-Track Optical Ring Resonators with Groove Coupling	Y. Tanushi M. Wake S. Yokoyama	Extended Abstracts of International Conference on Solid State Devices and Materials, (2004) pp. 940-941
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<b>F45</b> Mechanical Property Determination of Thin Porous Low-k Films by Twin-Transducer Laser Generated Surface Acoustic Waves	X. Xiao N. Hata K. Yamada T. Kikkawa	Jpn. J. Appl. Phys., <b>43</b> , 2 (2004) pp. 508-513
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<b>F47</b> Nondestructive Characterization of a Series of Periodic Porous Silica Films by in situ Spectroscopic Ellipsometry in a Vapor Cell	C. Negoro N. Hata K. Yamada T. Kikkawa	Jpn. J. Appl. Phys., <b>43</b> , 4A (2004) pp. 1327-1329
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<b>F51</b> Effect of High-Resistivity Si Substrate on Antenna Transmission Gain for On-Chip Wireless Interconnects	S. Watanabe A. B. M. H. Rashid T. Kikkawa	Jpn. J. Appl. Phys., <b>43</b> , 4B (2004) pp. 2297-2301
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<b>F60</b> A CMOS Monocycle Pulse Generation Circuit of UWB Transmitter for Intra/Inter Chip Wireless Interconnection	P. K.Saha N. Sasaki T. Kikkawa	Extended Abstracts of the 2004 International Conference on Solid State Devices and Materials, (2004) pp. 394-395
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<b>F63</b> Transient Characteristics of Integrated Dipole Antennas on Silicon for Ultra Wide-band Wireless Interconnects	S. Watanabe K. Kimoto T. Kikkawa	IEEE AP-S INTERNATIONAL SYMPOSIUM AND USNC/URSI NATIONAL RADIO SCIENCE MEETING, (2004)

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## Registered Patents

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<b>Patent Name (Registered Number)</b>	<b>Inventor Name</b>	<b>Registered Date</b>
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Semiconductor device and method for manufacturing same (United States Patent No. 6787863)	Anri Nakajima	2004.9.7