

CURRICULUM VITAE

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1. Education

Date Graduated	Degree Received	Major Course	School	City and Country
March 1984	Bachelor of Engineering	Electronic Engineering	Himeji Institute of Technology	Himeji Japan
March 1986	Master of Engineering	Electrical and Electronic Engineering	Himeji Institute of Technology	Himeji Japan
March 1989	Doctor of Engineering (Ph. D)	Productive Engineering	Himeji Institute of Technology	Himeji Japan

2. Work Experience

1989-1993	Research Associate, Department of Electronics, Faculty of Engineering, Himeji Institute of Technology, Japan
1993-1995	Assistant Professor, Department of Computer Engineering, Faculty of Engineering, Himeji Institute of Technology, Japan
1995-1996	Visiting Scholar, University of California, Berkeley
1995-2000	Associate Professor, Department of Computer Engineering, Faculty of Engineering, Himeji Institute of Technology, Japan
1997-2003	Visiting Professor, University of California at Berkeley, USA
2000-2004	Professor, Department of Computer Engineering, Faculty of Engineering, Himeji Institute of Technology, Japan
2004-present	Professor, Division of Computer Engineering, Department of Electrical Engineering and Computer Sciences, Graduate School of Engineering,

2008-present	<p>University of Hyogo, Japan Guest Professor, WPI Immunology Frontier Research Center, Osaka University</p> <p><u>Teaching Class:</u> Undergraduate course : Database System, Data Structure and Algorithm, Image Processing and Multimedia, Exercise in Information Processing 1, Experiments of Electrical Engineering C, D Graduate course: Logics for Computer Science, Advanced Seminar on Artificial Intelligence and Cognitive Science, Advanced Researches on Artificial Intelligence and Cognitive Science:</p>
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3. Awards

1. World Automation Congress 2010 Distinguished Contribution Award, (Sep. 2010, Kobe, Japan)
2. Best Paper Award in The 4th International Symposium on Computational Intelligence and Industrial Application (August. 2010, China)
3. Biomedical Wellness Award, SPIE Defense, Security, and Sensing (April. 2010, Orlando, USA)
4. Franklin V. Taylor Memorial Award, IEEE SMC (Oct. 2009)
5. Lifetime Achievement Award from Intelligent Automation and Soft Computin Journal & World Automation Congress (Sep. 2008, USA)
6. World Automation Congress Distinguished Contribution Award (July. 2006, Budapest, Hungary)
7. Outstanding Paper Award at International Symposium on Advanced Intelligent Systems (Sept. 2005, Korea)
8. Albertos Best Paper Award at sixth biannual World Automation Congress, (June, 2004, Spain)
9. World Automation Congress Contribution Award, (June, 2004, Spain)
10. Highlighted Technical Papers at the Eighth Australian and New Zealand Intelligent Information Systems Conference (Dec. 2003, Australia)
11. World Automation Congress Contribution Award, (June, 2002, USA)
12. Joseph F. Engelberger Best Paper Award at the Fourth Biannual World Automated Congress (June, 2000, USA)
13. Best Paper Award at the Fourth Biannual World Automated Congress (June, 2000, USA)
14. Distinctive Contributed Paper Award at IEEE 28th International Symposium on

Multiple-Valued Logic from IEEE CS MVL-TC (May 1999)

4. Membership (2011)

1. IEEE Fellow (2010) *For contributions to fuzzy logic based image processing in biomedical informatics*
2. Member of The Institute of Electronics, Information and Communication Engineers of Japan
3. Member of Japanese Society for Medical and Biological Engineering
4. Member of Japan Society for Fuzzy Theory and Systems
5. Member of Biomedical Fuzzy Systems Association
6. President of Japanese Society for Clinical Biomechanics

5. Journal Editor (2011)

1. Founding Editor-in-Chief: The International Journal of Intelligent Computing in Medical Sciences and Image Processing, USA
2. Associate Editor: IEEE System Journal
3. Regional Editor: Intelligent Automation and Soft Computing, USA
4. Editorial Board Member: Journal of Multiple-Valued Logic and Soft Computing, USA
5. Editorial Board Member: Applied Soft Computing Journal, Elsevier

6. Academic Society Activity (2011)

1. Chair of IEEE CIS TF Fuzzy Logic in Medical Sciences (2008-
2. Chair of IEEE SMC TC Medical Informatics
3. Chairman: Berkeley Initiative in Soft Computing Special Interest Group in Medical Imaging, University of California at Berkeley, USA

7. Conference Activity

1. Organizing Committee Chair of World Automation Congress and Chair of International Forum in Multimedia and Image Processing, Japan, 2010 (co-sponsored by IEEE SMC Society)
2. Vice Chair of IEEE CS International Symposium on Multiple-Valued Logic, Japan: May 2009
3. Special Session Chair of IEEE International Conference on Fuzzy Systems: 2009, 2010
4. Chair of World Automation Congress International Forum in Multimedia and Image Processing, Spain, 2008 (co-sponsored by IEEE SMC Society)
5. Chair of World Automation Congress International Forum in Multimedia and Image Processing, Hungary, 2006 (co-sponsored by IEEE SMC Society)

6. International Program Committee Member of IASTED International Conference on Signal and Image Processing,, USA, 2006
7. Local Committee Chair of the Fifth International Conference on Rough Sets and Current Trends in Computing, Japan, 2006
8. Special Session Chair of IEEE International Conference on Systems Man and Cybernetics: 2005, 2006, 2007, 2008, 2009, 2010, 2011
9. International Program Committee Member of IASTED International Conference on Biomedical Engineering, Austria 2004, 2005, 2006
10. Financial Chair of IEEE CS International Symposium on Multiple-Valued Logic, Japan, May, 2003
11. Chair of World Automation Congress International Forum in Multimedia and Image Processing, 2002 and 2004 (Published by IEEE Press)
12. International Advisory Board Member of IEEE International Conference on Information Technology and Applications, Australia: 2002, 2008, 2009
13. Asia/Pacific Program Chair of IEEE CS Int. Symposium on Multiple Valued Logic, USA, May, 2000
14. Publicity Chair of the IEEE CS Int. Symposium on Multiple Valued Logic, Japan: May 1998
15. Bulletin/Web-Page Editor and Executive Sub-Committee Members of IEEE CS MVL TC: 1996-2006

4. Books and Refereed Journal and Proceedings Publications

(Books, Invited Talks, Refereed Journal and Proceedings Paper lists)

2011

Journal Papers

1. T. Takeda, K. Kuramoto, S. Kobashi and Y. Hata, "Fuzzy-logic is precise -Its application to biometric system-," Journal of Scientia Iranica, vol. 18, issue. 3, pp. 655-662, june 2011.
2. A. Hashioka, S. Kobashi, K. Kuramoto, Y. Wakata, K. Ando, R. Ishikura, T. Ishikawa, and Y. Hata, "A neonatal brain MR image template of 1 week newborn," International Journal of Computer Assisted Radiology and Surgery, in press.
3. Y. Hata, S. Kobashi, K. Kuramoto, and H. Nakajima, "Fuzzy Biosignal Detection Algorithm and Its Application to Health Monitoring," International Journal of Applied and Computational Mathematics, Vol. 10, No.1, pp.133-145, 2011.
4. S. Kobashi, D. Yokomichi, Y. Wakata, K. Ando, R. Ishikura, K. Kuramoto, S. Hirota, and Y. Hata, "Cerebral Contour Extraction with Particle Method in Neonatal MR Images", Journal of Advanced Computational Intelligence and Intelligent Informatics, in press.

Refereed Proceedings

5. M. Endo, K. Tsuruta, Y. Saitoh, H. Nakajima and Y. Hata, "Toward an optimal QCDE in Manufacturing by health monitoring of equipment energy consumption," Proc. of 2011 IEEE Int. Conf. on System, Man, and Cybernetics, pp. 327-332, 2011.
6. N. Yagi, Y. Oshiro, O. Ishikawa and Y. Hata, "Trans-skull brain imaging by image registration of 0.5 and 1.0 MHz waves," Proc. of 2011 IEEE Int. Conf. on System, Man, and Cybernetics, pp. 706-710, 2011.
7. S. Kobashi, N. Ikoma, F. Imamura, N. Shibamura, K. Kuramoto, T. Ishikawa and Y. Hata, "Particle filter for implanted knee kinematic analysis using dynamic radiograph video," Proc. of 2011 IEEE Int. Conf. on System, Man, and Cybernetics, pp. 746-751, 2011.
8. M. Nakamura, T. Ishikawa, S. Kobashi, K. Kuramoto and Y. Hata "Blood flow detection under skull by doppler effect," Proc. of 2011 IEEE Int. Conf. on System, Man, and Cybernetics, pp. 758-763, 2011.
9. T. Takeda, Y. Sakai, K. Kuramoto, S. Kobashi, T. Ishikawa and Y. Hata, "Foot age estimation for fall-prevention using sole pressure by fuzzy logic," Proc. of 2011 IEEE Int. Conf. on System, Man, and Cybernetics, pp. 769-774, 2011.
10. H. Nakajima, T. Shiga and Y. Hata, "Systems health care," Proc. of 2011 IEEE Int. Conf. on System, Man, and Cybernetics, pp. 1167-1172, 2011.
11. Y. Takashima, K. Kuramoto, S. Kobashi, Y. Hata and T. Ishikawa, "A testicular tubule evaluation method by ultrasonic array probe," Proc. of 2011 IEEE Int. Conf. on Fuzzy Systems, pp. 1013-1016.
12. N. Yagi, Y. Oshiro, O. Ishikawa, Y. Hata and N. Shibamura, "Fuzzy RASP Determination by 1kHz Ultrasonic Probe for Total Hip Arthroplasty," Proc. of 2011 IEEE Int. Conf. on Fuzzy Systems, pp. 1017-1021.
13. H. Tanii, H. Nakajima, N. Tsuchiya, K. Kuramoto, S. Kobashi and Y. Hata, "A fuzzy logic approach to predict human body weight based on AR model," Proc. of 2011 IEEE Int. Conf. on Fuzzy Systems, pp. 1022-1025.
14. H. Nakajima, N. Tsuchiya and Y. Hata, "Consideration of Invasion, Intrusion, and Consciousness in Biomedical Sensing with Uncertainty," Proc. of 2011 IEEE Int. Conf. on Fuzzy Systems, pp. 1026-1032.
15. T. Takeda, S. Kobashi, K. Kuramoto and Y. Hata, "A Challenge to Biometrics by Sole Pressure while Walking," Proc. of 2011 IEEE Int. Conf. on Fuzzy Systems, pp. 1430-1435.
16. H. Mita, S. Kobashi, K. Nakagawa, K. Nishiyama, H. Maeno, K. Kuramoto and Y. Hata, "Marine radar system of systems for radar image quality improvement using EM algorithm," Proc. of the 6th IEEE Int. Conf. on System of Systems Engineering, pp. 270-275, 2011.
17. A. Hashioka, K. Yamaguchi, S. Kobashi, Y. Wakata, K. Ando, R. Ishikura, K. Kuramoto, T. Ishikawa, S. Hirota and Y. Hata, "Neonatal brain MR image segmentation based on system-of-systems in engineering technology," Proc. of the 6th IEEE Int. Conf. on System of Systems Engineering, pp. 107-112, 2011.
18. A. Hashioka, S. Kobashi, K. Kuramoto, Y. Wakata, K. Ando, R. Ishikura, T. Ishikawa, S. Hirota and Y. Hata, "A neonatal brain MR images template pf 1 week new born," Int. Journal of Computer Assisted Radiology and Surgery, vol. 6, supplement 1, pp. 345 - 346, 2011.

19. Y. Hata, K. Ho, K. Kuramoto, S. Kobashi, N. Tsuchiya and H. Nakajima, "YURAGI: analysis for detecting heart-rate by mat-type sensor in bed," Proc. of SPIE Defence, Security and Sensing 2011, pp. 80580Y-1-9, 2011.
20. N. Tsuchiya, H. Nakajima and Y. Hata, "Heart-rate monitoring by air pressure and causal analysis," Proc. of SPIE Defence, Security and Sensing 2011, pp. 805811, 2011.
21. N. Yagi, Y. Oshiro, O. Ishikawa, Y. Hata, Y. T. Kitamura and T. Yanagida, "YURAGI: analysis for trans-skull brain visualizing by ultrasonic array probe," Proc. of SPIE Defence, Security and Sensing 2011, pp. 805813-1-9, 2011.
22. T. Takeda, K. Kuramoto, S. Kobashi and Y. Hata, "Biometrics security by dynamics of left and right sole pressure while walking," Proc. of SPIE Defence, Security and Sensing 2011, pp. 805814-1-11, 2011.
23. S. Kanazawa, K. Taniguchi, A. Kazunari, K. Kuramoto, S. Kobashi and Y. Hata, "A fuzzy automated object classification by infrared laser camera," Proc. of SPIE Defence, Security and Sensing 2011, pp. 805815-1-9, 2011.
24. Y. Hata, S. Kobashi, K. Kuramoto and H. Nakajima, "Home care system for aging people confined to bed by detached sensor network," Proc. of 2011 IEEE Symposium Series on Computational Intelligence Workshop on Robotic Intelligence in Informationally Structured Space, pp. 1-6, 2011.
25. N. Yagi, Y. Oshiro, O. Ishikawa, N. Shibanuma and Y. Hata, "Estimation system for total hip arthroplasty by acoustic signal," Proc. of 2011 IEEE Symposium Series on Computational Intelligence Workshop on Robotic Intelligence in Informationally Structured Space, pp. 32-36, 2011.
26. S. Kobashi, Y. Nakajima, K. Kuramoto, N. Shibanuma, S. Yoshiya and Y. Hata, "A Fully Automated Frame-by-Frame Analysis of Digital Radiography images for Quantifying Total-Knee-Arthroplasty Implanted Knee Kinematics", Proc. of the Oorthopaedic Research Society, No. 0957, 2011.
27. T. Nishiyama, N. Shibanuma, N. Kanzaki, S. Hayashi, T. Fujishiro, K. Takebe, K. Kawakita, K. Iwasa, S. Kobashi, Y. Hata, and M. Kurosaka " Automated determination of pelvic coordinate system and application to clinical study using MDCT images," Proc. of the Oorthopaedic Research Society, No. 1241, 2011.
28. S. Kobashi, N. Kawakami, Y. T. Kitamura, K. Shimono, K. Kuramoto, M. Taniike, and Y. Hata "Fractal Dimension Based Cortical Dysplasia Detection Using MR Images for Epilepsy Children," Proc. of The 2011 International Conference on Image Processing, Computer Vision, and Pattern Recognition, pp. 467-463, 2011.
29. D. Yokomichi, S. Kobashi, Y. Wakata, K. Ando, R. Ishikura, K. Kuramoto, T. Ishikawa, S. Hirota, and Y. Hata, "Particle Method for Sub-voxel Extraction of Cerebral Surface in Neonatal MR Images," Proc. of The 2011 International Conference on Image Processing, Computer Vision, and Pattern Recognition, 2011.

2010

Journal Papers

30. K. Oe, M. Miwa, K. Nagamune, Y. Sakai, S. Y. Lee, T. Niikura, T. Iwakura, T. Hasegawa, N. Shibanuma, Y. Hata, R. Kuroda, and M. Kurosaka, "Nondestructive evaluation of cell numbers in bone marrow stromal cells/beta-tricalcium phosphate composites using ultrasound," Tissue Engineering, Part C: Methods, Vol. 16, No. 3, pp.347-353, June 2010.
31. S. Kobashi, S. Fujimoto, T. Nishiyama, N. Kanzaki, T. Fujishiro, N. Shibanuma, K. Kuramoto, M. Kurosaka, and Y. Hata, "Robust pelvic coordinate system determination for pose changes in

multidetector-row computed tomography images," *Int. J. of Fuzzy Logic and Intelligent System*, vol.10, no.1, pp.65-72, 2010

32. H. Yamaguchi, H. Nakajima, K. Taniguchi, S. Kobashi, and Y. Hata, "An Ultrasonic and Air Pressure Sensing System for Detection of Behavior before Getting Out of Bed Aided by Fuzzy Theory," *IEICE Trans. on Inf. and Sys.*, vol. E93-D, no. 3, pp. 542-549, 2010.
33. S. Kobashi, N. Shibamura, and Y. Hata, "Fuzzy visual hull algorithm for Three-dimensional shape reconstruction of TKA implant from X-ray cone-beam images," *J. of Advanced Computational Intelligence and Intelligent Informatics*, vol. 14, no. 2, pp. 122-127, 2010.
34. S. Kobashi and Y. Hata, "Lung lobar segmentation using tubular tissue density from multidetector-row CT images," *Int. J. of Innovative Computing, Information and Control*, vol. 6, no. 3(A), pp. 829-842, 2010.
35. Y. Hata, T. Yamakawa, S. Kobashi, K. Kuramoto, K. Asari, and K. Taniguchi, "Personal Classification Method Based on Sole Pressure Sensor," *IEEJ Transactions on Electrical and Electronic Eng*, EIS, Vol. 130, No. 11, pp. 1953-1959, 2010. (in Japanese)

Invited Papers/Talks

36. Y. Hata, "Soft computing in medicine and health monitoring," *Proc. of The 2010 International Symposium on Intelligent Systems*, 2010.
37. Y. Hata, "Medical diagnosis imaging systems: image and signal processing applications aided by fuzzy logic," *Proc. of SPIE*, vol. 7703, pp. 77030Q-10, 2010.

Refereed Proceedings

38. K. Kuramoto, M. Nii, S. Kobashi and Y. Hata, "High performance computing for molecular imaging and immunology," *CSI-IFReC Joint Symposium on Immunology*, 2010.
39. M. Tanaka, K. Kuramoto, S. Kobashi, K. Kanda, T. Fujita, K. Maenaka, Y. Hata and K. Higuchi, "Fine walking analysis using three-dimensional accelerometer," *27th sensor symposium on Sensors, Micromachines and Applied Systems*, p.68, 2010.
40. K. Kuramoto, S. Kobashi, Y. Hata, Y. Utsumi and T. Saiki, "Simulation and experimental study for transport particle by surface acoustic waves," *27th sensor symposium on Sensors, Micromachines and Applied Systems*, p.100, 2010
41. Y. Hata, S. Kobashi and T. Yanagida, "Fuzzy logic in Trans-Skull ultrasonic imaging system," *Proc. of Korea Institute of Intelligent Systems Fall Conference 2010*, Vol. 20, No. 2, pp. 3-8, 2010.
42. N. Yagi, Y. Oshiro, O. Ishikawa and Y. Hata, "Computational intelligence in medical ultrasonic system," *Proc. of Korea Institute of Intelligent Systems Fall Conference 2010*, Vol. 20, No. 2, pp. 9-15, 2010.
43. H. Nakajima, N. Tsuchiya, K. Yamamoto and Y. Hata, "Fuzzy logic and causal analysis in biomedical sensing system," *Proc. of Korea Institute of Intelligent Systems Fall Conference 2010*, Vol. 20, No. 2, pp. 16-20, 2010.
44. T. Takeda, Hong Ye, K. Taniguchi, K. Asari, K. Kuramoto, S. Kobashi, and Y. Hata, "Foot age estimation by gait sole pressure changes," *Proc. of 2010 IEEE Int. Conf. on Systems, Man and Cybernetics*, pp. 1204-1208, 2010.

45. N. Yagi, Y. Oshiro, O. Ishikawa, G. Hiramatsu, Y. Hata, Y. Kitamura, and T. Yanagida, "Data synthesis for trans - skull brain imaging by 0.5 and 1.0MHz ultrasonic array systems," Proc. of 2010 IEEE Int. Conf. on Systems, Man and Cybernetics, pp. 1524-1529, 2010.
46. M. Nakamura, Y.T. Kitamura, T. Yanagida, S. Kobashi, K. Kuramoto, and Y. Hata, "Free placement trans - skull doppler system with 1.0MHz array ultrasonic probe," Proc. of 2010 IEEE Int. Conf. on Systems, Man and Cybernetics, pp. 1370-1374, 2010.
47. D. Yokomichi, S. Kobashi, Y. Wakata, K. Ando, R. Ishikura, K. Kuramoto, S. Imawaki, S. Hirota, and Y. Hata, "Cerebral surface extraction based on particle method in neonatal MR images," Proc. of 2010 IEEE Int. Conf. on Systems, Man and Cybernetics, pp. 1477-1482, 2010.
48. A. Tomaru, S. Kobashi, Y. Tsumori, S. Yoshiya, K. Kuramoto, S. Imawaki, and Y. Hata, "A 3-DOF knee joint angle measurement system with inertial and magnetic sensors," Proc. of 2010 IEEE Int. Conf. on Systems, Man and Cybernetics, pp. 1261-1266, 2010.
49. K. Ho, N. Tsuchiya, H. Nakajima, K. Kuramoto, S. Kobashi, and Y. Hata, "Data Synthesis for Heartbeat Detection System of Two Sensor Systems," Proc. of The 2010 International Symposium on Intelligent Systems, 2010.
50. T. Takeda, K. Taniguchi, K. Asari, K. Kuramoto, S. Kobashi, and Y. Hata, "Biometric personal identification by dynamics of sole pressure at walking," Proc. of 2010 World Automation Cong., 2010. (online)
51. K. Ho, K. Taniguchi, K. Asari, K. Kuramoto, S. Kobashi, and Y. Hata, "Automated Detection of People Distribution by a 3D Camera," Proc. of 2010 World Automation Cong., 2010. (online)
52. Y. Nakajima, S. Kobashi, Y. Tsumori, N. Shibamura, F. Imamura, K. Kuramoto, S. Imawaki, S. Yoshiya, and Y. Hata, "Particle filter based knee kinematics analysis with 2-D/3-D image registration," Proc. of 2010 World Automation Cong., 2010. (online)
53. K. Yamaguchi, S. Kobashi, K. Kuramoto, Y. T. Kitamura, S. Imawaki, and Y. Hata, "Statistical quantification of brain shape deformation with homologous brain shape modeling," Proc. of 2010 World Automation Cong., 2010. (online)
54. N. Kawakami, S. Kobashi, K. Kuramoto, Y. T. Kitamura, K. Kagitani-Shimono, S. Imawaki, M. Taniike, and Y. Hata, "A study on image features using intensity profile for cortical dysplasia degree estimation," Proc. of 2010 World Automation Cong., 2010. (online)
55. S. Fujimoto, S. Kobashi, T. Nishiyama, N. Kanzaki, T. Fujishiro, N. Shibamura, K. Kuramoto, M. Kurosaka, and Y. Hata, "Determination of pelvic coordinate system and application to clinical study using MDCT images," Proc. of 2010 World Automation Cong., 2010. (online)
56. S. Kobashi, D. Yokomichi, K. Kuramoto, S. Imawaki, and Y. Hata, "Particle Method Based Sub-voxel Cerebral Contour Extraction in neonatal MR images," The 4th International Symposium on Computational Intelligence and Industrial Application, pp. 47-53, 2010.
57. T. Takeda, K. Taniguchi, K. Asari, K. Kuramoto, S. Kobashi, and Y. Hata, "Biometric Personal Authentication by One Step Foot Pressure Distribution Change by Fuzzy Artificial Immune System," Proc. of 2010 IEEE World Congress on Computational Intelligence, pp. 844-849, 2010.
58. K. Ho, K. Yamamoto, N. Tsuchiya, H. Nakajima, K. Kuramoto, S. Kobashi, and Y. Hata, "Multi Sensor Approach to Detection of Heartbeat and Respiratory Rate Aided by Fuzzy Logic," Proc. of 2010 IEEE World Congress on Computational Intelligence, pp. 2341-2346, 2010.
59. N. Yagi, Y. Oshiro, O. Ishikawa, K. Oe, and Y. Hata, "Soft Computing Approaches to Identify Cellular Quantity of Artificial Culture Bone," Proc. of 2010 IEEE World Congress on Computational Intelligence, pp. 2852-2857, 2010.

60. Y. Nakajima, S. Kobashi, Y. Tsumori, N. Shibamura, F. Imamura, S. Imawaki, S. Yoshiya and Y. Hata, "A priori Knowledge Based Particle Filter for Estimating 3-D Pose position of Implanted Knee," Proc. of 2010 IEEE World Congress on Computational Intelligence, pp. 392-398, 2010.
61. K. Yamaguchi, Y. Fujimoto, S. Kobashi, Y. Wakata, R. Ishikura, K. Kuramoto, S. Imawaki, S. Hirota, and Y. Hata, "Automated fuzzy logic based skull stripping in neonatal and infantile MR images," Proc. of 2010 IEEE World Congress on Computational Intelligence, pp. 800-806, 2010.
62. S. Kobashi, D. Yokomichi, K. Yamaguchi, K. Kuramoto, S. Imawaki, and Y. Hata, "Computer-Aided diagnosis system of systems for neonatal human brain MR images," 5th International Conference on Systems of Systems Engineering, 2010. (on line)
63. S. Kobashi, T. Hozumi, S. Kan, T. Koike, K. Kuramoto, S. Imawaki, S. Miyauchi and Y. Hata, "Absolute Eye Gaze Tracking System with MR Images", 5th International Conference on Soft Computing and Intelligent Systems and 11th International Symposium on Advanced Intelligent Systems, pp. 1612-1616, 2010.
64. N. Kawakami, S. Kobashi, K. Kuramoto, Y. T. Kitamura, K. K. Shimono, S. Imawaki, M. Taniike, and Y. Hata, "Estimation Method of Cortical Dysplasia Degree Using Neural Network in Pediatric Brain MR Images", 5th International Conference on Soft Computing and Intelligent Systems and 11th International Symposium on Advanced Intelligent Systems, pp. 1399-1402, 2010.
65. A. Hashioka, S. Kobashi, K. Kuramoto, Y. Wakata, K. Ando, R. Ishikura, S. Imawaki, S. Hirota, and Y. Hata, "On a Voxel Based Morphometry Analysis in Neonatal Brain MR Images", 5th International Conference on Soft Computing and Intelligent Systems and 11th International Symposium on Advanced Intelligent Systems, pp. 1393-1398, 2010.
66. A. Tomaru, S. Kobashi, Y. Tsumori, S. Yoshiya, K. Kuramoto, S. Imawaki, and Y. Hata, "Unconstraint Knee Joint Dynamics Estimation System using Inertial and Magnetic Composite MEMS sensor," Proc. of the 3rd International Conference on Emerging Trends in Engineering & Technology (ICETET-10), pp. 440-445, 2010.
67. S. Kobashi, A. Tomaru, Y. Tsumori, S. Yoshiya, K. Kuramoto, S. Imawaki, and Y. Hata, "Wavelet Transform Based Quantification of Pivot Shift Test Using Inertial and Magnetic Composite MEMS," Proc. of the 3rd International Conference on Emerging Trends in Engineering & Technology (ICETET-10), pp. 450-455, 2010.

2009

Journal Papers

68. Y. Hata, S. Kobashi, and S. Imawaki, "An ultrasonic thickness and wave speed determination system aided by fuzzy logic," Int. J. Computer Applications in Technology, vol. 34, no. 4, pp. 257-263, 2009.
69. Y. Hata, S. Kobashi, and H. Nakajima, "Human health care system of systems," IEEE Systems Journal, vol. 3, no. 2, pp. 231-238, 2009.
70. Y. Hata and S. Kobashi, "Fuzzy segmentation of endorrhachis in magnetic resonance images and its fuzzy maximum intensity projection," Applied Soft Computing Journal, vol. 9, no. 3, pp. 1156-1169, 2009.

Refereed Proceedings

71. K. Kuramoto, M. Nii, S. Kobashi and Y. Hata, "High performance computing for molecular imaging and immunology," *Integrating Immune Networks with Immuno-Imaging*, 2009.
72. N. Kawakami, S. Kobashi, K. Kagitani-Shimono, S. Imawaki, M. Taniike, and Y. Hata, "Cortical dysplasia detection method with support vector machine in pediatric brain MR images," *Proc. of Int. Forum on Medical Imaging in Asia*, pp. 11-16, 2009.
73. S. Kobashi, K. Kawano, Y. Tsumori, S. Yoshiya, and Y. Hata, "Wearable joint kinematic monitoring system using inertial and magnetic sensors," *Proc. of 2009 IEEE Workshop on Robotic Intelligence in Informationally Structured Space*, pp. 25-29, 2009.
74. S. Kobashi, Y. Fujimoto, M. Ogawa, K. Ando, R. Ishikura, S. Imawaki, S. Hirota, and Y. Hata, "Fuzzy logic assisted quantification of gyral deformation index using magnetic resonance images for the infantile brain," *Proc. of IEEE 39th Int. Symposium on Multiple-Valued Logic*, pp.24-29, 2009.
75. S. Kobashi, Y. Tsumori, S. Imawaki, S. Yoshiya, and Y. Hata, "Wearable knee kinematics monitoring system of MARG sensor and pressure sensor systems," *Proc. of IEEE SMC Fourth Int. Conf. on System of Systems Engineering 2009*. (online)
76. S. Kobashi, T. Oshiba, K. Ando, R. Ishikura, S. Imawaki, S. Hirota, and Y. Hata, "Fuzzy thick rubber model for cerebral surface extraction in neonatal brain MR images," *Proc. of 2009 IEEE Int. Conf. on Fuzzy Systems*, pp. 927-932, 2009.
77. Y. Hata, S. Kobashi, K. Taniguchi, and H. Nakajima, "Human health monitoring system of systems with fuzzy logic by sensor network," *Proc. of 2009 IEEE Workshop on Robotic Intelligence in Informationally Structured Space*, pp. 1-6, 2009.
78. H. Ye, S. Kobashi, K. Taniguchi, K. Asari, and Y. Hata, "Biometric system by foot pressure change based on neural network," *Proc. of IEEE 39th Int. Symposium on Multiple-Valued Logic*, pp.18-23, 2009.
79. Y. Hata, S. Kobashi, H. Yamaguchi, O. Ishikawa, N. Tsuchiya, and H. Nakajima, "Human health monitoring system of systems by non-contacted sensors," *Proc. of IEEE SMC Fourth Int. Conf. on System of Systems Engineering 2009*. (online)
80. T. Takeda, K. Taniguchi, K. Asari, K. Kuramoto, S. Kobashi, and Y. Hata, "Biometric personal authentication by one step foot pressure distribution change by load distribution sensor," *Proc. of 2009 IEEE Int. Conf. on Fuzzy Systems*, pp. 906-910, 2009.
81. K. Ho, N. Tsuchiya, H. Nakajima, K. Kuramoto, S. Kobashi, and Y. Hata, "Fuzzy logic approach to respiration detection by air pressure sensor," *Proc. of 2009 IEEE Int. Conf. on Fuzzy Systems*, pp. 911-915, 2009.
82. H. Uchida, H. Yamaguchi, S. Kobashi, Y. Hata, N. Tsuchiya, and H. Nakajima, "Fuzzy estimation system of dementia severity using biological information during sleep," *Proc. of 2009 IEEE Int. Conf. on Fuzzy Systems*, pp. 921-926, 2009.
83. S. Fujimoto, S. Kobashi, T. Nishiyama, N. Kanzaki, N. Shibamura, T. Fujishiro, K. Kuramoto, M. Kurosaka, and Y. Hata, "Evaluating of hip joint alignment system in MDCT images," *Proc. of 10th Int. Symposium on advanced Intelligent Systems*, pp. 223-226, 2009.
84. K. Yamamoto, S. Kobashi, Y. Hata, N. Tsuchiya, and H. Nakajima, "Real time autonomic nervous system display with air cushion sensor while seated," *Proc. of 2009 IEEE Int. Conf. on Systems, Man and Cybernetics*, pp. 1116-1121, 2009.
85. G. Hiramatsu, Y. Ikeda, S. Kobashi, Y. Hata, S. Imawaki, Y. Kitamura, and T. Yanagida, "Trans-skull imaging system by ultrasonic array probe," *Proc. of 2009 IEEE Int. Conf. on Systems, Man and Cybernetics*, pp. 1122-1127, 2009.

86. K. Yamaguchi, S. Kobashi, I. Mohri, S. Imawaki, M. Taniike, and Y. Hata, "Brain shape homologous modeling using sulcal-distribution index in MR images," Proc. of 2009 IEEE Int. Conf. on Systems, Man and Cybernetics, pp. 1128-1132, 2009.
87. Y. Nakajima, S. Kobashi, Y. Tsumori, N. Shibamura, S. Imawaki, S. Yoshiya, and Y. Hata, "2-D/3-D image registration of implanted knee DR images with Kalman filter," Proc. of 2009 IEEE Int. Conf. on Systems, Man and Cybernetics, pp. 1133-1138, 2009.
88. K. Yamaguchi, S. Kobashi, and Y. Hata, "Sulcal-rendering index based homologous brain shape modeling in MR images," JAMIT Annual Meeting 2009, Vol. 109, No. 407, pp. 253-257, 2009.

2008

Books/Book Chapter

89. Y. Hata, S. Kobashi, and H. Nakajima, "Medical and health management system of systems," in Mo Jamshidi (ed.), *Systems of Systems Engineering: Principles and Applications in Computational Intelligence*, CRC press, pp.233-250, 2008.

Journal Papers

90. M. Kimura, S. Kobashi, K. Kondo, Y. Hata, Y. T. Kitamura, and T. Yanagida, "Fuzzy ultrasonic imaging system for visualizing brain surface and skull considering refraction," *J. of Japan Society for Fuzzy Theory and Intelligent informatics*, vol. 20, no. 1, pp. 79-89, 2008.
91. S. Kobashi, Y. Yahata, S. Kan, M. Misaki, T. Koike, K. Kondo, S. Miyauchi, and Y. Hata, "Eye-position estimation during sleep using infrared video in functional MRI," *J. of Advanced Computational Intelligence and Intelligent Informatics*, 2008. vol. 12, no. 1, pp. 32-40, 2008.
92. S. Kobashi, M. Matsui, N. Inoue, K. Kondo, T. Sawada, and Y. Hata, "Cerebral cortex segmentation with adaptive fuzzy spatial modeling in 3.0T IR-FSPGR MR images," *J. of Japan Society for Fuzzy Theory and Systems*, vol. 20, no. 1, pp. 29-40, 2008.
93. S. Kobashi, Y. T. Kitamura, T. Yanagida, and Y. Hata, "Hemodynamic response latency analysis using wavelet transform in event-related Functional MRI," *Int. J. of Intelligent Computing in Medical Sciences and Image Processing*, vol. 2, no. 3, pp. 1-12, 2008.
94. M. Konishi and Y. Hata, "A Nursing Expert System Aided by Fuzzy Logic for Preventing Pressure Ulcer Development in Surgical Patients," *J. of Japan Society for Fuzzy Theory and Systems*, vol.20, no. 6, pp.963-971, 2008. (In Japanese)

Invited Papers/Talks

95. Y. Hata, "Medical and health monitoring systems aided by fuzzy logic," *The 6th Int. Forum on Sensing and Control Technology*, pp.95-131, 2008

Refereed Proceedings

96. T. Nishiyama, N. Shibamura, T. Fujishiro, S. Hashimoto, K. Takebe, Y. Suzuki, M. Fukuoka, S. Kobashi, Y. Hata, and M. Kurosaka, "In-vivo estimation of 3-D pose/position of hip implants with fuzzy based rapid/accurate 3-D/2-D image registration from 2-D X-ray images," *54rd Annual Meeting of Orthopaedic Research Society*, 2008. (online)

97. Y. Hata, H. Yamaguchi, S. Kobashi, K. Taniguchi, and H. Nakajima, "A human health monitoring system of systems in bed," Proc. of IEEE third Int. Conf. on System of Systems Engineering, (CDROM).
98. S. Kobashi, Y. Fujimoto, T. Ohshiba, M. Ogawa, K. Ando, R. Ishikura, S. Imawaki, S. Hirota, and Y. Hata, "Computer-aided diagnosis system of systems for neonatal and infantile brain using MR images," Proc. of IEEE third Int. Conf. on System of Systems Engineering, Jun. (CDROM).
99. S. Kobashi, S. Nishiwaki, N. Shibanuma, S. Imawaki, M. Kurosaki, and Y. Hata, "Fuzzy visual hull algorithm for 3-D pose/position estimation of TKA implants without 3-D CAD model," Proc. of 5th Int. Conf. on Information Technology and Applications (ICITA 2008), Jun. (online).
100. S. Kobashi, Y. Yahata, S. Kan, M. Misaki, K. Kondo, S. Miyauchi, and Y. Hata, "MRI compatible sleeping-eye gaze tracking system using infrared video analyzed by ANN based image processing," in Human Brain Mapping (HBM), Jun. (CDROM).
101. T. Oshiba, S. Kobashi, M. Ogawa, K. Ando, R. Ishikura, S. Imawaki, and Y. Hata, "Cerebral surface extraction with sub-voxel accuracy from neonatal MR images using thick rubber model," Human Brain Mapping (HBM), Jun. (CDROM).
102. T. Oshiba, S. Kobashi, M. Ogawa, K. Ando, R. Ishikura, S. Imawaki, S. Hirota, and Y. Hata, "Fuzzy control based thick rubber model for extracting cerebral surface from neonatal MR images," Proc. of 2008 World Automation Cong., 2008. (online)
103. M. Fukuoka, S. Kobashi, T. Nishiyama, N. Shibanuma, T. Fujishiro, S. Imawaki, M. Kurosaka, and Y. Hata, "Kinematics Analysis in Total Hip Arthroplasty using Multi-modal Image Registration Technique," Proc. of 2008 World Automation Cong., 2008. (online)
104. K. Kawano, S. Kobashi, Y. Tsumori, N. Shibanuma, S. Imawaki, M. Yagi, S. Yoshiya, and Y. Hata, "Evaluation of Pivot Shift in the anterior cruciate ligament-injured knee using Inertial and Magnetic Sensors," Proc. of 2008 World Automation Cong., 2008. (online)
105. Y. Hata, S. Kobashi, and S. Imawaki, "A fuzzy ultrasonic thickness and wave speed determination system by triangle probe," Proc. of 5th Int. Conf. on Information Technology and Applications (ICITA 2008), Jun. (online).
106. H. Yamaguchi, M. Kuroono, K. Taniguchi, S. Matsuo, S. Kobashi, and Y. Hata, "A fuzzy processing for respiratory rate monitoring system by optical fiber sensor," Proc. of 2008 World Automation Cong., 2008. (online)
107. T. Yamakawa, K. Taniguchi, K. Asari, S. Kobashi, and Y. Hata, "Biometric personal identification based on gait pattern using both feet pressure change," Proc. of 2008 World Automation Cong., 2008. (online)
108. Y. Hata, S. Yamaguchi, S. Kobashi, and K. Oe, "Fuzzy ultrasonic system for identifying cellular quantity of artificial culture bone," Proc. 2008 IEEE Int. Conf. on Systems, Man and Cybernetics, pp. 3062-3066, 2008.
109. K. Yamamoto, S. Kobashi, Y. Hata, N. Tsuchiya, and H. Nakajima, "Fuzzy heart rate variability Detection by air pressure sensor for evaluating autonomic nervous System," Proc. 2008 IEEE Int. Conf. on Systems, Man and Cybernetics, pp. 3067-3071, 2008.
110. G. Hiramatsu, S. Kobashi, Y. Hata, and S. Imawaki, "Ultrasonic large intestine thickness determination system for low anterior resection," Proc. 2008 IEEE Int. Conf. on Systems, Man and Cybernetics, pp. 3072-3076, 2008.

- 111. N. Tsuchiya, K. Yamamoto, H. Nakajima, and Y. Hata, "A comparative study of heart rate estimation via air pressure sensor," Proc. 2008 IEEE Int. Conf. on Systems, Man and Cybernetics, pp. 3077-3082, 2008.
- 112. Y. Mizuno-Matsumoto, S. Kobashi, Y. Hata, O. Ishikawa, and F. Asano, "Functional MRI changes affected by horticultural therapy for cerebrovascular disorders," Proc. of 2008 World Automation Cong., 2008. (online)
- 113. T. Ohshiba, S. Kobashi, M. Ogawa, K. Ando, R. Ishikura, S. Imawaki, and Y. Hata, "Subpixel extraction of neonatal cerebral surface from 3.0T MR images using a thick rubber model," Proc. of 94th Scientific Assembly and Annual Meeting of the Radiological Society of North America (RSNA2008), p. 690, 2008.
- 114. Y. Fujimoto, S. Kobashi, M. Ogawa, K. Ando, R. Ishikura, S. Imawaki, S. Hirota, and Y. Hata, "Fuzzy rule-based interactive gyrus labeling for the infantile brain in magnetic resonance images," Proc. of IEEE Int. Conf. on Bioinformatics and Biomedicine Workshops, pp. 115-116, 2008.

2007

Journal Papers

- 115. S. Kobashi, Y. Yanagida, K. Kondo, and Y. Hata, "Elasticity imaging with fuzzy control-based registration using Multidetector-row CT," Int. J. of Intelligent Computing in Medical Sciences and Image Processing, vol. 1, no. 2, pp. 139-148, 2007.
- 116. Y. Kamozaiki, T. Sawayama, K. Taniguchi, S. Kobashi, K. Kondo, and Y. Hata, "A new ultrasonic oscillosensor and its application in biological information measurement system aided by fuzzy theory," IEICE Trans. on Inf. and Sys., vol. E90-D, no. 11, pp. 1864-1872, 2007.
- 117. M. Endo, K. Nagamune, N. Shibanuma, S. Kobashi, K. Kondo, and Y. Hata, "An ultrasonography system aided by fuzzy logic for identifying implant position in bone", IEICE Trans. on Inf. and Sys., vol. E90-D, no. 12, pp. 1990-1997, 2007.
- 118. M. Endo, H. Nakajima, and Y. Hata, "Invisible object locating system for fracture surgery by using eddy current," Int. J. of Intelligent Computing in Medical Sciences and Image Processing, vol. 1, no. 2, pp. 129-138, 2007.
- 119. D. Kubo, S. Kobashi, N. Shibanuma, A. Okayama, M. Yagi, K. Kondo, S. Yoshiya, and Y. Hata, "Automated analysis of knee kinematics after anterior cruciate ligament reconstruction using multidetector-row CT and digital radiography," J. of Japanese Society for Clinical Biomechanics, vol. 28, pp. 341-347, 2007.

Refereed Proceedings

- 120. S. Yamaguchi, K. Nagamune, K. Oe, S. Kobashi, K. Kondo, and Y. Hata, "A fuzzy estimation system for cellular quantity of artificial culture bone," Proc. of IEEE Int. Conf. on Complex Medical Engineering, 2007. (online)
- 121. Y. Hata, Y. Kamozaiki, T. Sawayama, K. Taniguchi, and H. Nakajima, "A heart pulse monitoring system by air pressure and ultrasonic sensor systems," Proc. of IEEE System of Systems Engineering, 2007. (online)
- 122. A. Okayama, S. Yoshiya, M. Yagi, N. Shibanuma, D. Kubo, S. Kobashi, K. Kondo, and Y. Hata, "In vivo analysis of knee kinematics after ACL reconstruction using automated image registration and fuzzy logic," 53rd Annual Meeting of Orthopaedic Research Society, 2007. (online)

123. Y. Yahata, S. Kobashi, S. Kan, M. Misaki, K. Kondo, S. Miyauchi, and Y. Hata, "Training artificial neural network using MR images for visual axes estimation during sleep," Proc. of IEEE Int. Conf. on Complex Medical Engineering, pp. 443-448, 2007.
124. D. Kubo, S. Kobashi, A. Okayama, N. Shibamura, M. Yagi, K. Kondo, S. Yoshiya, and Y. Hata, "Analyze 3-D knee kinematics after anterior cruciate ligament reconstruction using MDCT and digital radiography," Proc. of IEEE Int. Conf. on Complex Medical Engineering, pp.437-442 2007.
125. S. Kobashi, S. Sueyoshi, K. Kondo, and Y. Hata, "Automated gyrus labeling using knowledge-based fuzzy inference systems," Proc. of IEEE System of Systems Engineering, 2007. (online)
126. K. Kawano, S. Kobashi, M. Yagi, K. Kondo, S. Yoshiya, and Y. Hata, "Analyzing 3D knee kinematics using accelerometers, gyroscopes and magnetometers," Proc. of IEEE System of Systems Engineering, 2007. (online)
127. T. Oshiba, S. Kobashi, K. Ando, R. Ishikura, K. Kondo, and Y. Hata, "Cerebral surface extraction from neonatal MR images using cerebral surface model," Proc. of IEEE System of Systems Engineering, 2007. (online)
128. D. Kubo, S. Kobashi, A. Okayama, N. Shibamura, M. Yagi, K. Kondo, S. Yoshiya, and Y. Hata, "Fuzzy ROI based 2-D/3-D registration for kinetic analysis after anterior cruciate ligament reconstruction," Proc. of NAFIPS'07, pp.266-270, 2007.
129. S. Kobashi, N. Shibamura, K. Kondo, M. Kurosaka, and Y. Hata, "Robust estimation of knee kinematics after total knee arthroplasty with evolutionary computing approach," Proc. of IEEE Int. Conf. on Image Processing, 2007. (online)
130. M. Kimura, S. Kobashi, K. Kondo, Y. Hata, Y. T. Kitamura, and T. Yanagida, "Fuzzy ultrasonic imaging system for visualizing brain surface under skull considering ultrasonic refraction," Proc. 2007 IEEE Int. Conf. on Systems, Man and Cybernetics, pp. 3790-3794, 2007.
131. Y. Ikeda, S. Kobashi, K. Kondo, and Y. Hata, "Fuzzy ultrasonic array system for locating screw holes of intramedullary nail," Proc. 2007 IEEE Int. Conf. on Systems, Man and Cybernetics, pp. 3428-3432, 2007.
132. T. Yamakawa, K. Taniguchi, T. Momen, S. Kobashi, K. Kondo, and Y. Hata, "Biometric personal identification using sole information," Proc. 2007 IEEE Int. Conf. on Systems, Man and Cybernetics, 2007. (online)
133. S. Kobashi, Y. Fujimoto, M. Ogawa, K. Ando, R. Ishikura, K. Kondo, S. Hirota, and Y. Hata, "Fuzzy-ASM based automated skull stripping method from infantile brain MR images," Proc. the 2007 IEEE Int. Conf. on Granular Computing, 2007. (online)
134. Y. Ikeda, N. Shibamura, S. Kobashi, K. Kondo, and Y. Hata, "Ultrasonography system for locating Screw hole positions of intramedullary nail using image registration," Int. Conf. on Soft Computing and Human Sciences, pp. 101-106, 2007.
135. T. Yamakawa, K. Taniguchi, T. Momen, S. Kobashi, K. Kondo, and Y. Hata, "Biometric personal identification based on foot pressure change," Int. Conf. on Soft Computing and Human Sciences, pp. 83-86, 2007.
136. Y. Yahata, S. Kobashi, S. Kan, M. Misaki, K. Kondo, S. Miyauchi, and Y. Hata, "Estimation of visual axis during sleep by analyzing infrared video using artificial neural network," Proc. 2007 IEEE Int. Conf. on Systems, Man and Cybernetics, pp. 3433-3437, 2007.
137. H. Tachibana, K. Kondo, S. Kobashi, and Y. Hata, "Dense point set tracking by projective voxel space of video camera images," Proc. of 2007 Int. Workshop on Smart Info-Media Systems in Bangkok, pp. 22-27, 2007.

138. S. Kobashi, Y. Fujimoto, M. Ogawa, K. Ando, R. Ishikura, K. Kondo, S. Hirota, and Y. Hata, "Fuzzy-ASM based automated skull stripping method from infantile brain MR images," Proc. 2007 IEEE Int. Conf. on Granular Computing, pp. 632-635, 2007.
139. Y. Hata, K. Kondo, and S. Kobashi, "Fine granule evaluation Model from Coarse Granule in Medical Ultrasonic System," Proc. the 2007 IEEE Int. Conf. on Granular Computing, pp. 617-621, 2007.
140. S. Yamaguchi, K. Nagamune, K. Oe, S. Kobashi, K. Kondo, and Y. Hata, "Fuzzy logic approach to identification of cellular quantity by ultrasonic system," Proc. the 2007 IEEE Int. Conf. on Granular Computing, pp. 636-639, 2007.
141. H. Yamaguchi, H. Nakajima, K. Taniguchi, S. Kobashi, K. Kondo, and Y. Hata, "Fuzzy detection system of behavior before getting out of bed by air pressure and ultrasonic sensors," Proc. the 2007 IEEE Int. Conf. on Granular Computing, pp. 114-119, 2007.
142. N. Shibamura, K. Nagamune, Y. Hata, T. Nishiyama, H. Tateishi, and M. Kurosaka, "Evaluation of the stability of a femoral stem using ultrasound," Proc. of the 53rd Annual Meeting of the Orthopaedic Research Society (ORS), Feb. 2007. (online)
143. K. Oe, M. Miwa, K. Nagamune, Y. Sakai, S. Y. Lee, T. Iwakura, T. Hasegawa, R. Kuroda, N. Shibamura, Y. Hata, and M. Kurosaka, "Nondestructive evaluation of B-tricalcium phosphate/mesenchymal stem cells composites in tissue-engineered constructs using ultrasound," Proc. of the 53rd Annual Meeting of the Orthopaedic Research Society (ORS), Feb. 2007. (online)
144. M. Endo, H. Nakajima, and Y. Hata, "Fracture surgery support system with robustness for bones by using eddy current," in Proc. 2007 IEEE Int. Conf. on Systems, Man and Cybernetics, pp. 1907-1912, 2007.
145. K. Nagamune, K. Nishimoto, Y. Hoshino, K. Mizuno, R. Kuroda, Y. Hata, and M. Kurosaka, "Automatic extraction method of bone tunnel of the anterior cruciate ligament from multi detector row computed tomography data," Proc. IEEE/ICME Int. Conf. on Complex Medical Engineering, pp. 503-507, 2007.

2006

Books/Book Chapter

146. S. Greco, Y. Hata, S. Hirano, M. Inuiguchi, S. Miyamoto, H. S. Nguyen, and R. Slowinski, "Rough Sets and Current Trends in Computing," Subseries of Lecture Notes in Computer Science, vol. 4259, Springer, 2006.
147. Y. Hata, O. Ishikawa, S. Kobashi, and K. Kondo, "Combination rule of normal degrees on automated medical diagnosis system (AMDS)," in B. Reusch (ed.), Computational Intelligence, Theory and Applications, Advances in Soft Computing Series, Springer, pp.339-347, 2006.
148. Y. Hata, K. Iseri, S. Kobashi, K. Kondo, and K. Taniguchi, "A fuzzy ultrasonic system for estimating degradation of insulating oil," in B. Reusch (ed.), Computational Intelligence, Theory and Applications, Springer, pp. 733-740, 2006.

Journal Papers

149. S. Kobashi, K. Kondo, and Y. Hata, "Fully automated segmentation of cerebral ventricles from 3-D SPGR MR images using fuzzy representative line," Soft Computing, vol. 10, no. 2, pp. 1181-1191, 2006.

150. S. Kobashi, Y. Fujiki, M. Matsui, N. Inoue, K. Kondo, Y. Hata, and T. Sawada, "Interactive segmentation of the cerebral lobes with fuzzy inference in 3T MR images," *IEEE Trans. on Systems, Man and Cybernetics*, vol. 36, no. 1, pp.74-86, 2006.
151. S. Kobashi, K. Kondo, and Y. Hata, "Computer-aided diagnosis of intracranial aneurysms in MRA images with case-based reasoning," *IEICE Trans. on Inf. and Sys.*, vol. E89-D, no. 1, pp. 340-350, Jan. 2006.
152. S. Kobashi, Y. T. Kitamura, K. Kondo, Y. Hata, and T. Yanagida, "Language laterality index regionally specified with fuzzy logic using near-infrared spectroscopy," *J. of Japan Society for Fuzzy Theory and Systems*, vol. 18, no. 3, pp. 414-424, Jul. 2006.

Invited Talks

153. Y. Hata and K. Nagamune, "Medical ultrasonic system aided by fuzzy logic," *Proc. of Taiwan-Japan Symposium*, pp. 258-264, 2006.

Refereed Proceedings

154. K. Nagamune, N. Shibanuma, Y. Hata, and M. Kurosaka, "Automated three dimensional evaluation of canal fit and fill of the stem in the femoral bone from CT image," *Proc. World Automation Cong.*, 2006. (online)
155. J. Yasui, S. Kobashi, K. Kondo, and Y. Hata, "Fuzzy evaluation system of velocity and thickness by multi-direction ultrasonic probe," *Proc. World Automation Cong.*, 2006. (online)
156. Y. Kamosaki, T. Sawayama, K. Taniguchi, S. Kobashi, K. Kondo, and Y. Hata, "Fuzzy extraction system of heart pulse using an ultrasonic oscillosensor," *Proc. World Automation Cong.*, 2006. (online)
157. M. Endo, H. Nakajima, M. Arao, and Y. Hata, "Eddy current system for finding distal transverse screw holes of an intramedullary nail," *Proc. World Automation Cong.*, 2006. (online)
158. Y. Hata, M. Endo, K. Iseri, S. Kobashi, and K. Kondo, "Fuzzy ultrasonic system design in medicine," *Proc. 2006 IEEE Int. Conf. on Systems, Man and Cybernetics*, pp. 1764-1769, 2006.
159. M. Kimura, S. Kobashi, K. Kondo, and Y. Hata, "In vitro ultrasonic simulation for visualizing brain surface under skull," *Joint 3rd Int. Conf. on Soft Computing and Intelligent Systems and 7th Int. Sympo. on Advanced Intelligent System (SCIS & ISIS 2006)*, pp. 1836-1841, Sep. 2006.
160. J. Yasui, S. Kobashi, K. Kondo, and Y. Hata, "Fuzzy ultrasonic testing system with columnar rod," *Proc. of 2006 Int. Symposium on Intelligent Signal Processing and Communication Systems (ISPACS 2006)*, pp. 903-906, Dec. 2006.
161. Y. Kamosaki, T. Sawayama, K. Taniguchi, S. Kobashi, K. Kondo, and Y. Hata, "Fuzzy extraction system for heart pulse by air pressure sensor," *Proc. of 2006 Int. Symposium on Intelligent Signal Processing and Communication Systems (ISPACS 2006)*, pp. 919-922, Dec. 2006.
162. Y. Hata and K. Nagamune, "Medical ultrasonic system aided by fuzzy logic," *Proc. of Taiwan-Japan Symposium*, pp. 258-264, 2006.
163. K. Nagamune, N. Shibanuma, Y. Hata, and M. Kurosaka, "Automated three-dimensional evaluation of canal fit and fill of the stem in the femoral bone from CT image," *Proc. of the Fifth Int. Forum on Multimedia and Image Processing (IFMIP)*, July, 2006.

164. T. Adachi, K. Kondo, S. Kobashi, and Y. Hata, "Self-location estimation of monocular camera using GPS and buildings map," Joint 3rd Int. Conf. on Soft Computing and Intelligent Systems and 7th Int. Sympo. on Advanced Intelligent System (SCIS & ISIS 2006), pp. 648-653, Sep. 2006.
165. T. Adachi, K. Kondo, S. Kobashi, and Y. Hata, "Identification of a scene by estimating the position and pose of a moving camera," Proc. of 2006 Int. Symposium on Intelligent Signal Processing and Communication Systems (ISPACS 2006), Dec. 2006.
166. S. Kobashi, T. Tomosada, N. Shibamura, K. Kondo, M. Yamaguchi, H. Muratsu, Y. Hata, S. Yoshiya, and M. Kurosaka, "Automated quantification of 3-D knee kinematics using 2-D X-ray fluoroscopy video sequence images," Proc. of Computer Assisted Radiology and Surgery, Int. J. of Computer Assisted Radiology and Surgery, vol. 1, Supp. 1, pp. 237-239, 2006.
167. D. Kubo, S. Kobashi, N. Shibamura, A. Okayama, K. Kondo, M. Yagi, and S. Yoshiya, "Fully automated measurement of 3-D knee kinematics after anterior cruciate ligament reconstruction using multidetector-row CT and X-ray fluoroscopic images," Proc. of Computer Assisted Radiology and Surgery, Int. J. of Computer Assisted Radiology and Surgery, vol. 1, Supp. 1, pp. 491, 2006.
168. S. Yogo, S. Kobashi, K. Kondo, and Y. Hata, "Estimation of rotator cuff by fuzzy inference using MRI images," Proc. World Automation Cong., 2006. (online)
169. Y. Yanagida, S. Kobashi, K. Kondo, and Y. Hata, "Non-rigid registration of multidetector CT images for plumonal tissue elasticity imaging," Proc. World Automation Cong., 2006. (online)
170. S. Sueyoshi, S. Kobashi, K. Kondo, and Y. Hata, "Automated gyral identification using interpolated sulcal curves," Proc. World Automation Cong., 2006. (online)
171. S. Kobashi, M. Matsui, N. Inoue, K. Kondo, and Y. Hata, "Adaptive brain tissue classification with fuzzy spatial modeling in 3T IR-FSPGR MR images," Proc. World Automation Cong., 2006. (online)
172. S. Sueyoshi, K. Murata, S. Kobashi, K. Ando, R. Ishikura, K. Kondo, N. Nakao, and Y. Hata, "Cortex classification of the infantile brain in MRI images using fuzzy logic," Proc. 2006 IEEE Int. Conf. on Systems, Man and Cybernetics, pp. 1536-1540, 2006.
173. S. Kobashi, Y. T. Kitamura, K. Kondo, T. Yanagida, and Y. Hata, "Wavlet transform based accurate estimation of hemodynamic response function in functional MR images," Proc. 2006 IEEE Int. Conf. on Systems, Man and Cybernetics, pp. 1793-1798, 2006.
174. S. Kobashi, M. Matsui, N. Inoue, K. Kondo, Y. Hata, and T. Sawada, "Automated mapping of cortical thickness using 3.0T IR-FSPGR MRI with intensity non-uniformity artifact," NeuroImage, 12th Annual Meeting of the Organization for Human Brain Mapping (HBM), vol. 31, sup. 1, 2006.
175. S. Kobashi, N. Shibamura, K. Kondo, M. Kurosaka, and Y. Hata, "Deformation analysis of in-vivo implant for total hip arthroplasty using multidetector-row CT images," Proc. of the 2006 North American Fuzzy Information Processing Society Annual Conf. - NAFIPS -, (CDROM) 2006.
176. D. Kubo, S. Kobashi, K. Kondo, Y. Hata, A. Okayama, M. Yagi, and S. Yoshiya, "Analyzing knee kinematics after anterior cruciate ligament reconstruction using fuzzy logic," Joint 3rd Int. Conf. on Soft Computing and Intelligent Systems and 7th Int. Sympo. on Advanced Intelligent System (SCIS & ISIS 2006), pp. 2007-2010, Sep. 2006.
177. Y. Yahata, S. Kobashi, S. Kan, M. Misaki, K. Kondo, S. Miyauchi, and Y. Hata, "Neural network based eye position estimation from infrared video during sleeping," Joint 3rd Int. Conf. on Soft Computing and Intelligent Systems and 7th Int. Sympo. on Advanced Intelligent System (SCIS & ISIS 2006), pp. 2011-2016, Sep. 2006.

178. S. Kobashi, Y. Yahata, S. Kan, M. Misaki, K. Kondo, S. Miyauchi, and Y. Hata, "Fully automated detection of eye movement on sleep based on neural network modeling," Proc. 2nd Int. Symposium on Computational Intelligence and Industrial Applications, pp. 269-273, Nov. 2006.
179. T. Adachi, K. Kondo, S. Kobashi, and Y. Hata, "Self-location estimation of a moving camera using the map of feature points and edges of environment," Proc. World Automation Cong., 2006 (CDROM).
180. K. Kondo, A. Yamachika, S. Kobashi, and Y. Hata, "3D shape acquisition and arbitrary view image generation from monocular image based on primitive decomposition," IEEE Asia Pacific Conf. on Circuits and Systems, 2006. (online)

2005

Journal Papers

181. Y. Hata, S. Kobashi, K. Kondo, and T. Nakano, "Automated 3D Surface Display for Evaluating Meniscal Tears Aided by Fuzzy Expert System," Journal of Advanced Computational Intelligence and Intelligent Informatics, Vol. 9, No. 1, pp. 70-79, 2005.
182. S. Kobashi, T. Tomosada, N. Shibanuma, M. Yamaguchi, H. Muratsu, K. Kondo, S. Yoshiya, Y. Hata and M. Kurosaka, "Fuzzy Image Matching for Pose Recognition of Occluded Knee Implants Using Fluoroscopy Images," Journal of Advanced Computational Intelligence and Intelligent Informatics, Vol. 9, No. 2, pp. 181-195, 2005.
183. Y. Hata, "Image Understanding on Medical Images-Toward Medical Image Understanding Systems," Journal of Japan Society for Fuzzy Theory and Intelligent Informatics, Vol. 17, No. 1, pp.11-18, 2005 (in Japanese)
184. S. Sueyoshi, S. Kobashi, K. Kondo and Y. Hata, "The knowledge Based Automatic Labeling of Sulci Using Pattern Matching Based on Running-Derection," Medical Imaging Technology, pp. 211-219, 2005. (in Japanese)
185. S. Imaeda, S. Kobashi, Y. T. Kitamura, K. Kondo, Y. Hata and T. Yanagida, "Unsupervised Analyzing Method of fMRI Data Using Wavelet Transform," Medical Imaging Technology, pp. 220-227, 2005. (in Japanese)
186. Y. Hata, S. Kobashi, K. Kondo, Y. T. Kitamura, and T. Yanagida, "Transcranial Ultrasonography System for Visualizing Skull and Brain Surface Aided by Fuzzy Expert System," IEEE Trans. on Systems, Man and Cybernetics, pp. 1360-1373, Vol. 35, No. 6, 2005
187. S. Kobashi, K. Kondo, and Y. Hata, "Fully Automated Segmentation of Cerebral Ventricles From 3-D SPGR MR Images Using Fuzzy Representative Line," Soft Computing, (accepted)

Rapid Communications

188. S. Yogo, S. Kobashi, K. Kondo and Y. Hata, "Computer-Aided Diagnosis System for Cerebral Aneurysms Using Constrained Neural Network," Medical Imaging Technology, Vol. 23, No. 5, pp. 333-338, 2005. (in Japanese)

Invited Talks

189. Y. Hata, O. Ishikawa, K. Kondo and K. Kobashi, "Normality on Medicine and Its Application to Numeric and Image Data Processing", Proceedings of Taiwan and Japan Symposium 2005, pp. 1-8, 2005

Refereed Proceedings

190. Y. Kamozaki, S. Kobashi, K. Kondo, Y. Hata, T. Sawayama, and K. Taniguchi, "A new Ultrasonic Oscillosensor and its Application to Extraction of Sleep State," in Proc. of 2005 IEEE International Ultrasonics Symposium, (in press)

191. T. Tomosada, S. Kobashi, N. Shibamura, K. Kondo, M. Yamaguchi, H. Muratsu, Y. Hata, S. Yoshiya, and M. Kurosaka, "3-D/4-D Registration Artificial Knee Implants with Predicting Knee Kinematics," in Proc. of Digital Image Computing: Techniques and Applications, (CDROM)
192. C. Maeda, S. Kobashi, N. Shibamura, K. Kondo, and Y. Hata, "3-D Strain Detection of a Support Implant for an Artificial Hip Joint Using Finit Element Method and Genetic Algorithm," in Proc. of Digital Image Computing: Techniques and Applications, (CDROM)
193. S. Yogo, S. Kobashi, K. Kondo, and Y. Hata, "False-Negative Reduction Neural Network Learning for Finding Cerebral Aneurysms with MRA images," in Proc. International Symposium on Advanced Intelligent Systems, 2005, pp. 746-751, 2005.
194. S. Sueyoshi, S. Kobashi, K. Kondo, and Y. Hata "Knowledge-based Automatic Labeling of Cortical Sulci in 3-D Brain MR Images Using Fuzzy Modeling," in Proc. International Symposium on Advanced Intelligent Systems, 2005, pp. 550-555, 2005.
195. S. Kobashi, T. Tomosada, N. Shibamura, M. Yamaguchi, H. Muratsu, K. Kondo, S. Yoshiya, Y. Hata, and M. Kurosaka, "Computer Aided Diagnosis of Total Knee Arthroplasty Using Two Dimensional X-ray Images with Simulated Annealing," Proc. of Daeduck International Conference on Human-Centered Advance Intelligent Technology 2005, pp. 54-59, 2005.
196. Y. Hata, O. Ishikawa, K. Kondo and S. Kobashi, "Design of Automated Medical Diagnosis System with Normal Degree," Proc. of NAFIPS, (CD-ROM) 2005
197. Y. Yanagida, S. Kobashi, T. Nakano, K. Kondo, Y. hata and H. Date, "Automated Lung Lobe Segmentation in MDCT images with Mixture Information of Lobar Fissures and Tubular Tissue Density," Proc. the First International Conference on Complex Medical Engineering CME2005, pp. 341-346, 2005.
198. A. Yamachika, K. Kondo, S. Kobashi and Y. Hata, "Arbitrary View Image Generation Using a Single Camera Based on Rectangular Parallelepiped Approximation and Known Environment Information," Proc. of IEEE International Workshop on Nonlinear Signal and Image Processing, pp. 336-339, Sapporo, May 2005.
199. S. Kobashi, S. Imaeda, Y. T. Kitamura, K. Kondo, Y. Hata, and T. Yanagida, "Wavelet-Based Activation Detection in functional MRI data with no Task, no Stimulus and no repetition," NeuroImage, 11th Annual Meeting of the Organization for Human Brain Mapping (HBM), (CDROM), 2005.
200. S. Imaeda, S. Kobashi, Y. T. Kitamura, K. Kondo, Y. Hata and T. Yanagida, "Detection of Brain Activation with no Stimulus Using Wavelet Analysis," in Proc. of 2005 IEEE Int. Conf. on Systems, Man and Cybernetics, pp. 1482-1487, 2005.
201. K. Iseri, S. Kobashi, K. Kondo, K. Yamato and Y. Hata, "A Fuzzy Logic Approach for Estimating Roughness by 1MHz Ultrasonic System," in Proc. of 2005 IEEE Int. Conf. on Systems, Man and Cybernetics, pp. 1500-1505, 2005.
202. M. Endo, S. Kobashi, K. Kondo and Y. Hata, "Dentistry Support Ultrasonic System for Root Canal Treatment Aided by Fuzzy Logic," in Proc. of 2005 IEEE Int. Conf. on Systems, Man and Cybernetics, pp. 1494-1499, 2005.
203. A. Takio, K. Kondo, S. Kobashi and Y. Hata, "Pin Insertion System Using Surface-Markers for Uniform Motion Region," in Proc. of 2005 IEEE Int. Conf. on Systems, Man and Cybernetics, pp. 1931-1936, 2005.
204. A. Yamachika, K. Kondo, S. Kobashi and Y. Hata, "Arbitrary View Image Generation for Indoor Surveillance Using a Camera Based on 3D Siple Shape Approximation," in Proc. of 2005

IEEE Int. Conf. on Systems, Man and Cybernetics, pp. 1937-1942, 2005.

2004

Invited Talks

205. Y. Hata, S. Kobashi, K. Kondo, Y. T. Kitamura and T. Yanagida, "Representation of Normality and Its Application to Development of Transcranial Sonography System," Proc. of Taiwan-Japan Symposium 2004, pp.7-12, 2004.

Journal Papers

206. S. Kobashi, K. Kondo, and Y. Hata, "Target Image Enhancement Using Representative Line in MR Cholangiography Images," International Journal of Imaging Systems and Technology, Vol. 14, No. 3, pp. 122-130, 2004.
207. K. Nagamune, S. Kobashi, K. Kondo, Y. Hata, K. Taniguchi, and T. Sawayama, "Unconstrained Evaluation System for Heart Rate Using Ultrasonic Vibrograph," Japanese Journal of Applied Physics, Vol. 43, No. 5B, pp. 3237-3238, 2004.

Refereed Proceedings

208. Y. Hata, O. Ishikawa, S. Kobashi and K. Kondo, "Combination Rule of Normal Degrees on Automated Medical Diagnosis System (AMDS)" Proc. of Computational Intelligence, theory and applications, (CD-ROM) 2004.
209. M. Endo, K. Nagamune, N. Shibamura, S. Kobashi, K. Kondo and Y. Hata, "Ultrasonography System for Finding Distal Transverse Screw Hole of Intramedullary Nail," Proc. of the Fourth International Symposium on Human and Artificial Intelligence Systems (HART), Fukui, pp. 229-234, 2004.
210. A. Takio, K. Kondo, S. Kobashi, and Y. Hata, "Real-Time Position and Pose Tracking Method for Pin Insertion by Observing Landmarks on a Moving Object," Proc. of the Fourth International Symposium on Human and Artificial Intelligence Systems (HART), Fukui, pp. 235-240, 2004.
211. K. Iseri, S. Kobashi, K. Kondo and Y. Hata, "On Angle Dependency in Fuzzy Ultrasonography System for Estimating Roughness," Proc. of the Fourth International Symposium on Human and Artificial Intelligence Systems (HART), Fukui, pp. 241-246, 2004.
212. T. Ohkawa, S. Kobashi, K. Kondo, Y. Hata, T. Nakano, and H. Date, "Automated Volumetric Method of Individual Lung Lobes Based on a Fuzzy Control System Using Multidetector-Row CT," Proc. of 90th Scientific Assembly and Annual Meeting of the Radiological Society of North America (RSNA'04), p. 351, 2004.
213. S. Kobashi, S. Imaeda, Y. T. Kitamura, K. Kondo, Y. Hata, and T. Yanagida, "Wavelet Analysis of Functional MRI and Regional Specificity of Hemodynamic Response," Proc. of 90th Scientific Assembly and Annual Meeting of the Radiological Society of North America (RSNA'04), p. 539, 2004.
214. T. Tomosada, S. Kobashi, K. Kondo, Y. Hata, Y. Takano, A. Muranaka, N. Shibamura, S. Yoshiya and M. Kurosaka "Position and Pose Estimation of the occluded Artificial Knee Joint in X-ray Fluoroscopy Images Based on Fuzzy Image Processing," Proc. of Joint 2nd International Conference on Soft Computing and Intelligent Systems and 5th International Symposium on Advanced Intelligent Systems, (Yokohama, 2004)
215. C. Maeda, S. Kobashi, K. Kondo, Y. Hata, and N. Shibamura "Fuzzy Object Model-based Image Segmentation for Evaluating Distortion of Artificial Hip Joint In-vivo," Proc. of Joint 2nd International Conference on Soft Computing and Intelligent Systems and 5th International

Symposium on Advanced Intelligent Systems, (Yokohama, 2004) (in press)

216. K. Iseri, S. Kobashi, K. Kondo, Y. Hata and K. Nagamuner "Fuzzy Ultrasonography System for Estimating Roughness by Using 1MHz Probe," Proc. of Joint 2nd International Conference on Soft Computing and Intelligent Systems and 5th International Symposium on Advanced Intelligent Systems, (Yokohama, 2004)
217. K. Nagamune, H. Muratsu, S. Yoshiya, M. Kurosaka, Y. Hata, "Fuzzy Determination of Anatomical Reference Points in 3D Kinematical Measurement for Human Body," Proc. of Joint 2nd International Conference on Soft Computing and Intelligent Systems and 5th International Symposium on Advanced Intelligent Systems, (Yokohama, 2004)
218. M. Konishi and Y. Hata, "Nursing Fuzzy Expert System for Preventing Pressure Ulcer Development in Surgical Patients," Proc. of Joint 2nd International Conference on Soft Computing and Intelligent Systems and 5th International Symposium on Advanced Intelligent Systems, (Yokohama, 2004)
219. K. Nakao, K. Kondo, S. Kobashi, Y. Hata, and T. Yagi, "3D Shape Reconstruction Using Extended Kalman Filter with an Active Camera," Proc. of Int. Sympo. on Communications and Information Technologies 2004 (ISCIT 2004), pp. 857-860, 2004.
220. S. Imaeda, S. Kobashi, Y. T. Kitamura, K. Kondo, Y. Hata, and T. Yanagida, "Analysis of ER-fMRI Time Series with Modified Mother Wavelet," Proc. of Int. Sympo. on Communications and Information Technologies 2004 (ISCIT 2004), pp. 849-852, 2004.
221. A. Takio, K. Kondo, S. Kobashi, and Y. Hata, "Real-Time Position and Pose Tracking Method of Moving Object Using Visual Servo System," Proc. of IEEE Int. Midwest Symposium on Circuits and Systems, Vol. 1, pp. 321-324, Hiroshima, Jul. 2004.
222. A. Yamachika, K. Kondo, S. Kobashi, and Y. Hata, "Arbitrary Viewpoint Image Generation Method of Unknown Objects in Known Environment Using a Single Camera," Proc. of IEEE Int. Midwest Symposium on Circuits and Systems, Vol. 3, pp. 167-170, Hiroshima, Jul. 2004.
223. T. Ohkawa, S. Kobashi, T. Nakano, K. Kondo, Y. Hata, and H. Data, "A new Measuring Method for the Forced Vital Capacity of Individual Lung Lobes Using Multidetector-row CT," Proc. of the Fifth International Forum on Multimedia and Image Processing (IFMIP), pp. 69-74, 2004.
224. K. Nagamune, T. Nishiyama, M. Kurosaka, N. Shibanuma and Y. Hata, "Fuzzy Diagnosis for Bonding Degree of Femur Stem by Using Ultrasonic Wave," Proc. of the Fifth International Forum on Multimedia and Image Processing (IFMIP), pp. 191-196, 2004.
225. T. Ohkawa, S. Kobashi, T. Nakano, K. Kondo, Y. Hata, and H. Data, "A new Measuring Method for the Forced Vital Capacity of Individual Lung Lobes Using Multidetector-row CT," Proc. of the Fifth International Forum on Multimedia and Image Processing (IFMIP), pp. 69-74, 2004.
226. Y. Hata, S. Kobashi, K. Kondo, O. Ishikawa, Y. T. Kitamura, and T. Yanagida, "Transcranial Ultrasonography System Aided by Fuzzy Model," Proc. of the Fifth International Forum on Multimedia and Image Processing (IFMIP), pp. 109-114, 2004.
227. M. Endo, S. Kobashi, K. Kondo, Y. Hata, K. Nagamune, H. Muratsu and N. Shibanuma, "Ultrasonography System of Implant in Bones for Orthopedic Surgery," Proc. of the Fifth International Forum on Multimedia and Image Processing (IFMIP), pp. 133-138, 2004.
228. K. Nakao, K. Kondo, S. Kobashi, S. Kobashi, Y. Hata and T. Yagi, "Iterated Model-Based Estimation of Object Pose Using Kalman Filter with an Active Camera," Proc. of the Fifth International Forum on Multimedia and Image Processing (IFMIP), pp. 139-144, 2004.
229. K. Kondo, S. Kobashi, and Y. Hata, "Motion Detection Using DWT and Kalman Filter in Mixed

Domain," Proc. of the Fifth International Forum on Multimedia and Image Processing (IFMIP), pp. 185-189, 2004.

230. S. Kobashi, K. Kondo, and Y. Hata, "Rough Sets Based Medical Image Segmentation with Connectedness," Proc. of the Fifth International Forum on Multimedia and Image Processing (IFMIP), pp. 197-202, 2004.
231. S. Kobashi, K. Kondo, Y. Hata, and N. Shibamura, "Volume Visualization for Functional Assessments of the Meniscus Using Multidetector CT Images," Proc. of the Sixth Asian Conference on Computer Visoin, Vol. 2, pp. 920-925, 2004.
232. Y. Hata, O. Ishikawa, S. Kobashi, and K. Kondo, "Automated Medical Diagnosis System (AMDS) with Normal Degree Based on Fuzzy Logic," Proc. 2nd IASTED Int. Conf. On Biomedical Engineering, pp.590-593, Austria, 2004.
233. K. Kondo, K. Nakao, S. Kobashi, and Y. Hata, "Challenge to Development of Guiding System Using an Active Camera for Computer Assisted Surgery," Proc. 2nd IASTED Int. Conf. On Biomedical Engineering, pp.529-533, Austria, 2004.
234. S. Imaeda, S. Kobashi, Y. T. Kitamura, K. Kondo, Y. Hata, and T. Yanagida, "Wavelet-Based Hemodynamic Analyzing Method in Event-related fMRI With Statistical Processing," Proceedings of ISBET 2004, International Congress Series, Vol. 1270, pp. 138-141, 2004.
235. S. Kobashi, S. Imaeda, Y. T. Kitamura, K. Kondo, Y. Hata, and T. Yanagida, "Regional Specificity of Hemodynamic Response Delay Analyzed by a New Wavelet Based Method: HAW," NeuroImage, 10th Annual Meeting of the Organization for Human Brain Mapping (HBM), Hungary, Jun. 2004. (CDROM)

2003

Journal Papers

236. K. Nagamune, K. Taniguchi, S. Kobashi, and Y. Hata, "Ultrasonic Nondestructive Evaluation for Embedded Objects in Concrete Aided by Fuzzy Logic," IEICE Trans. on Inf. and Syst. Vol. E86-D, No. 1, pp. 79-88, Jan. 2003.
237. T. Kimura, K. Nagamune, S. Kobashi, K. Kondo, Y. Hata, and K. Taniguchi, "A fuzzy inference system for identifying tissue elasticity using ultrasound," Journal of Advanced Computational Intelligence and Intelligent Informatics, Vol. 7, No. 1, pp. 31-39, 2003.
238. K. Nagamune, K. Taniguchi, S. Kobashi, and Y. Hata, "Automated Extraction System of Embedded Tubes from Pulse Radar Image Based on Fuzzy Expert System," IEICE Trans. on Inf. and Syst., Vol. E86-A, No. 7, pp. 1778-1789, 2003.
239. Y. Fujiki, S. Kobashi, M. Matsui, N. Inoue, K. Kondo, Y. Hata and T. Sawada, "3-D Segmentation of the Frontal Lobe in 3.0T IR-FSPGR MR Images Using Fuzzy Rule-Based ACM," Journal of Advanced Computational Intelligence and Intelligent Informatics, Vol. 7, No. 2, pp. 189-199, 2003.

Refereed Proceedings

240. K.Kondo, S.Kobashi, and Y.Hata, "Boundary Extraction of Laminae for Varve Analysis by Energy Minimization", Proc. 2003 International Symposium on Intelligent Signal Processing and Communication Systems, pp. 266-270, 2003.
241. T. Kimura, K. Nagamune, S. Kobashi, K. Kondo, Y. Hata, Y. T. Kitamura, and T. Yanagida, "Three-Dimensional Bone Shape Sonography System Aided by Fuzzy Logic," in Proc. of The 8th Australian and New Zealand Conference on Intelligent Information Systems, pp. 63-68, 2003.
242. T. Shimizu, K. Nagamune, S. Kobashi, K. Kondo, Y. Hata, Y. T. Kitamura, and T. Yanagida, "Skull and Brain Visualization by Transcranial Sonography System," in Proc. of The 8th Australian and

New Zealand Conference on Intelligent Information Systems, pp. 427-432, 2003.

243. Y. Fujiki, S. Kobashi, M. Matsui, N. Inoue, K. Kondo, Y. Hata, and T. Sawada, "Segmentation of Cerebral Lobes in 3.0 T IR-FSPGR MR Images Using Fuzzy Inference," in Proc. of The 8th Australian and New Zealand Conference on Intelligent Information Systems, pp. 69-74, 2003.
244. M. Ninomiya, S. Kobashi, K. Kondo, Y. Hata, and T. Nakano, "Computer-aided Diagnosis of Cerebral Aneurysm based on Fuzzy Expert System: MR Angiography Study," in Proc. of The 8th Australian and New Zealand Conference on Intelligent Information Systems, pp. 219-224, 2003.
245. K. Nagamune, K. Taniguchi, S. Kobashi, K. Kondo, and Y. Hata, "An Ultrasonic Evaluation for Degradation of Insulating Oil Using Fuzzy Inference," Proc. of 2003 IEEE Int. Ultrasonics Symp. (CDROM)
246. Y. Hata, O. Ishikawa, S. Kobashi, and K. Kondo, "Degree of Normality Based on Fuzzy Logic for a Diagnostic Analysis of Signs Observed in a Human Body," in Proc. 20th Annual Meeting of the North American Fuzzy Information Processing Society - NAFIPS, pp.155-160, Chicago, 2003.
247. K. Nakao, K. Kondo, S. Kobashi, Y. Hata, T. Yagi, T. Hayashi, "Object Position/Pose Estimation Using CAD Models for Navigation of Manipulator with a Single CCD Camera," Proc. of IEEE International Symposium on Computational Intelligence in Robotics and Automation, pp. 1433-1438, July. 2003.
248. S. Kobashi, K. Kondo and Y. Hata, "Automated Finding of the Willis Ring in MR Angiography Images Using Fuzzy Knowledge Base," Proc. 2003 International Symposium on Multiple-Valued Logic (ISMVL). pp. 83-90. 2003.
249. S. Kobashi, T. Inazumi, Y. T. Kitamura, K. Kondo, Y. Hata, and T. Yanagida, "Quantitative Evaluation of the Wavelet Based Analyzing method (HAW) in ER-fMRI study and comparison with SPM99," NeuroImage, 9th Annual Meeting of the Organization for Human Brain Mapping (HBM), New York, Jun. 2002. (CDROM)
250. S. Kobashi, K. Kondo and Y. Hata, "Fuzzy Representative Line Tracking Algorithm for Enhancing 3-D MR Cholangiography Images," Proc. of IEEE EMBS Asian-Pacific Conference on Biomedical Engineering 2003, (CDROM)
251. T. Ohkawa, S. Kobashi, K. Kondo, Y. Hata, and T. Nakano, "Tubular Tissue-Based Segmentation of Lung Lobes from Chest MDCT Images," Proc. of IEEE EMBS Asian-Pacific Conference on Biomedical Engineering 2003, (CDROM)

2002

Books

252. M. Jamshidi, Y. Hata, M. Fathi, A. Homaifar and J.S.Jamshidi, "Soft computing, Multimedia, Biomedicine, Image Processing and Financial Engineering," TSI Press, Vol. 13, IEEE Catalog# 02EX548, 2002

Journal Papers

253. Y. Hata, and M. Mukaidono, "On fundamental three classes of fuzzy information granularity," MULTIPLE-VALUED LOGIC-An Int. J., Vol.8(1), pp.1-16 (2002)
254. T. Okuzaki, S. Hirano, S. Kobashi, Y. Hata, and Y. Takahashi, "A Rough Set Based Clustering Method by Knowledge Combination," IEICE Trans. on Inf. and Syst. (in press)
255. S. Hirano, S. Tsumoto, T. Okuzaki, Y. Hata, and K. Tsumoto, "Anaysis of Biochemical Data Aided by a Rough Sets-Based Clustering Technique," Int. J. of Fuzzy Systems, Vol. 4, No. 3, pp.759-765, Sep. 2002

Refereed Proceedings

256. S. Kobashi, Y. Hata, E. Matsui, H. Kitagaki, E. Mori, T. Kanagawa, "Automated volumetry of lateral ventricles in 3-D SPGR MR images using physicians' knowledge represented by fuzzy logic," Proc. 16th International Congress and Exhibition, Computer Assisted Radiology and Surgery, pp. 1028, 2002.
257. K. Nagamune, K. Taniguchi, S. Kobashi, and Y. Hata, "Automated Design of Non-Destructive Testing System by Genetic Algorithms," Proc. of the fourth International Forum on Multimedia and Image Processing, pp. 159-164, Jun. 2002.
258. Y. Hata, M. Terao, S. Kobashi, S. Kanazawa, S. Imawaki and M. Ishikawa, "Fuzzy Maximum Intensity Projection (FMIP) in Medical Imaging," Proc. of the fourth International Forum on Multimedia and Image Processing, 2002. (CDROM)
259. S. Kobashi, T. Matsumoto, Y. Hata, Y. T. Kitamura, and T. Yanagida, "Fuzzy Lateral Index for Determining the Language Dominance Using Near-Infrared Spectroscopy," Proc. of the fourth International Forum on Multimedia and Image Processing, 2002. pp. 287-292, Jun. 2002.
260. S. Kobashi T. Zui, Y. Hata, Y. T. Kitamura, T. Yanagida, "Wavelet Based Analysis of the Hemodynamic Response Delay in Event Functional MRI," NeuroImage, 8th Annual Meeting of the Organization for Human Brain Mapping, Sendai, Jun. 2002. (CDROM)
261. S. Kobashi T. Matsumoto, Y. Hata, Y. T. Kitamura, T. Yanagida, "Fuzzy Logic Approach to Investigating the Language Dominance Using Near-Infrared Spectroscopy," NeuroImage, 8th Annual Meeting of the Organization for Human Brain Mapping, Sendai, Jun. 2002. (CDROM)
262. S. Kawamura, K. Kondo, Y. Konishi, and H. Ishigaki, "Estimation of Motion Using Motion Blur for Tracking Vision System," Proc. 5th World Automation Congress, vol. 13, pp. 371-376, Jun. 2002.
263. K. Maeda, K. Kondo, Y. Konishi, and H. Ishigaki, "Design of Mixed-Domain Filters for Detection of Arbitrary Trajectory Signals by Using Extended Complex Kalman Filters," Proc. 45th IEEE Int. Midwest Symposium on Circuits and Systems, Aug. 2002.
264. Y. Hata, S. Kobashi, K. Kondo, S. Imawaki, and M. Ishikawa, "Fuzzy Maximum Intensity Projection (FMIP) of MR Endorrhachis Images," Proc. 6th Int. Conf. on Knowledge-Based Intelligent Information Engineering Systems & Allied Technologies (KES'2002), pp. 618-622, Sep. 2002.
265. K. Kondo, S. Kobashi, Y. Hata, K. Maeda, H. Ishigaki, Y. Nasu, T. Suzuki, and K. Mabuchi, "Topograms of Spectral Analysis of Physiological Signals for Intuitive Evaluation," Proc. 6th Int. Conf. on Knowledge-Based Intelligent Information Engineering Systems & Allied Technologies (KES'2002), pp. 614-617, Sep. 2002.
266. S. Kobashi, K. Kondo, Y. Hata, and M. Matsui, "Knowledge-Based Fuzzy Shape Detective Algorithm for Segmenting Human Brain MR Images," Proc. 6th Int. Conf. on Knowledge-Based Intelligent Information Engineering Systems & Allied Technologies (KES'2002), pp. 600-603, Sep. 2002.
267. K. Nagamune, S. Kobashi, k. Kondo, Y. Hata, Y. T. Kitamura, "Challenge to the Development of a Transcranial Sonography System," Proc. 6th Int. Conf. on Knowledge-Based Intelligent Information Engineering Systems & Allied Technologies (KES'2002), pp. 604-608, Sep. 2002.
268. C. Yasuba, S. Kobashi, K. Kondo, Y. Hata, S. Imawaki, and M. Ishikawa, "Finding the Non-Continuous Tube by Fuzzy Inference for Segmenting the MR Cholangiography," Proc. of Fifth Int. Conf. on Medical Image Computing and Computer Assisted Intervention (MICCAI), part II, pp.28-35, Sep. 2002.
269. T. Kimura, K. Nagamune, S. Kobashi, K. Kondo, Y. Hata, and K. Taniguchi "Tissue Elasticity Estimation from Ultrasonic Waveform Using Fuzzy Inference," Joint 1st Int. Conf. on Soft

- Computing and Intelligent Systems (SCIS2002), pp. 83, Oct. 2002.
270. T. Shimizu, K. Nagamune, S. Kobashi, K. Kondo, Y. Hata, Y. T. Kitamura, and T. Yanagida, "An Automated Ultrasound Discrimination System of Tissue under an Obstacle by Fuzzy Reasoning," Joint 1st Int. Conf. on Soft Computing and Intelligent Systems (SCIS2002), pp. 83, Oct. 2002.
271. M. Ninomiya, S. Kobashi, K. Kondo Y. Hata, S. Imawaki, and M. Ishikawa, "Feature Extraction from MRA Images for Fuzzy Rule-Based Diagnosis of Cerebral Aneurysms," Joint 1st Int. Conf. on Soft Computing and Intelligent Systems (SCIS2002), pp. 84, Oct. 2002.
272. Y. Fujiki, S. Kobashi, K. Kondo, Y. Hata, and M. Matsui, "User-Guided Segmentation of the Frontal Lobe Using Fuzzy Rule-Based Active Contour Model," Joint 1st Int. Conf. on Soft Computing and Intelligent Systems (SCIS2002), pp. 84, Oct. 2002.
273. Y. T. Kitamura, S. Kobashi, Y. Hata, M. Takeda, T. Yanagida, "Dissociation in Human Prefrontal Cortex on a Procedural Learning-Related Activation: A Study by Near-Infrared Optical Topography," Proc. of Society for Neuroscience Annual Meeting, Nov. 2002. (CDROM)
274. M. Shibata, S. Kobashi, K. Kondo, Y. Hata, S. Imawaki, and M. Ishikawa, "Representative Line Detection Algorithm with Fuzzy Inference and Its Application to Segmentation of CT Meniscus Images," Proc. of 9th Int. Conf. on Neural Information Processing (ICONIP), Vol. 5, pp. 2284-2288, Nov. 2002.
275. C. Yasuba, S. Kobashi, K. Kondo, Y. Hata, S. Imawaki, and M. Ishikawa, "Fuzzy Inference Based Augmented Reality in MR Cholangiography Images," Proc. of 9th Int. Conf. on Neural Information Processing (ICONIP), Vol. 2, pp. 796-800, Nov. 2002.
276. T. Matsuura, S. Kobashi, K. Kondo, Y. Hata, "An Image Classification Based on new Similarity Measure in Rough Sets," Proc. of 1st Int. Conf. on Fuzzy Systems and Knowledge Discovery (FSKD), Vol. 1, pp. 197-201, Nov. 2002.
277. Y. Hata, T. Shimizu, S. Kobashi, K. Kondo, Y. T. Kitamura, and T. Yanagida, "A Fuzzy Logic Approach to Transcranial Sonography System with Placement Free," Proc. 1st Int. Conf. on Information Technology & Applications (ICITA2002), Nov. 2002. (CDROM)
278. K. Kondo, S. Kobashi, Y. Hata, A. Goto, and H. Morinaga, "Extraction of Laminae from Lacustrine Varved Diatomite and its Spectral Analysis," Proc. 1st Int. Conf. on Information Technology & Applications (ICITA2002), Nov. 2002. (CDROM)
279. K. Nagamune, K. Taniguchi, S. Kobashi, K. Kondo, and Y. Hata, "Comparison between Ultrasonic and Pulse-Radar Non-Destructive Testing Systems," Proc. 1st Int. Conf. on Information Technology & Applications (ICITA2002), Nov. 2002. (CDROM)
280. K. Sugano, S. Kobashi, K. Kondo, Y. Hata, T. Sawayama, and K. Taniguchi, "A New Ultrasonic Oscillosensor and its Application to Recognition of Human Action," Proc. 1st Int. Conf. on Information Technology & Applications (ICITA2002), Nov. 2002. (CDROM)

2001

Books

281. K. Imai, N. Kamiura, and Y. Hata, "Pattern Recognition in Soft Computing Paradigm, Chapter 6, New Clustering with Estimation of Cluster Number Based on Genetic Algorithm," in N. R. Pal (ed.), World Scientific Publishing Co. Pte. Ltd. pp. 142-162, Jan. 2001.
282. S. Nakagawa, N. Kamiura, and Y. Hata, "A New Paradigm Based of Knowledge Engineering by Soft Computing, Chapter 13, A Clustering Based on Self-Organizing Map and Knowledge Discovery

by Neural Network," in L. Y. Ding (ed.), World Scientific Publishing Co. Pte. Ltd. pp. 273-296, Jan, 2001.

283. S. Kobashi, Y. Hata, and L. O. Hall, "Fuzzy Information Granulation of Medical Images - Blood Vessel Extraction from 3-D MRA Images," in S. Barro and R. Marrin (eds.), Fuzzy Logic in Medicine, Springer, pp. 103-109, 2001.

284. Y. Hata, N.Y. Phuong and H. Eda (Eds.), "First Vietnam/Japan Symposium on Medical Imaging/Informatics and Applications Proceedings, 2001.

Journal Papers

285. S. Kobashi, N. Kamiura, Y. Hata, and F. Miyawaki, "Volume quantization based neural network approach to 3D MR angiography image segmentation," Image Vis. Comput., vol. 19, no. 4, pp. 185-193, 2001.

286. S. Hirano, and Y. Hata, "Fuzzy expert system for foot CT image segmentation," Image Vis. Comput., vol. 19, no. 4, pp. 207-216, 2001.

287. N. Kamiura, Y. Taniguchi, Y. Hata, and N. Matsui, "A Learning Algorithm with Activation Function Manipulation for Fault Tolerant Neural Networks," IEICE Trans. on Inf. and Syst. Vol. E84-D, pp. 899-905, 2001.

Refereed Proceedings

288. S. Hirano, T. Okuzaki, Y. Hata, S. Tsumoto, and K. Tsumoto, "A clustering method based on rough sets and its application to biochemical data analysis," in Proc. Atlantic Symp. Computational Biology and Genome Inf. Syst. and Technol., pp. 16-20, 2001.

289. S. Hirano, T. Okuzaki, Y. Hata, S. Tsumoto, and K. Tsumoto, "A rough set-based clustering method with modification of equivalence relations," in Proc the Fifth Pacific-Asia Conf. Knowledge Discovery and Data Mining, (PAKDD2001), Lecture Notes in Computer Science, vol. 2035, pp. 507-512, 2001.

290. S. Kobashi, Y. T. Kitamura, M. Otsuki, Y. Hata, H. Naritomi, and T. Yanagida, "Time Series Analysis in Near-Infrared Spectroscopy (NIRS) Aided by Fuzzy C-Means (FCM) and Wavelet Transforms," 7th Annual Meeting of the Organization for Human Brain Mapping, vol. 13, no. 6, p. S175, Brighton, Jun. 2001.

291. M. Otsuki, Y. T. Kitamura, S. Kobashi, H. Naritomi, Y. Hata, and T. Yanagida, "Functional MRI of Word Retrieval: Difference Depending on the Retrieval Strategy," 7th Annual Meeting of the Organization for Human Brain Mapping, vol. 13, no. 6, p. S581, Brighton, Jun. 2001.

292. Y. T. Kitamura, S. Kobashi, Y. Hata, M. Otsuki, H. Naritomi, and T. Yanagida, "Dynamic Brain Activation During Improvement in a Sequential Motor Performance: An NIRS/I Study," 7th Annual Meeting of the Organization for Human Brain Mapping, vol. 13, no. 6, p. S695, Brighton, Jun. 2001.

293. S. Kobashi, T. Takae, Y. Hata, and Y. Kitamura, T. Yanagida, "Automated Segmentation of cerebrospinal fluid and lateral ventricles from human brain MR images," in Proc. 20th Annual Meeting of the North American Fuzzy Information Processing Society - NAFIPS, Vancouver, pp. 1961-1966, 2001.

294. S. Kobashi, T. Takae, Y. T. Kitamura, Y. Hata, and T. Yanagida, "Fuzzy Medical Image Processing for Segmenting the Lateral Ventricles from MR Images," Proc. of IEEE 2001 Int. Conf. on Image Processing, Greece, pp. 1095-1098, 2001.

295. Y. Hata, S. Kobashi, Y. Tokimoto, and M. Ishikawa, "Computer Aided Diagnosis System of Meniscal Tears with T1 and T2 weighted MR Images Based on Fuzzy Inference," 7th FUZZY DAYS Int. Conf. on Computational Intelligence, pp. 55-58, Oct, 2001.

296. S. Kobashi, Y. Hata, Y. T. Kitamura, T. Hayakata, and T. Yanagida, "Brain State Recognition Using Fuzzy C-Means (FCM) with Near Infrared Spectroscopy (NIRS)," 7th FUZZY DAYS Int. Conf. on Computational Intelligence, pp. 124-136, Oct, 2001.
297. H. Uchida, Y. Hata, S. Matsuura, T. Tsuchikawa, Y. Morotomi, and H. Aoyama, "Rough Set Based Knowledge Discovery of the Interface for Internet Usage among Japanese Elderly Women," 7th FUZZY DAYS Int. Conf. on Computational Intelligence, Oct. 2001.
298. K. Nagamune, Y. Hata, and K. Taniguchi, "Inherent Wave Estimation on Ultrasonic Non-Destructive Testing using Fuzzy Inference," 7th FUZZY DAYS Int. Conf. on Computational Intelligence, pp. 369-379, Oct. 2001.
299. M. Terao, S. Kobashi, Y. Hata, M. Tanaka, Y. Tokimoto, O. Ishikawa, and M. Ishikawa, "Automated Extraction of the Endorrhachis from MR Lumber Images by Fuzzy Inference," Proc. of 20th Annual Meeting of the North American Fuzzy Information Processing Society - NAFIPS, Vancouver, pp. 1620-1625, Jul. 2001.
300. T. Matsuura, S. Kobashi, Y. Hata, and K. Yamato, "Image Segmentation with Clustering Based on Rough Sets," The Second Korea-Japan Joint Symposium on Multiple-Valued Logic pp. 23-26, Aug. 2001.
301. K. Sugano, K. Nagamune, S. Kobashi, Y. Hata, T. Sawayama, and K. Taniguchi, "An Automated Tissue Discrimination Based on Fuzzy Analysis of Ultrasonic Wave," Knowledge-Based Intelligent Information Engineering Systems & Allied Technologies, pp. 431-435, Sep. 2001.
302. T. Matsuura, S. Kobashi, and Y. Hata, "A Medical Image Segmentation Method Using K-means Clustering and Rough Sets," Knowledge-Based Intelligent Information Engineering Systems & Allied Technologies, pp. 436-440, Sep. 2001.
303. M. Shibata, S. Kobashi, and Y. Hata, "Fuzzy Rule Based Segmentation of CT Knee Images," Knowledge-Based Intelligent Information Engineering Systems & Allied Technologies, pp. 441-445, Sep. 2001.
304. C. Yasuba, S. Kobashi, and Y. Hata, "3-D Visualization of the Cholecyst and the Bile duct Using Fuzzy Clustering," Knowledge-Based Intelligent Information Engineering Systems & Allied Technologies, pp. 446-450, Sep. 2001.
305. T. Zui, S. Kobashi, Y. T. Kitamura, Y. Hata, and T. Yanagida, "Data-driven Analysis of Hemodynamic Response Delay in Event-related fMRI Using Wavelet Transform," in Proc. Mathematical Methods in Biomedical Image Analysis, pp. 113-120, 2001.
306. K. Ohta, Y. Hata, C. Ohta, and T. Kawaguchi, "Extract the Facial Expression of Patient's Pain for Telenursing System," in Proc. The IASTED (The International Association of Science and Technology for Development), International Symposia, Applied Informatics, pp. 301-305, 2001.
307. Y. Hata, S. Kobashi, O. Ishikawa, S. Kanazawa, S. Imawaki, M. Ishikawa, "Medical Image Processing Aided by Fuzzy Logic," First Vietnam Japan Symposium on Medical Imaging/Informatics and Applications (VJMEDIAG2001), pp. 1-8, Nov. 2001.
308. S. Kobashi, T. Matsuura, Y. Hata, S. Imawaki, M. Ishikawa, "A Rough Set-Based Clustering Method for Biomedical Informatics," First Vietnam Japan Symposium on Medical Imaging/Informatics and Applications (VJMEDIAG2001), pp. 23-29, Nov. 2001.
309. K. Nagamune, S. Kobashi, Y. Hata, T. Sawayama, K. Taniguchi, "Ultrasound Diagnosis in Medical Engineering," First Vietnam Japan Symposium on Medical Imaging/Informatics and Applications (VJMEDIAG2001), pp. 30-36, Nov. 2001.

2000

Journal Papers

310. S. Hirano, N. Kamiura, Y. Hata, and N. Matsui, "Hippocampus extraction based on parallel multiscale structure matching," *Int. J. Pattern Recognit. Artif. Intell.*, vol.14, no.4, pp. 427-439, 2000.
311. S. Kobashi, N. Kamiura, Y. Hata, and F. Miyawaki, "Fuzzy information granulation on blood vessel extraction from 3-D TOF MRA image," *Int. J. Pattern Recognit. Artif. Intell.*, vol.14, no.4, pp. 409-425, 2000.
312. Y. Hata, S. Kobashi, Y. Kitamura, and T. Yanagida, "Fuzzy information granulation on three-dimensional medical image processing," *J. Japanese Society of Medical Imaging Technology*, vol. 18, no. 5, pp. 681-687, 2000.
313. Y. Hata, S. Kobashi, S. Hirano, H. Kitagaki, and E. Mori, "Automated segmentation of human brain MR images aided by fuzzy information granulation and fuzzy inference," *IEEE Trans. Syst., Man, Cybern. C*, vol. 30, no. 3, pp. 381-395, Aug. 2000.
314. S. Kobashi, Y. Hata, Y. Kitamura, and T. Yanagida, "A fuzzy rule-based region growing method for segmenting 3-D dynamic MR images," *Biomedical Soft Computing and Human Sciences*, vol. 6, no. 1, pp. 85-94, 2000.

Refereed Proceedings

315. S. Hirano, Y. Hata, N. Matsui, Y. Ando and M. Ishikawa, "Segmentation of the fractured foot CT image: A fuzzy rule-based approach," in *Proc. SPIE Medical Imaging 2000*, vol. 3979, pp. 854-862, Feb. 2000.
316. S. Kobashi, Y. Hata, Y. Tokimoto, and M. Ishikawa, "A fuzzy rule based image segmentation in dynamic MR images of the liver," in *Proc. SPIE Medical Imaging 2000*, vol. 3979, pp. 888-896, Feb. 2000.
317. S. Kobashi, Y. Hata, M. Ishikawa, Y. Kitamura, and T. Yanagida, "Medical image registration based on fuzzy and multiple-valued logics," in *Proc. Second Int. Forum on Multimedia and Image Processing*, pp. 270-275, May 2000. (IFMIP-067, CDROM, 2000.)
318. Y. Hata, S. Kobashi, Y. Tokimoto, O. Ishikawa, and M. Ishikawa, "A fuzzy region growing method for segmentation of 3D dynamic MR image of the liver," in *Proc. Second Int. Forum on Multimedia and Image Processing*, pp. 251-257, May 2000. (IFMIP-064, CDROM, 2000.)
319. O. Ishikawa, Y. Tokimoto, M. Ishikawa, and Y. Hata, "Current state of medical images in clinical practice in Japan," in *Proc. Second Int. Forum on Multimedia and Image Processing*, IFMIP-068, pp. 276-281, 2000.(IFMIP-068, CDROM, 2000.)
320. S. Hirano, Y. Hata, N. Matsui Y. Tokimoto, and M. Ishikawa, "An extraction method of the coronary artery in the human heart MR images based on fuzzy inference," in *Proc. Second Int. Forum on Multimedia and Image Processing*, pp. 258-263, 2000. (IFMIP-065, CDROM, 2000.)
321. S. Kobashi, Y. Hata, Y. Kitamura, and T. Yanagida, "3D visualization of the structure of the cerebral blood vessels using fuzzy image processing";, in *Proc. Asian Fuzzy Systems Symp. 2000*, pp. 846-851, May 2000.
322. K. Nagamune, Y. Hata, and K. Taniguchi, "Automated extraction of buried pipes from 3D ultrasonic images by fuzzy inference";, in *Proc. WCC Int. Conf. on Signal Processing 2000*, pp. 877-881, Aug. 2000.
323. C. J. Yan, S. Hirano, and Y. Hata, "Extraction of blood vessel in CT angiography image aided by fuzzy logic," in *Proc. WCC Int. Conf. on Signal Processing 2000*, pp. 926-929, Aug. 2000.
324. K. Taniguchi, T. Matsumoto, K. Nagamune, and Y. Hata, "Three-dimensional imaging of the internal

structure in the concrete by fuzzy inference," ; in Proc. Second Int. Forum on Multimedia and Image Processing, pp. 284-289, 2000.(IFMIP-070, CDROM, 2000.)

325. T. Matsumoto, Y. Hata, and K. Taniguchi, "3-D imaging of the buried tube in a concrete using fuzzy inference," in Proc. Asian Fuzzy Systems Symp. 2000, pp. 842-845, May 2000.
326. T. Matsumoto, Y. Hata, and K. Taniguchi, "Three-dimensional image construction for non-destructive testing aided by fuzzy logic," in Proc. Int. Conf. on Pattern Recognition 2000, pp. 603-606, Sep. 2000.
327. T. Okuzaki and Y. Hata, "A clustering method based on similarity between equivalence relations of Rough Sets," in Proc. Asian Fuzzy System Symp. 2000, pp. 410-414, May 2000.
328. Y. Takizawa, Y. Hata, and M. Mukaidono, "The expression of the affordance of stick model based on fuzzy logic," in Proc. Asian Fuzzy Systems Symp. 2000, pp. 1063-1066, May 2000.
329. Y. Hata, S. Kobashi, N. Kamiura, Y. Kitamura, and T. Yanagida, "On the architecture of medical image registration system based on multiple-valued logic," in Proc. IEEE Int. Symp. on Multiple-Valued logic, pp. 273-278, May 2000.
330. N. Kamiura, Y. Hata, and N. Matsui, "Controllability/Observability measures for multiple-valued test generation based on D-algorithm," in Proc. IEEE Int. Symp. on Multiple-Valued logic, pp.245-250, May 2000.
331. S. Kobashi, Y. Hata, T. Yanagida, Y. Kitamura, H. Kitagaki, and M. Ishikawa, "Automated blood vessel segmentation in 3-D time-of-flight MR angiography using 3-D spatial fuzzy models," in Supplement RSNA2000, vol. 217, p. 209, Nov. 2000.
332. S. Hirano, K. Ohta, Y. Hata, Y. Tokimoto, and M. Ishikawa, "Fuzzy ROI representation in medical images in conjunction with multiple if-then rules," in Proc. Int. Conf. Soft Computing, pp. 977-982, 2000.
333. T. Takae, K. Ohta, Y. Hata, M. Matsui, and E. Mori, "Segmentation of the lateral ventricles from MR image using the cylindrical region extraction technique," in Proc. Int. Conf. Soft Computing, pp. 404-409, 2000.
334. T. Zui, K. Nagamune, K. Ohta, and Y. Hata, "Functional MRI analysis aided by fuzzy calculus," in Proc. Int. Conf. Soft Computing, pp. 983-989, 2000.
335. H. Uchida, Y. Hata, and H. Aoyama, "Temporal fuzziness in answering a repetitive health questionnaire exhibited by elderly," in Proc. Int. Conf. Soft Computing, pp. 410-415, 2000.
336. H. Kitagaki, K. Oda, E. Fukuba, M. Matsui, K. Sugimura, and Y. Hata, "Corticobasal degeneration: Evaluation of cortical atrophy by means of hemispheric surface display with MR images," in Supplement RSNA 2000, vol. 217, p. 186, Nov. 2000.
337. K. Oda, H. Kitagaki, E. Fukuba, M. Matsui, K. Sugimura, and Y. Hata, "Focal atrophy in early-onset dementia of the Alzheimer type: Automatic hemispheric volume calculation generated with MR images," in Supplement RSNA 2000, vol. 217, p. 187, nov. 2000.
338. K.Ohta, Y.Hata, C.Ohta, T.Kawaguchi, " Tele-nursing System and Recognition of Facial Expressions," in Proc. IVCNZ'00 (Image and Vision Computing New Zealand), pp. 258-262, 2000.

1999

Books

346. S. Kobashi, S. Hirano, and Y. Hata, "Automatic human brain MR image segmentation based on fuzzy logic techniques," in B. J. Vellas and J. L. Fitten (eds.), Research and Practice in Alzheimer's Disease, vol. 2, pp. 103-109, 1999.

Journal Papers

347. N. Kamiura, S. Nakano, and Y. Hata, "A reconfiguration of arraylike layoutable tree-connected poly-processor," *IEICE Trans. Inf. and Syst.*, vol. J82-D-I, no. 7, pp. 966-967, July 1999.
348. N. Kamiura and Y. Hata, "On-line testing in fuzzy controllers," *IEICE Trans. Inf. and Syst.*, vol. J82-D-I, no. C167, pp. 950-957, 1999.
349. M. Ishikawa, N. Kamiura, and Y. Hata, "Thresholding based image segmentation by Kleene algebra," *IEICE Trans. Inf. and Syst.*, vol. E82-D, no. 5, pp. 962-967, 1999.
350. T. Hozumi, O. Kakusho, and Y. Hata, "Comparison of logic operators for use in multiple-valued sum-of-products expressions," *IEICE Trans. Inf. and Syst.*, vol. E82-D, no. 5, pp. 933-939, 1999.
351. Y. Hata, N. Kamiura, and K. Yamato, "Design of multiple-valued programmable logic array with unary function generators," *IEICE Trans. Inf. and Syst.*, vol. E82-D, no. 9, pp. 1254-1260, 1999.

Refereed Proceedings

352. K. Imai, N. Kamiura, and Y. Hata, "An unsupervised clustering with evolutionary strategy to estimate the cluster number," *Int. Conf. on Computational Intelligence, Lecture Notes in Computer Science*, vol. 1625, pp. 99-107, 1999.
353. H. Uchida, Y. Hata, K. Suei, H. Nakagawa, and H. Aoyama, "Relation between the IADL and physical fitness tests focusing on uncertainty of answering questionnaire in elderly women," *Int. Conf. on Computational Intelligence, Lecture Notes in Computer Science*, vol. 1625, pp. 686-688, 1999.
354. S. Kobashi, N. Kamiura, Y. Hata, and F. Miyawaki, "MR angiography image segmentation aided by fuzzy information granulation," *Proc. Sixth Int. Workshop on Parallel Image Processing and Analysis*, pp. 9-14, Jan. 1999.
355. S. Kobashi, Y. Hata, Y. Tokimoto, and M. Ishikawa, "Automatic segmentation of blood vessels from MR angiography volume data by using fuzzy logic technique," *Proc. SPIE Medical Imaging 1999*, vol. 3661, pp. 968-976, Feb. 1999.
356. T. Sasaki, Y. Hata, Y. Ando, and M. Ishikawa, "Fuzzy rule-based approach to segment the menisci regions from MR images," in *Proc. SPIE Medical Imaging 1999*, vol. 3661, pp. 258-263, Feb. 1999.
357. Y. Hata, "Medical image processing : Soft computing approaches," *Proc. Sixth Int. Workshop on Parallel Image Processing and Analysis*, pp. 1-8, Jan. 1999.
358. S. Hirano, N. Kamiura, Y. Hata, and K. Yamauchi, "Hippocampus extraction based on parallel multiscale structure matching," *Proc. Sixth Int. Workshop on Parallel Image Processing and Analysis*, pp. 15-22, Jan. 1999.
359. N. Kamiura, Y. Hata, and N. Matsui, "Fault tolerant feedforward neural networks with learning algorithm based on synaptic weight limit," *Proc. 5th IEEE Int. On-Line Testing Workshop*, pp. 222-226, 1999.
360. Y. Hata and M. Mukaidono, "On some classes of fuzzy information granularity and their representations," in *Proc. IEEE Int. Symp. on Multiple-Valued Logic*, pp. 288-293, 1999.
361. T. Hozumi, O. Kakusho, and Y. Hata, "The output permutation for the multiple-valued logic minimization with universal literals," *Proc. IEEE Int. Symp. on Multiple-Valued Logic*, pp.105-109, 1999.
362. S. Nakano, N. Kamiura, Y. Hata, and N. Matsui, "Reconfiguration of two-dimensional meshes embedded in faulty hypercubes," *Proc. 1999 Pacific Rim Int. Symp. on Dependable Computing*, pp. 234-241, 1999.

- 363. S. Nakano, N. Kamiura, Y. Hata, and N. Matsui, "Reconfiguration of two-dimensional meshes embedded in faulty hypercubes," Proc. IEEE Int. Symp. on Defect and Fault Tolerance in VLSI Systems, pp. 395-403, 1999.
- 364. Y. Taniguchi, N. Kamiura, Y. Hata, and N. Matsui, "Activation function manipulation for fault tolerant feedforward neural networks," Proc. 8th Asian Test Symp., pp. 203-208, 1999.
- 365. Y. Hata, S. Kobashi, S. Hirano, and M. Ishikawa, "Registration of multi-modality medical images by soft computing approach," Proc. IEEE 6th Int. Conf. on Neural Information Processing, vol. 3, pp. 878-883, 1999.
- 366. T. Takae, Y. Hata, N. Matsui, and E. Mori, "Automated segmentation of the lateral ventricle of MR brain by fuzzy inference," Proc. IEEE 6th Int. Conf. on Neural Information Processing, vol. 3, pp. 884-889, 1999.
- 367. Y. Hata, T. Sasaki, Y. Tokimoto, Y. Ando, M. Ishikawa, and H. Ishikawa, "Automated segmentation of magnetic resonance image using fuzzy logic," Proc. Eighth Int. fuzzy systems association world Cong., vol. 1, pp. 274-278, Aug. 1999.
- 368. T. Okuzaki, N. Kamiura, Y. Hata, N. Matsui, and K. Yamato, "A new approach of clustering based on Rough Set," Proc. The First Korea-Japan Joint Symp. of Multiple-Valued Logic, pp. 244-249, Aug. 1999.

1998

Journal papers

- 369. S. Kobashi, N. Kamiura, and Y. Hata, "Fuzzy information granulation on segmentation of human brain MR images," J. Japan Society for Fuzzy Theory and Systems, vol. 10, no. 1, pp. 117-125, Feb. 1998.
- 370. T. Hozumi, N. Kamiura, Y. Hata, and K. Yamato, "Multiple-valued logic design based on gate model networks," MULTIPLE-VALUED LOGIC-An Int. J., vol. 3, no. 1, pp. 1-20, 1998.
- 371. T. Hozumi, O. Kakusho, and Y. Hata, "Minimization of switching functions using neural networks," J. Japan Society for Fuzzy Theory and Systems, vol. 10, no. 2, pp. 265-274, Apr. 1998.
- 372. S. Hirano, N. Kamiura, and Y. Hata, "A fuzzy rule based approach to segmentation of the human brain portions," J. Japan Society for Fuzzy Theory and Systems, vol. 10, no. 5, pp. 937-946, Oct. 1998.
- 373. S. Hirano, N. Kamiura, and Y. Hata, "A new sulcus extraction algorithm using MAGNET principle," IEICE Trans. Inf. and Syst., vol. E81-D, no. 11, pp. 1253-1260, Nov. 1998.
- 374. H. Kitagaki, E. Mori, S. Yamaji, K. Ishii, N. Hirono, S. Kobashi, and Y. Hata, "Frontotemporal dementia and Alzheimer disease: evaluation of cortical atrophy with automated hemispheric surface display generated with MR images," Radiology, vol. 208, no. 2, pp. 431-439, Aug. 1998.

Refereed Proceedings

- 375. Y. Hata, M. Ishikawa, and N. Kamiura, "Image segmentation based on Kleene algebra," Proc. IEEE Int. Symp. on Multiple-Valued Logic, pp. 155-160, May 1998.
- 376. N. Kamiura, Y. Hata, and K. Yamato, "On concurrent tests of fuzzy controllers," Proc. IEEE Int. Symp. on Multiple-Valued Logic, pp. 356-361, May 1998.
- 377. T. Hozumi, O. Kakusho, and Y. Hata, "On low cost realization of multiple-valued logic functions," Proc. IEEE Int. Symp. on Multiple-Valued Logic, pp. 233-238, May 1998.

378. Y. Hata, S. Hirano, and N. Kamiura, "Medical image granulation by fuzzy inference", Proc. 17th Annual Meeting of the North American Fuzzy Information Processing Society - NAFIPS, pp. 188-192, Aug. 1998.
379. Y. Hata, "State of the art and trend on medical imaging in Japan," Proc. Int. Conf. on Soft Computing and Information / Intelligent Systems (IIZUKA98), vol. 1, pp. 337-340, Oct. 1998.
380. S. Kobashi, N. Kamiura, and Y. Hata, "Fuzzy cluster analysis for MR angiography image classification," Proc. Int. Conf. on Soft Computing and Information / Intelligent Systems (IIZUKA98), vol. 1, pp. 329-332, Oct. 1998.
381. S. Hirano, N. Kamiura, and Y. Hata, "Fuzzy expert system for foot CT image segmentation," Proc. Int. Conf. on Soft Computing and Information / Intelligent Systems (IIZUKA98), vol. 1, pp. 313-316, Oct. 1998.
382. K. Nakagawa, N. Kamiura, and Y. Hata, "Knowledge discovery using fuzzy c-means and neural network," Proc. Int. Conf. on Soft Computing and Information / Intelligent Systems (IIZUKA98), vol. 2, pp. 915-918, Oct. 1998.
383. K. Imai, N. Kamiura, and Y. Hata, "A new clustering with estimation of cluster number based on genetic algorithm," Proc. Int. Conf. on Soft Computing and Information / Intelligent Systems (IIZUKA98), vol. 2, pp. 779-782, Oct. 1998.
384. Y. Hata, S. Kobashi, and S. Hirano, "Medical image segmentation by fuzzy logic techniques," Proc. IEEE Int. Conf. on Systems, Man and Cybernetics, pp. 4098-4103, Oct. 1998.
385. Y. Hata, S. Hirano, S. Kobashi, N. Kamiura, and M. Ishikawa, "An application of fuzzy logic to medical imaging," Proc. Vietnam-Japan Bilateral Symp. on Fuzzy Systems and Applications, pp. 119-125, Oct. 1998.
386. S. Nakano, N. Kamiura, and Y. Hata, "Fault tolerance of a tree-connected multiprocessor system and its arraylike layout", Proc. 7th Asian Test Symp., pp. 306-310, Dec. 1998.
387. H. Kitagaki, E. Mori, K. Ishii, S. Kobashi, and Y. Hata, "Utility of automated hemispheric surface display of MRI in diagnosing for cortical atrophy," Proc. 12th Int. Symp. and exhibition, Computer Assisted Radiology and Surgery -CAR'98-, pp. 76-81, 1998.
388. E. Mori, M. Yasuda, H. Kitagaki, S. Kobashi, and Y. Hata, "Automated brain MRI volumetry demonstrated a genetic correlate of brain atrophy in Alzheimer's disease," Proc. 12th Int. Symp. and exhibition, Computer Assisted Radiology and Surgery -CAR'98-, pp. 82-87, 1998.
389. K. Ishii, E. Mori, M. Sasaki, H. Kitagaki, S. Hirano, and Y. Hata, "H2O-PET perfusion Z score image for a diagnosis Alzheimer's disease," Proc. 12th Int. Symp. and exhibition, Computer Assisted Radiology and Surgery -CAR'98-, p. 863, 1998.
390. H. Uchida, Y. Hata, and H. Aoyama, "Fuzzy analysis between the instrumental activities of daily living and physical fitness tests in elderly women," Proc. Int. Conf. on Soft Computing and Information / Intelligent Systems (IIZUKA98), vol. 1, pp. 367-370, Oct. 1998.
391. Y. Kumazawa, Y. Hata, and M. Mukaidono, "On an expression of the affordance based on fuzzy logic," Proc. Int. Conf. on Soft Computing and Information / Intelligent Systems (IIZUKA98), vol. 2, pp. 660-663, Oct. 1998.

1997

Journal papers

392. T. Hozumi, T. Utsumi, N. Kamiura, Y. Hata, and K. Yamato, "Design of MIN-of-TSUM form multiple-valued PLA's using universal literals," *MULTIPLE-VALUED LOGIC-An Int. J.*, vol. 2, no. 2, pp. 79-109, 1997.
393. T. Hozumi, N. Kamiura, Y. Hata, and K. Yamato, "On minimization of multiple-valued Sum-of-Products expression with multiple-valued TRSUM," *MULTIPLE-VALUED LOGIC-An Int. J.*, vol. 2, no. 2, pp. 141-158, 1997.
394. Y. Hata, M. Ishikawa, N. Kamiura, R. Nagura, and K. Yamato, "A pattern generation model based on neural network," *J. Japan Society for Fuzzy Theory and Systems*, vol. 9, no. 8, pp. 908-916, 1997.

Refereed Proceedings

395. Y. Hata, S. Kobashi, N. Kamiura, and M. Ishikawa, "Fuzzy logic approach to 3D magnetic resonance image segmentation," *Information Processing in Medical Imaging, Lecture Notes in Comp. Sci.*, vol. 1230, pp. 387-392, Jun. 1997.
396. Y. Hata, K. Hayase, T. Hozumi, N. Kamiura, and K. Yamato, "Multiple-valued logic minimization by genetic algorithms," *Proc. 27th Int. Symp. on Multiple-Valued Logic*, pp. 97-102, Jun. 1997.
397. Y. Hata, N. Kamiura, and K. Yamato, "Multiple-valued Product-of-Sums expression with Truncated Sum," *Proc. 27th Int. Symp. on Multiple-Valued Logic*, pp. 103-107, Jun. 1997.
398. T. Utsumi, N. Kamiura, Y. Hata, and K. Yamato, "Multiple-valued programmable logic arrays with universal literals," *Proc. 27th Int. Symp. on Multiple-Valued Logic*, pp. 163-168, 1997.
399. N. Kamiura, Y. Hata, and K. Yamato, "On fault checking for fuzzy controllers," *Proc. World MultiConf. on Systemics, Cybernetics and Informatics*, vol. 3, pp.178-184, July 1997.
400. S. Kobashi, N. Kamiura, and Y. Hata, "Soft computing approach to image segmentation," *Proc. Fifth Int. Workshop on Parallel Image Analysis -Theory and Applications-*, pp. 63-72, Sep. 1997.
401. S. Hirano, N. Kamiura, and Y. Hata, "Parallel feature extraction based on MAGNET model," *Proc. Fifth Int. Workshop on Parallel Image Analysis -Theory and Applications-*, pp. 73-81, Sep. 1997.
402. T. Kataoka, N. Kamiura, and Y. Hata, "Rubber: an active morphing model in medical imaging," *Proc. Fifth Int. Workshop on Parallel Image Analysis -Theory and Applications-*, pp. 290-298, Sep. 1997.
403. S. Kobashi, N. Kamiura, Y. Hata, and M. Ishikawa, "Automatic robust threshold finding aided by fuzzy information granulation," *Proc. IEEE Int. Conf. on Image Processing*, vol. 1, pp.711-714, Oct. 1997.
404. S. Hirano, N. Kamiura, Y. Hata, and M. Ishikawa, "MAGNET: An active ditch extraction model," *Proc. IEEE Int. Conf. on Image Processing*, vol. 2, pp.124-127, Oct. 1997.

1996

Journal papers

405. N. Kamiura, Y. Hata, and K. Yamato, "Design and fault masking of two-level cellular arrays on multiple-valued logic," *IEICE Trans. Inf. and Syst.*, vol. E79-D, no. 10, pp. 1453-1461, Oct. 1996.

406. S. Kobashi, N. Morinaga, S. Hirano, N. Kamiura, Y. Hata, and K. Yamato, "Computer aided system for the diagnosis of the Alzheimer's disease," *Trans. IEE of Japan*, vol. 116-C, no. 11, pp.1238-1245, Nov. 1996.
407. Y. Hata, T. Hozumi, and K. Yamato, "Minimization of multiple-valued logic expressions with kleenean coefficients," *IEICE Trans. Inf. and Syst.*, E79-D, no. 3, pp. 189-195, Mar. 1996.
408. Y. Hata, K. Takiguchi, T. Hozumi, and K. Yamato, "Design of fuzzy PLAs using decision diagrams," *Int. J. Intelligent Automation and Soft Computing*, vol. 1, pp. 415-426, 1995.

Refereed Proceedings

409. Y. Hata, M. A. Lee, and K. Yamato, "A neuro-fuzzy computing model of human pattern generation," *Proc. Biennial Conf. of the North America Fuzzy Information Processing Society-NAFIPS*, pp. 336-340, Jun. 1996.
410. N. Kamiura, Y. Hata, and K. Yamato, "On design of fail-safe cellular arrays," *Proc. 5th Asian Test Symp.*, pp. 107-112, Nov. 1996.
411. S. Kobashi, N. Kamiura, Y. Hata, and K. Yamato, "Automatic extraction method of the brain regions aided by fuzzy matching technique," *Proc. Asian Fuzzy Systems Symp., SOFT Computing in Intelligent Systems and Information Processing*, pp. 164-169, Dec. 1996.
412. N. Morinaga, S. Kobashi, N. Kamiura, Y. Hata, and K. Yamato, "Decomposition of the brain portions by fuzzy inference technique," *Proc. Asian Fuzzy Systems Symp., SOFT Computing in Intelligent Systems and Information Processing*, pp. 170-175 Dec. 1996.

1995

Journal Papers

413. N. Kamiura, H. Satoh, Y. Hata and K. Yamato, "On Ternary Cellular Arrays Designed from Ternary Decision Diagrams, *IEICE Transactions on Information and Systems*, E78-D, pp. 326-335 (1995)
414. Y. Hata, K. Takiguchi, T. Hozumi and K. Yamato. Design of Fuzzy PLA's using Fuzzy Decision Diagrams, *Int. Journal of Intelligent Automation & Soft Computing*, 1, pp. 415-426 (1995)

Refereed Proceedings

415. L. Lemaitre and Y. Hata, Fuzzy Logic Environment Shell (FLES), "Third Annual Int. Conf. on Fuzzy-Neural Applications Systems and Tools, pp. 44.1-44.2 (1995)
416. Y. Hata, L. Lemaitre, T. Hozumi, N. Kamiura and K. Yamato, "An Application of Neural Computing to Fuzzy Logic Minimizer," *Third Annual Int. Conf. on Fuzzy-Neural Applications Systems and Tools*, pp.42.1-42.6 (1995)
417. N. Kamiura, Y. Hata and K. Yamato, "A Cellular Array Designed from a Multiple-Valued Decision Diagram and Its Fault Tests, *Proc. of the 4th Asian Test Symp.*, pp. 20-24 (1995)
418. T. Hozumi, N. Kamiura, Y. Hata and K. Yamato, "Multiple-Valued Logic Design Using Multiple-Valued EXOR," *IEEE Proc. of the 25th Int. Symp. on Multiple-Valued Logic*, pp.290-295 (1995)
419. Y. Hata, N. Kamiura and K. Yamato, "On Input Permutation Technique for Multiple-Valued Logic Synthesis", *IEEE Proc. of the 25th Int. Symp. on Multiple-Valued Logic*, pp. 170-175(1995)

1994

Journal Papers

420. Y. Hata and K. Yamato, "On a Class of Multiple-Valued Logic Functions with Truncated Sum, Differential Product and NOT Operations," *IEICE Transactions on Information and Systems*, E77-D, pp.567-573 (1994)
421. K. Yamato, T. Asada and Y. Hata. "Interpolation Technique of Fingerprint Features for Personal Verification," *IEICE Transactions on Information and Systems*, E77-D, pp.1306-1309 (1994)

Refereed Proceedings

422. Y. Hata and K. Yamato, "A Multiple-Valued Logic Synthesis using the Kleenean Coefficients", *IEEE Proc. of the 24th Int. Symp. on Multiple-Valued Logic*, pp.52-57 (1994)
423. N. Kamiura, Y. Hata and K. Yamato, "Design of Fault-Tolerant Cellular Arrays on Multiple-Valued Logic", *IEEE Proc. of the 24th Int. Symp. on Multiple-Valued Logic*, pp. 297-304, (1994)
424. Y. Hata, T. Hozumi and K. Yamato, "System Design Based on Neural Computing," *IEEE Proc. of the 3rd Int. Conf. on Systems Integration*, (1994), pp. 197-205
425. N. Kamiura, Y. Hata and K. Yamato, "Design of Repairable Cellular Arrays on Multiple-Valued Logic", *IEICE Transactions on Information and Systems*, E77-D, pp.877-884 (1994)
426. N. Kamiura, Hidetoshi Satoh, Y. Hata and K. Yamato, "Design in Fault Isolating of Ternary Cellular Arrays Using Ternary Decision Diagrams," *IEEE Proc. of the 3rd Asian Test Symp.*, pp. 201-206 (1994)
427. Y. Hata and K. Yamato." An Analogical Inference Representation with Certainty Factor," *Journal of Japan Society for Fuzzy Theory and Systems*, Vol. 6, pp. 284-293 (1994)
428. Y. Hata, Y. Lin and K. Yamato, "Ambiguity Caused by Various Situations and the Implication Operation on Fuzzy Interval Logic," *Proc. of the 3rd Int. Conf. on Fuzzy Logic, Neural Nets and Soft Computing*, pp. 369-371, (1994)
429. K. Takiguchi, Y. Hata and K. Yamato, "Fuzzy Decision Diagrams and Its Application to Design of Fuzzy PLA's," *Proc. of the 3rd Int. Conf. on Fuzzy Logic, Neural Nets and Soft Computing*, pp.417-419 (1994)

1993

Journal Papers

430. Y. Hata, K. Nakashima and K. Yamato. "Some Fundamental Properties of Multiple-Valued Kleenean Functions and Determination of Their Logic Formulas,
431. *IEEE Transactions of Computers*, 42, pp.950-961 (1993)
432. Y. Hata and K. Yamato. "Output Permutation and the Maximum Number of Implicants Needed to Cover the Multiple-Valued Logic Functions," *IEICE Transactions on Information and Systems*, E76-D, pp. 555-561 (1993)
433. N. Kamiura, Y. Hata and K. Yamato. "Design of a Multiple-Valued Cellular Array," *IEICE Transactions on Electronics*, E76-C, pp. 412-418 (1993)

Refereed Proceedings

434. Y. Hata and K. Yamato,"Multiple-Valued Logic Functions Represented by TSUM, TPRODUCT, NOT, and Variables," *IEEE Proc. of the 23rd Int. Symp. on Multiple-Valued Logic*, pp. 222-227 (1993)

435. N. Kamiura, Y. Hata and K. Yamato, "A Repairable and Diagnosable Cellular Array on Multiple-Valued Logic," IEEE Proc. of the 23rd Int. Symp. on Multiple-Valued Logic, pp. 92-97, (1993)
436. Y. Hata, T. Hozumi and K. Yamato, "Gate Model Networks for Minimization of Multiple-Valued Logic Functions," IEEE Proc. of the 23rd Int. Symp. on Multiple-Valued Logic, pp. 29-34, (1993)
437. K. Miyai, Y. Hata and K. Yamato, "A Representation of Approximate Reasoning with Analogy," IEEE Proc. of the 23rd Int. Symp. on Multiple-Valued Logic, pp. 184-189, (1993)
438. K. Yamato, Y. Hata and T. Asada, "Laplacian Enhancement Techniques for Fingerprint Features", Proc. of Asian Conf. on Computer Vision, pp. 75-78, (1993)
439. N. Kamiura, Y. Hata, F. Miyawaki and K. Yamato, "Easily Testable Multiple-Valued Cellular Arrays," IEEE Proc. of the 22nd Int. Symp. on Multiple-Valued Logic, pp. 36-42 (1992)
440. Y. Hata, F. Miyawaki and K. Yamato, "Optimal Output Assignment and the Maximum Number of Implicants Needed to Cover the Multiple-Valued Logic Functions," IEEE Proc. of the 22nd Int. Symp. on Multiple-Valued Logic, pp. 389-395 (1992)
441. Y. Hata, X. He, F. Miyawaki and K. Yamato, "Japanese Document Reader System," Proc. of the 2nd Singapore Int. Conf. on Image Processing, pp. 194-197 (1992)
442. K. Yamato, Y. Hata and S. Hashimoto, "Telecommunication Security Using Fingerprint Identification," Proc. of the 2nd Singapore Int. Conf. on Image Processing, pp. 562-565 (1992)
443. Y. Hata, K. Miyai, F. Miyawaki and K. Yamato, "A Method of Approximate Reasoning with Certainty Factor," Proc. of the 2nd Int. Conf. on Fuzzy Logic & Neural Networks, pp.36-42 (1992)

1991

444. Y. Hata, M. Yuhara, F. Miyawaki and K. Yamato, "On the Complexity for Enumerations of Multiple-Valued Kleenean Functions and Unate Functions," IEEE Proc. of the 21st Int. Symp. on Multiple-Valued Logic, (1991), pp. 55-62
445. S. Hashimoto, M. Kawakami, Y. Hata, K. Nakashima and K. Yamato, "Coding of Fingerprints for Personal Verification," 1991 Picture Coding Symp. Program and Papers, pp. 263-266, (1991),

1990

446. S. Hashimoto, Y. Hata, K. Nakashima and K. Yamato, "Automatic Fingerprint Classifier and Its Application to Access Control," The Transactions of The IEICE, E73, 1120-1126 (1990)
447. Y. Hata, K. Nakashima and K. Yamato, "Some Relationships Between Multiple-Valued Kleenean Functions and Ternary Input Multiple-Valued Output Functions," IEEE Proc. of the 20th Int. Symp. on Multiple-Valued Logic, pp. 410-417 (1990)

1989

448. Y. Hata, T. Sato, K. Nakashima and K. Yamato, "A Necessary and Sufficient Condition for Multiple-Valued Logical Functions Representable by AND, OR, NOT, Constants, Variables and Determination of Their Logical Formulae," IEEE Proc. of the 19th Int. Symp. on Multiple-Valued Logic, pp.448-455, (1989)
449. Y. Hata, K. Nakashima, K. Yamato and T. Kitahashi, "Multiple-Valued Logical Functions Derived from Two-Valued Input Multiple-Valued Output Functions," IEEE Proc. of the 18th Int. Symp. on Multiple-Valued Logic, pp. 194-201, (1988)

1987-85

450. Y. Hata, K. Nakashima and K. Yamato. "A Necessary and Sufficient Condition for m-Valued Majority Functions," The Transactions of The IEICE, E70, pp.715-718, (1987)
451. K. Yamato, K. Nakashima and Y. Hata. "Testing and Realization of Three-Valued Majority Functions by Complete Monotonicity", The Transactions of The IEICE, E69, 852-858, (1986)
452. Y. Hata, Y. Miyoshi, K. Nakashima and K. Yamato, "A Necessary and Sufficient Condition for Three-Valued Majority Functions", IEEE Proc. of the 15th Int. Symp. on Multiple-Valued Logic, pp.286-291, (1985)

In Japanese (1986-1993)

453. 上浦尚武, 畑 豊, 大和一晴セルラアレーによる多値論理回路設計とその故障診断容易性の考察, 電子情報通信学会論文誌, J76-D-I, pp. 676-685 (1993)
454. 畑 豊, 滝口孝司, 上浦尚武, 大和一晴. "ファジィ P L A によるファジィ論理回路の設計について," 日本ファジィ学会誌, 5, pp. 1312-1322 (1993)
455. 大和一晴, 畑 豊, 新藤 修, 宮脇富士夫. 低品質指紋画像の復元処理,
456. 画像電子学会誌, 21, pp. 12-17 (1992)
457. 大和一晴, 宮脇富士夫, 畑 豊, 賀 先楓日本語印刷文書の読取りシステム, 電子情報通信学会論文誌, J75-D-II, pp.257-266 (1992)
458. 大和一晴, 宮脇富士夫, 畑 豊, 賀 先楓. 日本語印刷文書の読取りシステム, 電子情報通信学会論文誌, J75-D-II, 257-266 (1992)
459. 大和一晴, 畑 豊, 新藤 修, 宮脇富士夫低品質指紋画像の復元処理,
460. 画像電子学会誌, 21, pp. 12-17 (1992)
461. 畑 豊, 湯原理晴, 宮脇富士夫, 大和一晴"多値クリーネ関数の数とそれに関する基本的性質," 電子情報通信学会論文誌, J75-D-I, pp.1-9 (1992)
462. 畑 豊, 三好義昭, 中島恭一, 大和一晴"多値クリーネ関数の判定と論理式決定," 電子情報通信学会論文誌, J73-D-I, 183-192 (1990)
463. 橋本 哲, 畑 豊, 三好義昭, 大和一晴"指紋画像に対する指の表面状態の影響," テレビジョン学会誌, 44, pp.1246-1252 (1990).
464. 畑 豊, 中島恭一, 大和一晴, 北橋忠宏. "多値多数決関数が完全単調性で判定できる変数限界とその構造決定," 電子情報通信学会論文誌, J72-D-I, pp.238-247 (1989)
465. 畑 豊, 中島恭一, 大和一晴, 北橋忠宏"2 値入力 p 値出力関数から生成される p 値論理関数とその論理式決定," 電子情報通信学会論文誌, J71-D, pp.2517-2526 (1988)
466. 大和一晴, 畑 豊, 矢頭尚之, 橋本 哲. 谷細線化による指紋照合システム, 電子情報通信学会論文誌, J71-D, pp.327-335 (1988).
467. 中島恭一, 畑 豊, 大和一晴.多値論理関数が正関数であるための必要十分条件, 電子通信学会論文誌, J69-D, pp.488-490, (1986)

5. Research Grants 2000- (The research titles are originally written in Japanese)

- 1) Ishikawa Hospital, April 2010 to March 2011, *Information System Development*, 2,000,000 Yen
- 2) Omron Cooperation, 2010, *Sensing System Development*, 3,000,000 Yen
- 3) Japan Society for Promotion of Science with Grant-in-Aid for Scientific Research (B), April 2008 to March 2010, *Ultrasonography System for Imaging Tissues in Bone*, 12,090,000 Japanese Yen
- 4) Ishikawa Hospital, April 2009 to March 2010, *Information System Development*, 2,000,000 Yen
- 5) Japan Society for Promotion of Science with Grant-in-Aid for Scientific Research(B), April 2005 to March 2008, *Ultrasonography System for Imaging Bone and Tissues through human Bone* , 10,100,000 Japanese Yen
- 6) Ishikawa Hospital, April 2008 to March 2009, *Information System Development*, 2,000,000 Yen
- 7) Omron Cooperation, 2007, *Sensing System Development*, 3,000,000 Yen
- 8) Ishikawa Hospital, April 2007 to March 2008, *Information System Development*, 2,000,000 Yen
- 9) Foundation of Biomedical Research Innovation, April 2006 to March 2007, *Ultrasonic Medical Diagnosis/Support System*, 8,000,000 Japanese Yen
- 10) Ishikawa Hospital, April 2006 to March 2007, *Information System Development*, 2,000,000 Yen
- 11) Japan Society for Promotion of Science with Grant-in-Aid for Scientific Research, April 2005 to March 2008, *Ultrasonic Diagnosis System through Human Bone*, 10,100,000 Japanese Yen
- 12) Foundation of Biomedical research Innovation, April 2005 to March 2006, *Ultrasonic Medical Diagnosis/Support System*, 8,000,000 Japanese Yen
- 13) Japan Science and Technology Agency, December 2005 to March 2006, *Next Generation Sensor and its Applications to Health Care System*, 2,000,000 Japanese Yen
- 14) Ishikawa Hospital, April 2005 to March 2006, *Information System Development*, 2,000,000 Yen
- 15) Kinden Corporation, June 2005 to March 2006, *Extraction of Biosignals by Ultrasonic Vibration Sensor*, 2,100,000 Yen
- 16) Kinden Corporation, June 2005 to March 2006, *Research on Preventing Pressure Ulcer Development by Ultrasonic vibration Sensor*, 1,680,000 Yen
- 17) Japan Society for Promotion of Science with Grant-in-Aid for Scientific Research, April 2002

- to March 2005, *Transcranial Ultrasonography System with Placement Free*, 10,200,000 Japanese Yen
- 18) Kinden Corporation, June 2004 to March 2005, *Extraction of Biosignals by Ultrasonic Sensor*, 1,575,000 Yen
 - 19) Kinden Corporation, June 2004 to March 2005, *Testing of Motors by Ultrasonic Sensor*, 1,575,000 Yen
 - 20) Ishikawa Hospital, April 2004 to March 2005, *Information System Development*, 2,000,000 Yen
 - 21) Ishikawa Hospital, April 2003 to March 2004, *Information System Development*, 2,000,000 Yen
 - 22) Kinden Corporation, June 2003 to March 2004, *Extraction of Biosignals by Ultrasonic Sensor*, 4,200,000 Yen
 - 23) Ishikawa Hospital, April 2002 to March 2003, *Information System Development*, 2,000,000 Yen
 - 24) Kinden Corporation, July 2002 to March 2003, *Extraction of Biosignals by Ultrasonic Sensor*, 1,575,000 Yen
 - 25) Kinden Corporation, July 2002 to March 2003, *Ultrasonic Non-Destructive Testing System*, 1,575,000 Yen
 - 26) Ishikawa Hospital, April 2001 to March 2002, *Information System Development*, 2,000,000 Yen
 - 27) Kinden Corporation, July 2001 to March 2002, *Laser Non-Destructive Testing System*, 1,575,000 Yen
 - 28) Kinden Corporation, July 2001 to March 2002, *Ultrasonic Non-Destructive Testing System*, 1,575,000 Yen
 - 29) Ishikawa Hospital, April 2000 to March 2001, *Information System Development*, 2,000,000 Yen
 - 30) Kinden Corporation, July 2000 to March 2001, *Embedded Region Extraction by Image filtering for Non-Destructive Testing System*, 1,575,000 Yen
 - 31) Kinden Corporation, July 2000 to March 2001, *Concrete Non-Destructive Testing System*, 1,575,000 Yen
 - 32) Kinden Corporation, July 2000 to March 2001, *3D Visualization of Ultrasonic Non-Destructive Testing System*, 1,575,000 Yen