
BIOGRAPHICAL SKETCH

NAME	Kouki Nagamune			POSITION TITLE	Associate Professor		
AFFILIATION	Department of Human and Artificial Intelligent Systems, Graduate School of Engineering, University of Fukui 3-9-1 Bunkyo, Fukui 910-8507 JAPAN TEL +81-776-27-8037, FAX +81-776-27-8037, E-mail: nagamune@u-fukui.ac.jp						
EDUCATION/TRAINING							
Faculty of Engineering, Himeji Institute of Technology, (JAPAN)	B. E.	1999	Computer Engineering				
Graduate School of Engineering, Himeji Institute of Technology, (JAPAN)	M. E.	2001	Computer Engineering				
Graduate School of Engineering, Himeji Institute of Technology, (JAPAN)	Ph. D.	2004	Computer Engineering				

Academic Appointments

2004-2006	Research Assistant, Kobe University Graduate School of Medicine, JAPAN
2006-2007	Lecturer, Kobe University Graduate School of Medicine, JAPAN
2007-2010	Lecturer, Graduate School of Engineering, University of Fukui, JAPAN
2010-Present	Associate Professor, Graduate School of Engineering, University of Fukui, JAPAN

Professional Experience

1999 - present Institute of Electrical and Electronics Engineers, Senior Member
2004 - present Japanese Society for Clinical Biomechanics, Councilor
2006, 08, 10, 12, 14, 16, 18 International Forum on Multimedia and Image Processing, Program Committee Member
2007 - present Department of Orthopaedic Surgery, Kobe University Graduate School of Medicine, Special Fellow
2008 - present Japanese Society for Medical and Biological Engineering, Member.
2012 - 2018 IEEE Systems, Man, and Cybernetics, Technical Committee Member on Medical Informatics
2012, 13, 14, 15 IEEE International Conference on Systems, Man and Cybernetics, Program Committee Member.
2013- present Arthrex (Developer of Surgery Instrument in USA), Technical Consultant

Awards

2002	Best Paper Award at the Fourth Biannual World Automated Congress (Orlando, Florida, USA)
2005	The finalists for the 2005 Young Researchers of Orthopaedics, Biomechanics/Biology, Operative Techniques and Sports (Y-ROBOTS) Award (Assisi, Italy)
2005	<i>The best paper of the year, basica, Japanese Journal of the Knee</i>
2010	<i>AAC2010 Best Achievement Award (Silver) at the 2nd Biennial Asia Arthroscopy Congress Beijing, China)</i>
2011	<i>ISAKOS Top 10 E-poster Award at The 8th Biennial ISAKOS Congress (Rio de Janeiro, Brazil)</i>
2013	<i>SICOT / CCJR Meeting Awards (Hederabad, India)</i>
2015	<i>Young Researcher Award in Journal of Advanced Computational Intelligence and Intelligent Informatics.</i>

- [1] Ultrasonic Nondestructive Evaluation for Embedded Objects in Concrete Aided by Fuzzy Logic
Kouki Nagamune, Kazuhiko Taniguchi, Syoji Kobashi, Yutaka Hata
IEICE Transactions on Information and Systems vol. E86-D, no. 1, pp. 79-88, Jan., 2003
- [2] A Fuzzy Inference System for Identifying Tissue Elasticity using Ultrasound
Tadashi Kimura, **Kouki Nagamune**, Syoji Kobashi, Katsuya Kondo, Yutaka Hata, Kazuhiko Taniguchi
Journal of Advanced Computational Intelligence and Intelligent Informatics, vol. 7, no. 1, pp. 31-39, Jan., 2003
- [3] Automated Extraction System of Embedded Tubes from Pulse Radar Image Based on Fuzzy Expert System
Kouki Nagamune, Kazuhiko Taniguchi, Syoji Kobashi, Yutaka Hata
IEICE Transactions on Fundamentals of Electronics, Communications and Computer Sciences, vol. E86-A, no. 7, pp. 1778-1789, July., 2003
- [4] Unconstrained Evaluation System for Heart Rate Using Ultrasonic Vibrograph
Kouki Nagamune, Syoji Kobashi, Katsuya kondo, Yutaka Hata, Kazuhiko Taniguchi, Toshiyuki Sawayama
Japanese Journal of Applied Physics, vol. 43, no. 5B, pp. 3237-3238, May, 2004
- [5] Double-bundle ACL reconstruction can improve rotational stability - Prospective comparison of three different procedures (double-bundle, AM and PL single-bundle reconstruction) -
Masayoshi Yagi, Ryosuke Kuroda, **Kouki Nagamune**, Shinichi Yoshiya, Masahiro Kurosaka
Clinical Orthopaedic and Related Research, vol. 454, pp. 100-107, Jan., 2007
- [6] The Effect of Graft Tensioning in Anatomic 2-bundle ACL Reconstruction on Knee Joint
Yuichi Hoshino, Ryosuke Kuroda, **Kouki Nagamune**, Koji Nishimoto, Masayoshi Yahi, Kiyonori Mizuno, Shinichi Yoshiya, Masahiro Kurosaka
Journal of Knee Surgery, Sports Traumatology, Arthroscopy, vol. 15, no. 5, pp. 508-514, May, 2007
- [7] In Vivo Measurement of the Pivot Shift Test in the Anterior Cruciate Ligament Deficient Knee Using an Electromagnetic Device
Yuichi Hoshino, Hirotsugu Muratsu, **Kouki Nagamune**, Masayoshi Yagi, Kiyonori Mizuno, Ryosuke Kuroda, Motoi Yamaguchi, Shinichi Yoshiya, Masahiro Kurosaka
American Journal of Sports Medicine, vol. 35, no. 7, pp. 1098-1104, Jul., 2007
- [8] An Automated Calculation of Three-Dimensional Evaluation of Canal Fill Ratio of the Stem in the Femoral Bone from CT Image
Kouki Nagamune, Nao Shibamura, Masahiro Kurosaka
International Journal of Intelligent Computing in Medical Sciences and Image Processing, vol. 1, no. 2(1), pp.131-137, Nov., 2007
- [9] Ultrasonography System Aided by Fuzzy Logic for Identifying Implant Position in Bone
Endo Maki, **Kouki Nagamune**, Nao Shibamura, Syoji Kobashi, Katsuya Kondo Yutaka Hata
IEICE Transactions on Information and Systems vol. E90-D, no. 12, pp. 1990-1997, Dec., 2007
- [10] Intraoperative Measurement of Pivot Shift by Electromagnetic Sensors
Ryosuke Kuroda, Yuichi Hoshino, **Kouki Nagamune**, Seiji Kubo, Koji Nishimoto, Daisuke Araki, Motoi Yamaguchi, Shinichi Yoshiya, Masahiro Kurosaka
Operative Techniques in Orthopaedics, vol. 18, no. 3, pp.190-195, July, 2008
- [11] Analysis of the graft bending angle at the femoral tunnel aperture in anatomic double bundle anterior cruciate ligament reconstruction: a comparison of the transtibial and the far anteromedial portal technique
Kouji Nishimoto, Ryosuke Kuroda, Kiyonori Mizuno, Yuichi Hoshino, **Kouki Nagamune**, Seiji Kubo, Masayoshi Yagi, Motoi Yamaguchi, Shinichi Yoshiya, Masahiro Kurosaka.
Knee Surg Sports Traumatol Arthrosc., vol. 17, no. 3, pp.270-276, Mar., 2009
- [12] The effect of intra-operative knee flexion angle on determination of graft location in the anatomic double-bundle ACL reconstruction
Yuichi Hoshino, **Kouki Nagamune**, Ryosuke Kuroda, Masahiro Yagi, Daisuke Araki, Seiji Kubo, Masahiro Kurosaka
Knee Surg Sports Traumatol Arthrosc. vol. 17, no. 9, pp.1052-1060, Sept., 2009
- [13] Nondestructive evaluation of cell numbers in bone marrow stromal cells / β -tricalcium phosphate composites using ultrasound
Keisuke Oe, Masahiko Miwa, **Kouki Nagamune**, Yoshitada Sakai, Sang Yang Lee, Takahiro Niikura, Takashi Iwakura, Takumi Hasegawa, Nao Shibamura, Yutaka Hata, Ryosuke Kuroda, Masahiro Kurosaka
Tissue Engineering Part C: Methods., vol. 16, no. 3, pp. 347-353 Jun., 2010
- [14] A prospective randomised study of anatomical single-bundle versus double-bundle anterior cruciate ligament reconstruction: quantitative evaluation using an electromagnetic measurement system
Daisuke Araki, Ryosuke Kuroda, Seiji Kubo, Norifumi Fujita, Katsumasa Tei, Koji Nishimoto, Yuichi Hoshino, Takehiko Matsushita, Tomoyuki Matsumoto, **Koki Nagamune**, Masahiro Kurosaka.
Int Orthop. vol. 35, no. 3, pp. 439-446, Mar., 2010.
- [15] The use of an electromagnetic measurement system for anterior tibial displacement during the Lachman test.
Daisuke Araki, Ryosuke Kuroda, Seiji Kubo, **Kouki Nagamune**, Yuichi Hoshino, Koji Nishimoto, Koji Takayama, Takehiko Matsushita, Katsumasa Tei, Motoi Yamaguchi, Masahiro Kurosaka
Arthroscopy. vol. 27, no. 6, pp. 792-802, June 2011.
- [16] Optimal measurement of clinical rotational test for evaluating anterior cruciate ligament insufficiency.
Yuichi Hoshino, Ryosuke Kuroda, **Kouki Nagamune**, Daisuke Araki, Seiji Kubo, Motoi Yamaguchi, Masahiro Kurosaka.
Knee Surg Sports Traumatol Arthrosc. vol. 20, no. 7, pp. 1323-1330, July 2012.
- [17] Similarities and differences of diagnostic manual tests for anterior cruciate ligament insufficiency: A global survey and kinematics assessment.
Ryosuke Kuroda, Yuichi Hoshino, Seiji Kubo, Daisuke Araki, Shinya Oka, **Kouki Nagamune**, Masahiro Kurosaka.

- Am J Sports Med. vol. 40, no. 1, pp. 91-99, Jan. 2012.
- [18] Quantitative measurement of the pivot shift, reliability, and clinical application.
Ryosuke Kuroda, Yuichi Hoshino, Daisuke Araki, Yuichiro Nishizawa, **Kouki Nagamune**, Tomoyuki Matsumoto, Seiji Kubo, Takehiko Matsushita, Masahiro Kurosaka
Knee Surg. Sports Traumatol. Arthrosc. Vol. 20, no. 4, pp. 686-691, Apr. 2012.
- [19] Clinical grading of the pivot shift test correlates best with tibial acceleration.
Mattias Ahldén, Paulo Araujo, Yuichi Hoshino, Kristian Samuelsson, Kellie K. Middleton, **Kouki Nagamune**, Jón Karlsson, Volker Musahl
Knee Surg. Sports Traumatol. Arthrosc. vol. 20, no. 4, pp. 708-712, Apr. 2012.
- [20] The effect of platelet-rich plasma on the regenerative therapy of muscle derived stem cells for articular cartilage repair
Y. Mifune, T. Matsumoto, K. Takayama, S. Ota, H. Li, L.B. Meszaros, A. Usas, **K. Nagamune**, B. Gharaibeh, F.H. Fu, J. Huard
Osteoarthritis Cartilage. vol. 21, no. 1, pp. 175-185, Jan. 2013.
- [21] Modified metaphyseal-loading anterolaterally flared anatomic femoral stem: five- to nine-year prospective follow-up evaluation and results of three-dimensional finite element Analysis.
Yasuo Kokubo, Kenzo Uchida, Hisashi Oki, Kohei Negoro, **Kouki Nagamune**, Shogo Kawaguchi, Kenichi Takeno, Takafumi Yayama, Hideaki Nakajima, Daisuke Sugita, Ai Yoshida, and Hisatoshi Baba
Artif. Organs. vol. 37, no. 2, pp. 175-182, Feb. 2013.
- [22] Biomechanical analysis of the knee with partial anterior cruciate ligament disruption: quantitative evaluation using an electromagnetic measurement system, Araki Daisuke, Kuroda Ryosuke, Matsushita Takehiko, Matsumoto Tomoyuki, Kubo Seiji, **Nagamune Kouki**, Kurosaka Masahiro, Arthroscopy. vol. 29, no. 6, pp. 1053-62, Jun. 2013.
- [23] Differences in Knee Kinematics Between Awake and Anesthetized Patients During the Lachman and Pivot-Shift Tests for Anterior Cruciate Ligament Deficiency, Takehiko Matsushita, Shinya Oka, **Kouki Nagamune**, Tomoyuki Matsumoto, Yuichiro Nishizawa, Yuichi Hoshino, Seiji Kubo, Masahiro Kurosaka, Ryosuke Kuroda, Orthopaedic Journal of Sports Medicine, vol. 1, no. 1, pp. 1-6, Aug. 2013.
- [24] An analysis of surface profile for cylindrical osteochondral grafts of the knee quantitative evaluation using a three-dimensional laser scanner.
Dausyje Araki, Ryosuke Kuroda, Tomoyuki Matsumoto, **Kouki Nagamune**, Takehiko Matsushita, Seiji Kubo, Yasunari Oniki, Masahiro Kurosaka.
Knee Surg Sports Traumatol Arthrosc. vol. 21, no. 8, pp.1794-1800, Aug. 2013.
- [25] Biomechanical characteristics of three pivot shift maneuvers for the anterior cruciate ligament-deficient knee: In vivo evaluations using an electromagnetic sensor system, Nobuto Kitamura, Masashi Yokota, Eiji Kondo, Shin Miyatake, **Kouki Nagamune**, Kazunori Yasuda, Am J Sports Med. Vol. 41, no. 11, pp. 2500-2506, Nov. 2013.
- [26] A Bone Segmentation for the Knee Joint in MDCT Image Based on Anatomical Information, Yosuke Uozumi, **Kouki Nagamune**, Daisuke Araki, Yuichi Hoshino, Takehiko Matsushita, Ryosuke Kuroda, Masahiro Kurosaka, International Journal of Intelligent Computing, vol. 5, no. 2, pp. 105-113, Dec. 2013.
- [27] An Automatic Three-dimensional Evaluation of Screw Placement After Anterior Cruciate Ligament Reconstruction Using MDCT Images, Yosuke Uozumi, **Kouki Nagamune**, Yuichiro Nishizawa, Daisuke Araki, Yuichi Hoshino, Takehiko Matsushita, Ryosuke Kuroda, and Masahiro Kurosaka, Journal of Advanced Computational Intelligence and Intelligent Informatics, vol. 17, no. 6, pp. 818-827, Dec. 2013.
- [28] Matching Articular Surfaces of Selected Donor and Recipient Sites for Cylindrical Osteochondral Grafts of the Femur: Quantitative Evaluation Using a Three-Dimensional Laser Scanner, Yuichiro Nishizawa, Tomoyuki Matsumoto, Daisuke Araki, **Kouki Nagamune**, Takehiko Matsushita, Masahiro Kurosaka, Ryosuke Kuroda, Am J Sports Med. Vol. 42, no. 3, pp. 658-664, Mar. 2014.
- [29] A Development of Force Distribution Measurement System with High Resolution for Total Knee Arthroplasty
Mohd Hanafi Mat Som, Takashi Kamiya, Shogo Kawaguchi, **Kouki Nagamune**, Koji Takayama, Tomoyuki Matsumoto, Ryosuke Kuroda, Masahiro Kurosaka
Journal of Advanced Computational Intelligence and Intelligent Informatics, vol. 18, no. 2, Mar. 2014.
- [30] Reduction of tunnel enlargement with use of autologous ruptured tissue in anterior cruciate ligament reconstruction: a pilot clinical trial
Matsumoto Tomoyuki, Kuroda Ryosuke, Matsushita Takehiko, Araki Daisuke, Hoshino Yuichi, **Nagamune Kouki**, Kurosaka Masahiro.
Arthroscopy, vol. 30, no. 4, pp. 468-474, Apr. 2014.
- [31] An Ultrasound Technique of Bone Thickness Estimation for Pedicle Screw Insertion
Muhamad Khairul Ali Hassan, **Kouki Nagamune**, Kenichiro Kakutani, Koichiro Maeno, Kotaro Nishida, Masahiro Kurosaka
Journal of Advanced Computational Intelligence and Intelligent Informatics, vol. 18, no. 4, Jul. 2014.
- [32] Three-Dimensional Analysis of Bone Tunnel Changes After Anatomic Double-Bundle Anterior Cruciate Ligament Reconstruction Using Multidetector-Row Computed Tomography.
Araki Daisuke, Kuroda Ryosuke, Matsumoto Tomoyuki, **Nagamune Kouki**, Matsushita Takehiko, Hoshino Yuichi, Oka Shinya, Nishizawa Yuichiro, Kurosaka Masahiro.
Am J Sports Med., vol. 42, no. 9, pp. 2234-2241, Sep. 2014.
- [33] A Three-dimensional Evaluation of EndoButton Displacement Direction After Anterior Cruciate Ligament Reconstruction in CT Image Using Tunnel Axis.
Yosuke Uozumi, **Kouki Nagamune**, Naoki Nakano, Kanto Nagai, Yuichiro Nishizawa, Yuichi Hoshino, Takehiko Matsushita, Ryosuke Kuroda, Masahiro Kurosaka.
Journal of Advanced Computational Intelligence and Intelligent Informatics, vol. 18, no. 5, Sep. 2014.
- [34] Performance Comparison of Conductive Rubber-based Sensor Array Calibration Using Cubic Spline and Back

- Propagation Neural Network.
Mohd Hanafi Mat Som, **Kouki Nagamune**, Shogo Kawaguchi.
Information, vol. 18, no. 2, pp. 673-688, Feb., 2015.
- [35] Analysis of Multiple Ultrasound Echoes for Cortical Bone Thickness Measurement Using Wavelet Decomposition Processing Method.
Muhamad Khairul Ali Hassan, **Kouki Nagamune**, Kenichiro Kakutani, Koichiro Maeno, Kotaro Nishida, Masahiro Kurosaka.
Information, vol. 18, no. 2, pp. 779-794, Feb. 2015.
- [36] A Marching Cubes Algorithm: Application for Three-dimensional Surface Reconstruction Based on Endoscope and Optical Fiber.
Zhongjie Long, **Kouki Nagamune**.
Information, vol.18, no.4, pp.1425-1438, April 2015.
- [37] Fully Automated Determination of Femoral Coordinate System in CT Image Based on Epi-condyles
Yosuke Uozumi, **Kouki Nagamune**, Naoki Nakano, Kanto Nagai, Daisuke Araki, Yuichi Hoshino, Takehiko Matsushita, Ryosuke Kuroda, and Masahiro Kurosaka
Journal of Advanced Computational Intelligence and Intelligent Informatics, vol. 19, no. 3, pp. 372-380, May, 2015.
- [38] Quantitative comparison of the pivot shift test results before and after anterior cruciate ligament reconstruction by using the three-dimensional electromagnetic measurement system
Kanto Nagai, Yuichi Hoshino, Yuichiro Nishizawa, Daisuke Araki, Takehiko Matsushita, Tomoyuki Matsumoto, Koji Takayama, **Kouki Nagamune**, Masahiro Kurosaka, Ryosuke Kuroda
Knee Surgery, Sports Traumatology, Arthroscopy, vol. 23, pp. 2876-2881, Sept. 2015.
- [39] A Comparison of Ligament Tensions Between Intra- and Extra-Articular Measurement in Anterior Cruciate Ligament Reconstruction
Shogo Kawaguchi, **Kouki Nagamune**, Yuichiro Nishizawa, Shinya Oka, Daisuke Araki, Yuichi Hoshino, Takehiko Matsushita, Ryosuke Kuroda, Masahiro Kurosaka
Journal of Advanced Computational Intelligence and Intelligent Informatics, vol. 19, no. 6, pp. 778-784, Nov. 2015.
- [40] An Evaluation Method of Hardness on Quantitative Measurement System for Lachman Test Using Force Sensor
Shogo Kawaguchi, **Kouki Nagamune**, Yuichiro Nishizawa, Daisuke Araki, Yuichi Hoshino, Tomoyuki Matsumoto, Takehiko Matsushita, Ryosuke Kuroda, Masahiro Kurosaka
Information, vol. 19. no. 2, pp. 695-704, Feb. 2016.
- [41] Biomechanical Function of Anterior Cruciate Ligament Remnants: Quantitative Measurement With a 3-Dimensional Electromagnetic Measurement System
Kanto Nagai, Daisuke Araki, Takehiko Matsushita, Yuichiro Nishizawa, Yuichi Hoshino, Tomohiro Matsumoto, Koji Takayama, Naoki Nakano, **Kouki Nagamune**, Masahiro Kurosaka, Ryosuke Kuroda
Arthroscopy, vol. 32, no. 7, pp. 1359-1366, Jul., 2016
- [42] Development of Manual Measurement System with Stereo Markers for Lachman Test
Zhongjie Long, Shogo Kawaguchi, **Kouki Nagamune**
Journal of Advanced Computational Intelligence and Intelligent Informatics, vol. 20, no. 2, May, 2016.
- [43] Underwater 3D Imaging of Fiber-based Endoscopic System for Arthroscopic Surgery
Zhongjie Long, **Kouki Nagamune**
Journal of Advanced Computational Intelligence and Intelligent Informatics, vol. 20, no. 3, May, 2016
- [44] A propagation time difference evaluation for a clamp-on ultrasonic flowmeter for low-pressure gas
Hiroshi Nishiguchi, Toshiyuki Sawayama, **Kouki Nagamune**
Journal of Japanese Applied Physics, vol. 55, Jun., 2016.
- [45] A study on ultrasonic wave detection method for clamp-on ultrasonic gas flowmeter
Hiroshi Nishiguchi, Toshiyuki Sawayama, **Kouki Nagamune**
Journal of Control, Measurement, and System Integration, vol. 9, no. 4, pp.158-164, Jul., 2016.
- [46] Local Administration of Simvastatin Stimulates Healing of an Avascular Meniscus in a Rabbit Model of a Meniscal Defect
Shurong Zhang, Takehiko Matsushita, Ryosuke Kuroda, Kyohei Nishida, Tokio Matsuzaki, Tomoyuki Matsumoto, Koji Takayama, Kanto Nagai, Shinya Oka, Yasuhiko Tabata, **Kouki Nagamune** and Masahiro Kurosaka
The American Journal of Sports Medicine, vol. 44, no.7, pp.1735-1743, Jul.. 2016.
- [47] Real-Time 3D Visualization and Navigation Using Fiber-Based Endoscopic System for Arthroscopic Surgery
Zhongjie Long, **Kouki Nagamune**, Ryosuke Kuroda, Masahiro Kurosaka
Journal of Advanced Computational Intelligence and Intelligent Informatics, vol. 20, no. 5, pp. 735-742, Sept., 2016
- [48] Stress distribution is deviated around the aperture of the femoral tunnel in the anatomic anterior cruciate ligament reconstruction
Yuichi Hoshino, Ryosuke Kuroda, Yuichiro Nishizawa, Naoki Nakano, Kanto Nagai, Daisuke Araki, Shinya Oka, Shogo Kawaguchi, **Kouki Nagamune**, Masahiro Kurosaka
Knee Surg Sports Traumatol Arthrosc. (in press) Apr., 2017. (E-pub ahead of print)
- [49] Comparison Between Intra- and Extra-articular Tension of the Graft During Fixation in Anterior Cruciate Ligament Reconstruction
Yuichiro Nishizawa, Yuichi Hoshino, **Kouki Nagamune**, Daisuke Araki, Kanto Nagai, Masahiro Kurosaka, Ryosuke Kuroda
Arthroscopy, vol. 33, no. 6, pp. 1204-1210, Jun., 2017.
- [50] Evaluation of the propagation time difference in low-pressure city gas flow using a clamp-on ultrasonic flowmeter
Hiroshi Nishiguchi, Toshiyuki Sawayama, **Kouki Nagamune**
Japanese Journal of Applied Physics, vol. 56, no. 7S1, Jun., 2017.
- [51] Interactive Surgery System with 3D Electromagnetic Motion Tracker for Training Surgeons in Skin Cutting Skills

- Needed in Total Knee Arthroplasty
Yosuke Uozumi, **Kouki Nagamune**
Journal of Advanced Computational Intelligence and Intelligent Informatics, vol. 21, no. 7, pp.1180-1188, Nov., 2017.
- [52] Automated Femoral Stem Canal Fill Ratio Evaluation for Bipolar Hip Arthroplasty in 2D X-Ray Image
Yosuke Uozumi, **Kouki Nagamune**, Keisuke Oe
Journal of Advanced Computational Intelligence and Intelligent Informatics, vol. 22, no. 3, 2018.
- [53] Analysis of anterior tibial subluxation to the femur at maximum extension in anterior cruciate ligament-deficient knees
Kyohei Nishida, Takehiko Matsushita, Daisuke Araki, Hiroshi Sasaki, Toshikazu Tanaka, Yuichi Hoshino, Noriyuki Kanzaki, Tomoyuki Matsumoto, **Kouki Nagamune**, Takahiro Niikura, Masahiro Kurosaka, Ryosuke Kuroda
J Orthop Surg (Hong Kong) 27(1) 1-8 Mar. 2019
- [54] An Objective Indicator Focused on the Symmetrical Movements of the Arms to Assess Gait Stability
Yuki Azuma, **Kouki Nagamune**, Ryosuke Kuroda
Journal of Advanced Computational Intelligence and Intelligent Informatics 23(4) 767-774 Jul. 2019
- [55] Plantar pressure sensors indicate women to have a significantly higher peak pressure on the hallux, toes, forefoot, and medial of the foot compared to men
Tetsuya Yamamoto, Yuichi Hoshino, Noriyuki Kanzaki, Koji Nukuto, Takahiro Yamashita, Kazuyuki Ibaraki, **Kouki Nagamune**, Kanto Nagai, Daisuke Araki, Takehiko Matsushita, Ryosuke Kuroda
Journal of Foot and Ankle Research, 13(1), 40, Jul., 2020
- [56] Radial Meniscal Tears Are Best Repaired by a Modified "Cross" Tie-Grip Suture Based on a Biomechanical Comparison of 4 Repair Techniques in a Porcine Model
Yuta Nakanishi, Yuichi Hoshino, **Kouki Nagamune**, Tetsuya Yamamoto, Kanto Nagai, Daisuke Araki, Noriyuki Kanzaki, Takehiko Matsushita, Ryosuke Kuroda
Orthopaedic Journal of Sports Medicine, 8(7), Jul., 2020
- [57] Migration Measurement of Pins in Postoperative Recovery of the Proximal Femur Fractures Based on 3D Point Cloud Matching
Kaifeng Liu, **Kouki Nagamune**, Keisuke Oe, Ryosuke Kuroda, Takahiro Niikura
Medicina, 57(5), 406, DOI: 10.3390/medicina57050406, Apr., 2021
- [58] A Postoperative Displacement Measurement Method for Femoral Neck Fracture Internal Fixation Implants Based on Femoral Segmentation and Multi-Resolution Frame Registration
Kaifeng Liu, **Kouki Nagamune**, Keisuke Oe, Ryosuke Kuroda, Takahiro Niikura
Symmetry, 13(5), 747, DOI: 10.3390/sym13050747, Apr., 2021
- [59] The quantitative evaluation of anterior drawer test using an electromagnetic measurement system
Kiminari Kataoka, Yuichi Hoshino, **Kouki Nagamune**, Koji Nukuto, Tetsuya Yamamoto, Takahiro Yamashita, Noriyuki Kanzaki, Kenichiro Kakutani, Takehiko Matsushita, Ryosuke Kuroda
Sports Biomech, 20:1-12. DOI: 10.1080/14763141.2021.1918754, May, 2021. [Online ahead of print]
- [60] A new quantitative evaluation system for distal radioulnar joint instability using a three-dimensional electromagnetic sensor
Shintaro Mukohara, Yutaka Mifune, Atsuyuki Inui, Hanako Nishimoto, Takashi Kurosawa, Kohei Yamaura, Tomoya Yoshikawa, Issei Shinohara, Yuichi Hoshino, **Kouki Nagamune**, Ryosuke Kuroda
J Orthop Surg Res., 16(1):452, DOI: 10.1186/s13018-021-02601-4, Jul., 2021
- [61] Direct suturing quadriceps tendon to a continuous loop with a suspensory button provides biomechanically superior fixation in ACL reconstruction
Kohei Kamada, Kanto Nagai, **Kouki Nagamune**, Yuichi Hoshino, Yuta Nakanishi, Daisuke Araki, Noriyuki Kanzaki, Takehiko Matsushita, Ryosuke Kuroda
Knee Surg Sports Traumatol Arthrosc., DOI: 10.1007/s00167-021-06805-3, Nov., 2021 [Online ahead of print.]
- [62] Development of an ultracompact endoscopic three-dimensional scanner with flexible imaging fiber optics
Zhongjie Long, Hengbing Guo, **Kouki Nagamune**, Yunbo Zuo
Optical Engineering, 60(11), 114108, DOI: 10.1117/1.OE.60.11.114108, 2021
- [63] Accuracy and reliability of tridimensional electromagnetic sensor system for elbow ROM measurement
Kohei Yamaura, Yutaka Mifune, Atsuyuki Inui, Hanako Nishimoto, Takeshi Kataoka, Takashi Kurosawa, Shintaro Mukohara, Yuichi Hoshino, Takahiro Niikura, **Kouki Nagamune**, Ryosuke Kuroda
J Orthop Surg Res, 17(1):60., DOI: 10.1186/s13018-022-02961-5, Jan., 2022
- [64] A Development of Robotic Scrub Nurse System – Detection for Surgical Instruments Using Faster Region-Based Convolutional Neural Network –
Akito Nakano, **Kouki Nagamune**
Journal of Advanced Computational Intelligence and Intelligent Informatics, vol. 26, no. 1, pp. 74-82, DOI: 10.20965/jaciii.2022.p0074, Jan., 2022
- [65] The Quantitative Evaluation of Anterior Drawer Test Using an Electromagnetic Measurement System
Kiminari Kataoka, Yuichi Hoshino, **Kouki Nagamune**, Koji Nukuto, Tetsuya Yamamoto, Takahiro Yamashita, Noriyuki Kanzaki, Kenichiro Kakutani, Takehiko Matsushita, Ryosuke Kuroda
Sports Biomech., 21(4), pp. 550-561, DOI: 10.1080/14763141.2021.1918754, Apr., 2022.

Proceedings with Referee

- [1] Three-Dimensional Imaging of the Internal Structure in the Concrete by Fuzzy Inference
Kazuhiko Taniguchi, Takashi Matsumoto, **Kouki Nagamune**, and Yutaka Hata
Proc. Second Int. Forum on Multimedia and Image Processing, pp. 284-289, Hawaii, USA, Jun., 2000
- [2] Automated Extraction of Buried Pipes from 3D Ultrasonic Images by Fuzzy Inference
Kouki Nagamune, Yutaka Hata, and Kazuhiko Taniguchi

- Proc. WCC Int. Conf. on Signal Processing 2000, pp. 877-881, Beijing, China, Aug. 2000
- [3] An Automated Tissue Discrimination Based on Fuzzy Analysis of Ultrasonic Wave
Keisuke Sugano, **Kouki Nagamune**, Syoji Kobashi, Yutaka Hata, Tomoyuki Sawayama, and Kazuhiko Taniguchi
Proc. of Knowledge-Based Intelligent Information Engineering Systems and Allied Technologies, pp. 431-435, Osaka, Japan, Sep. 2001
- [4] Inherent Wave Estimation on Ultrasonic Non-Destructive Testing using Fuzzy Inference
Kouki Nagamune, Yutaka Hata, and Kazuhiko Taniguchi
Proc. of 7th FUZZY DAYS Int. Conf. on Computational Intelligence, pp. 369-379, Dortmund, Germany, Oct., 2001
- [5] Ultrasound Diagnosis in Medical Engineering
Kouki Nagamune, Syoji Kobashi, Yutaka Hata, Tomoyuki Sawayama, and Kazuhiko Taniguchi
Proc. of First Vietnam Japan Symposium on Medical Imaging/Informatics and Applications, pp. 30-36, Hanoi, Vietnam, Nov. 2001
- [6] Challenge to the Development of a Transcranial Sonography System
Kouki Nagamune, Syoji Kobashi, Katsuya Kondo, Yutaka Hata, Yuri Kitamura, and Toshio Yanagidai
Proc. of Knowledge-Based Intelligent Information Engineering Systems & Allied Technologies, pp. 604-608, Crema, Italy, Sep., 2002
- [7] Automated Design of Non-Destructive Testing System by Genetic Algorithms
Kouki Nagamune, Kazuhiko Taniguchi, Syoji Kobashi, and Yutaka Hata
Proc. of the fourth International Forum on Multimedia and Image Processing, pp. 159-164, Florida, USA, Jun., 2002
- [8] Tissue Elasticity Estimation from Ultrasonic Waveform Using Fuzzy Inference
Tadashi Kimura, **Kouki Nagamune**, Syoji Kobashi, Katsuya Kondo, Yutaka Hata, and Kazuhiko Taniguchi
Proc. of Joint 1st Int. Conf. on Soft Computing and Intelligent Systems, 24P6-2, Tsukuba, Japan, Oct., 2002
- [9] An Automated Ultrasound Discrimination System of Tissue under an Obstacle by Fuzzy Reasoning
Takashi Shimizu, **Kouki Nagamune**, Syoji Kobashi, Katsuya Kondo, Yutaka Hata, Yuri T. Kitamura, and Toshio Yanagida
Proc. of Joint 1st Int. Conf. on Soft Computing and Intelligent Systems, 24P6-1, Tsukuba, Japan, Oct., 2002
- [10] Comparison between Ultrasonic and Pulse-Radar Non-Destructive Testing Systems
Kouki Nagamune, Kazuhiko Taniguchi, Syoji Kobashi, Katsuya Kondo, and Yutaka Hata
Proc. 1st Int. Conf. on Information Technology & Applications, 257-6, Bathurst, Australia, Nov., 2002
- [11] An Ultrasonic Evaluation for Degradation of Insulating Oil Using Fuzzy Inference
Kouki Nagamune, Kazuhiko Taniguchi, Syoji Kobashi, Katsuya Kondo, and Yutaka Hata
Proc. of 2003 IEEE Int. Ultrasonics Symposium, pp.893-896, Hawaii, USA, Oct., 2003
- [12] Three-Dimensional Bone Shape Sonography System Aided by Fuzzy Logic
Tadashi Kimura, **Kouki Nagamune**, Syoji Kobashi, Katsuya Kondo, Yutaka Hata, Yuri T. Kitamura, and Toshio Yanagida
Proc. of The 8th Australian and New Zealand Conference on Intelligent Information Systems, pp. 63-68, Sydney, Australia, Dec. 2003
- [13] Skull and Brain Visualization by Transcranial Sonography System
Takashi Shimizu, **Kouki Nagamune**, Syoji Kobashi, Katsuya Kondo, Yutaka Hata, Yuri T. Kitamura, and Toshio Yanagida
Proc. of The 8th Australian and New Zealand Conference on Intelligent Information Systems, pp. 427-432, Sydney, Australia, Dec. 2003.
- [14] Fuzzy Diagnosis for Bonding Degree of Femur Stem by Using Ultrasonic Wave
Kouki Nagamune, Takayuki Nishiyama, Masahiro Kurosaka, Nao Shibamura and Yutaka Hata
Proc. of the Fifth International Forum on Multimedia and Image Processing, pp. 191-196, Sevilla, Spain, Jun., 2004
- [15] Ultrasonography System of Implant in Bones for Orthopedic Surgery
Maki Endo, Syoji Kobashi, Katsuya Kondo, Yutaka Hata, **Kouki Nagamune**, Hirotsugu Muratsu and Nao Shibamura
Proc. of the Fifth International Forum on Multimedia and Image Processing, pp. 133-138, Sevilla, Spain, Jun., 2004
- [16] Fuzzy Determination of Anatomical Reference Points in 3D Kinematical Measurement for Human Body
Kouki Nagamune, Hirotsugu Muratsu, Shinichi Yoshiya, Masahiro Kurosaka, and Yutaka Hata
Proc. of 3rd International Conference on Soft Computing and Intelligent Systems, FE-2-5, Yokohama, Japan, Sep., 2004
- [17] Fuzzy Ultrasonography System for Estimating Roughness by Using 1MHz Probe
Kensuke Iseri, Syoji Kobashi, Katsuya Kondo, Yutaka Hata, **Kouki Nagamune**
Proc. of Joint 2nd International Conference on Soft Computing and Intelligent Systems and 5th International Symposium on Advanced Intelligent Systems, FE-2-6 Yokohama, Japan, Sep., 2004
- [18] Ultrasonography System for Finding Distal Transverse Screw Hole of Intramedullary Nail
Maki Endo, **Kouki Nagamune**, Nao Shibamura, Syoji Kobashi, Katsuya Kondo, and Yutaka Hata
Proc. of International Series on Natural and Artificial Intelligence, vol.1, pp.229-234, Fukui, Japan, Dec. 2004
- [19] Joint Surface Geometry Based Standardization for the ACL Insertion by Using Fuzzy Logic,
Kouki Nagamune, Hirotsugu Muratsu, Yuichi Hoshino, Koichi Tanaka, Kiyonori Mizuno, Ryosuke Kuroda, Masahiro Kurosaka, Masayoshi Yagi, and Shinichi Yoshiya
Proc. of the IEEE SMC 2005, pp.1949-1954, Hawaii, USA, Oct., 2005
- [20] Automated Three-Dimensional Evaluation of Canal Fit and Fill of the Stem in the Femoral Bone from CT Image
Kouki Nagamune, Nao Shibamura, Yutaka Hata, and Masahiro Kurosaka
Proc. of the Fifth International Forum on Multimedia and Image Processing, ifmip-162, Budapest, Hungary, Jul., 2006
- [21] Medical Ultrasonic System Aided by Fuzzy Logic
Yutaka Hata, and **Kouki Nagamune**

- Proc. of Twaiwan-Japan Symposium, pp.258-264, Aug., 2006 (**Invited**)
- [22] A Determination Method of the Femoral and Tibial Bone Coordinate Systems by Integrating Ultrasound Device with 3D Electromagnetic Device
Kouki Nagamune, Hirotsugu Muratsu, Koji Nishimoto, Yuichi Hoshino, Koichi Tanaka, Kiyonori Mizuno, Masayoshi Yagi, Ryosuke Kuroda, Shinich Yoshiya, and Masahiro Kurosaka
Proc. of International Conference on Soft Computing and Intelligent Systems, pp.1842-1847, Tokyo, Japan, Aug., 2006
- [23] A Fuzzy Estimation System for Cellular Quantity of Artificial Culture Bone
Satoshi Yamaguchi, **Kouki Nagamune**, Keisuke Oe, Syoji Kobashi, Katsuya Kondo, and Yutaka Hata
Proc. of International Conference on Complex Medical Engineering, pp.427-430, Beijing, China, May, 2007.
- [24] Automatic Extraction Method of Bone Tunnel of the Anterior Cruciate Ligament from Multi Detector Row Computed Tomography Data
Kouki Nagamune, Koji Nishimoto, Yuichi Hoshino, Kiyonori Mizuno, Rosuke Kuroda, Yutaka Hata, and Masahiro Kurosaka
Proc. of International Conference on Complex Medical Engineering, pp.504-507, Beijing, China, May, 2007.
- [25] Fuzzy Logic Approach to Identification of Cellular Quantity by Ultrasonic System
Satoshi Yamaguchi, **Kouki Nagamune**, Keisuke Oe, Syoji Kobashi, Katsuya Kondo and Yutaka Hata
Proc. of IEEE International Conference on Granular Computing, pp.636-639, California, USA, Nov. 2007
- [26] Reproducibility of Real-Time Knee Kinematics measurement System Using Electromagnetic Device
Kouki Nagamune, Daisuke Araki, Koji Nishimoto, Yuichi Hoshino, Seiji Kubo, Ryosuke Kuroda, and Masahiro Kurosaka
Proc. of the Sixth International Forum on Multimedia and Image Processing, ifmip-012, Hawaii, USA, Oct., 2008
- [27] Estimation System of Affection Due To Pointing Error In Navigation System of Total Hip Arthroplasty
Kouki Nagamune, Takaaki Fujishiro, Takayuki Nishiyama, Ryosuke Kuroda, and Masahiro Kurosaka
Proc. of the Sixth International Forum on Multimedia and Image Processing, ifmip-019, Hawaii, USA., Oct., 2008
- [28] Automated Extraction Method of Bone Tunnel after the Anterior Cruciate Ligament Reconstruction from a Knee MDCT Image by using Fuzzy Inference
Kouki Nagamune, Dasiuke Araki, Yuichi Hoshino, Seiji Kubo, Ryosuke Kuroda, and Masahiro Kurosaka
Proc. of IEEE International Conference on Fuzzy Systems, pp.933-938, Jeju Island, Korea, Aug., 2009
- [29] Computer-Assisted Designing System for Fixation Plate
Kouki Nagamune, Yasuro Kokubo, and Hisatoshi Baba
Proc. of IEEE International Conference on Fuzzy Systems, pp.975-980, Jeju Island, Korea, Aug., 2009
- [30] An Evaluation Method of EndoButton Position in MDCT Image After Anterior Cruciate Ligament Reconstruction
Kouki Nagamune, Daisuke Araki, Koji Nishimoto, Yuichi Hoshino, Seiji Kubo, Ryosuke Kuroda, and Masahiro Kurosaka
Proc. of IEEE International Conference on Systems, Man, and Cybernetics, P1058, San Antonio, USA, Oct., 2009
- [31] Automated Determination Method of Tibial Bone Coordinate System for Analysing Bone Tunnel Trans-Position after Anterior Cruciate Ligament Reconstruction from a Knee MDCT Image
Kouki Nagamune, Daisuke Araki, Seiji Kubo, Ryosuke Kuroda, and Masahiro Kurosaka
Proc. of IEEE World Congress on Computational Intelligence, Barcelona, Spain, July, 2010.
- [32] Motion Analysis of Knee Joint during Lachman Test from Fluoroscopy by Fuzzy Inference
Kouki Nagamune, Hiroshi Sasaki, Daisuke Araki, Seiji Kubo, Ryosuke Kuroda, and Masahiro Kurosaka
Proc. of The 4th International Symposium on Computational Intelligence and Industrial Applications, Harbin, China, August 2-8, 2010.
- [33] Development of Force Measurement System by Embedding Force Sensor to Insert of Knee Prosthesis
Kouki Nagamune
Proc. of World Automation Congress, 516, Kobe, Japan, September, 2010.
- [34] An Analysis Method of Direction of Bone tunnel Enlargement in MDCT Image After Anterior Cruciate Ligament Reconstruction
Yosuke Uozumi, **Kouki Nagamune**, Daisuke Araki, Seiji Kubo, Ryosuke Kuroda, and Masahiro Kurosaka
Proc. of World Automation Congress, Kobe, Japan, September, 2010.
- [35] An Analysis Method of EndoButton Position with Registration in MDCT Images After Anterior Cruciate Ligament Reconstruction
Yosuke Uozumi, **Kouki Nagamune**, Daisuke Araki, Seiji Kubo, Ryosuke Kuroda, and Masahiro Kurosaka
Proc. of World Automation Congress, Kobe, Japan, September, 2010.
- [36] A Quantitative Measurement System of Lachman test with Force Sensor
Shogo Kawaguchi, **Kouki Nagamune**, Daisuke Araki, Seiji Kubo, Ryosuke Kuroda, and Masahiro Kurosaka
Proc. of World Automation Congress, Kobe, Japan, September, 2010.
- [37] An Analysis Method of Surface Profile for Cylindrical Osteochondral Grafts of the Knee
Kouki Nagamune, Daisuke Araki, Seiji Kubo, Ryosuke Kuroda, and Masahiro Kurosaka
Proc. of IEEE International Conference on Systems, Man, and Cybernetics, Istanbul, Turkey, Oct., 2010.
- [38] A Quantitative Measurement System of Endpoint during Lachman Test with Force Sensor
Kawaguchi Shogo, **Nagamune Kouki**, Araki Daisuke, Matsumoto Tomoyuki, Kubo Seiji, Matsushita Takehiko, Kuroda Ryosuke and Kurosaka Masahiro
Proc. of IEEE World Congress on Computational Intelligence, Taiwan, Taiwan, June, 2011.
- [39] An Development of Navigation System for MOSAIC PLASTY using Electromagnetic Sensor
Takayasu Toyoshima, **Kouki Nagamune**, Daisuke Araki, Tomoyuki Matsumoto, Seiji Kubo, Takehiko Matsushita, Ryosuke Kuroda and Masahiro Kurosaka
Proc. of IEEE World Congress on Computational Intelligence, Taiwan, Taiwan, June, 2011.
- [40] Six Degree Of Freedom Calculation Based on Principal Component Analysis for the Knee Joint in MDCT Image

- Yosuke Uozumi, **Kouki Nagamune**, Daisuke Araki, Tomoyuki Matsumoto, Takehiko Matsushita, Seiji Kubo, Ryosuke Kuroda and Masahiro Kurosaka
Proc. of IEEE World Congress on Computational Intelligence, Taiwan, Taiwan, June, 2011.
- [41] 2D-3D Matching of Fluoroscopy and MDCT Image during Manual Tests based on Anatomical Knowledge
Kouki Nagamune, Yosuke Uozumi, Shinya Oka, Hiroshi Sasaki, Daisuke Araki, Seiji Kubo, Ryosuke Kuroda, and Masahiro Kurosaka
Proc. of WORLDCOMP 2011 Congress, Las Vegas, USA, July, 2011.
- [42] An Analysis Method of Femur and Patellar for Patellar Subluxation Diagnosis using MDCT Image
Kouki Nagamune, Shinya Oka, Hiroshi Sasaki, Daisuke Araki, Tomoyuki Matsumoto, Takehiko Matsushita, Seiji Kubo, Ryosuke Kuroda, and Masahiro Kurosaka
Proc. of IEEE International Conference on Systems, Man, and Cybernetics, Anchorage, USA, Oct., 2011.
- [43] Lateral Supra-acetabular External Fixation for Unstable Pelvic Ring Fracture: A Biomechanical Assessments
M.M.S. Hanafi, Shogo Kawaguchi, **Kouki Nagamune**, Keisuke Oe, Sang Yang Lee, Takahiro Niikura, Ryosuke Kuroda and Masahiro Kurosaka
Proc. of WCCI 2012 IEEE World Congress on Computational Intelligence, pp. 1980-1965 Brisbane, Australia, June, 2012.
- [44] An Automated Calibration by Using Fuzzy Control for a Measurement System of Lachman Test
Shogo Kawaguchi, **Kouki Nagamune**, Daisuke Araki, Tomoyuki Matsumoto, Seiji Kubo, Takehiko Matsushita, Ryosuke Kuroda, and Masahiro Kurosaka
Proc. of WCCI 2012 IEEE World Congress on Computational Intelligence, pp. 1974-1979 Brisbane, Australia, June, 2012.
- [45] A Development of Navigation System with Image Segmentation in Mosaicplasty of the Knee
Takayasu Toyoshima, **Kouki Nagamune**, Daisuke Araki, Tomoyuki Matsumoto, Seiji Kubo, Takehiko Matsushita, Ryosuke Kuroda, and Masahiro Kurosaka
Proc. of WCCI 2012 IEEE World Congress on Computational Intelligence, pp. 1968-1973 Brisbane, Australia, June, 2012..
- [46] A Registration Method of 3D Profile and Motion Data of the Knee Kinematics
Kouki Nagamune, Shinya Oka, Daisuke Araki, Koji Nishimoto, Seiji Kubo, Ryosuke Kuroda, and Masahiro Kurosaka
Proc. of World Automation Congress 2012, pp.1-5 (ID: 1569538115) , Puerto Vallarta, Mexico, June, 2012
- [47] Challenge of Normality Evaluation by using Micro-Size Tension Measurement Device in Anterior Cruciate Ligament Reconstruction
Shogo Kawaguchi, **Kouki Nagamune**, Yuichiro Nishizawa, Yuichi Hoshino, Tomoyuki Matsumoto, Seiji Kubo, Takehiko Matsushita, Ryosuke Kuroda, Masahiro Kurosaka
Proc. of 2012 IEEE International Conference on Systems, Man, and Cybernetics, pp. 2605-2609 , Seoul, Korea, October, 2012.
- [48] Calculation of Graft Bending Angle in Anterior Cruciate Ligament Reconstruction
Kouki Nagamune, Yuichiro Nishizawa, Koji Nishimoto, Yuichi Hoshino, Seiji Kubo, Ryosuke Kuroda, Masahiro Kurosaka
Proc. of 2012 IEEE International Conference on Systems, Man, and Cybernetics, pp. 237-241, Seoul, Korea, October, 2012.
- [49] A Development of Surgery Instrument Pose Support System for Mosaicplasty by Using Force Distribution
Satoshi Nishino, Takayasu Toyoshima, **Kouki Nagamune**, Yuichi Hoshino, Tomoyuki Matsumoto, Seiji Kubo, Takehiko Matsushita, Ryosuke Kuroda, and Masahiro Kurosaka
Proc. of 2012 IEEE International Conference on Systems, Man, and Cybernetics, pp. 3257-3262, Seoul, Korea, October, 2012.
- [50] A Development of Force Distribution Measurement System in Total Knee Arthroplasty and With High Resolution
Takashi Kamiya, Shogo Kawaguchi, Mohd Hanafi Mat Som, **Kouki Nagamune**, Tomoyuki Matsumoto, Takehiko Matsushita, Seiji Kubo, Ryosuke Kuroda, and Masahiro Kurosaka
Proc. of SCIS-ISIS 2012, pp. 785-788, Kobe, Japan, November, 2012.
- [51] An Automatic Bone Segmentation Method Based on Anatomical Structure for the Knee Joint in MDCT Image
Yosuke Uozumi, **Kouki Nagamune**
Proc. of annual international conference of the IEEE EMBC 2013, pp. 7214- 7127, Osaka, Japan, July, 2013.
- [52] A New Technique of Bone Thickness Measurement for Pedicle Screw Insertion Safety Purpose
Muhamad Khairul Ali Hassan, **Kouki Nagamune**
Proc. of annual international conference of the IEEE EMBC 2013, pp. 7180- 7183, Osaka, Japan, July, 2013.
- [53] An Automatic Segmentation of Bone Tunnels After Anterior Cruciate Ligament Reconstruction in MDCT Image Using K-means Clustering
Yosuke Uozumi, **Kouki Nagamune**, Daisuke Araki, Yuichi Hoshino, Ryosuke Kuroda, Masahiro Kurosaka
Proc. of international conference on Knowledge-Based and Intelligent Information and Engineering Systems (KES-2013), pp. 437-445, Kitakyushu, Japan, September, 2013.
- [54] A Study of Bone Thickness Measurement by Using Infrared Sensor for Pedicle Screw Insertion
Muhamad Khairul Ali Hassan, **Kouki Nagamune**, Kenichiro Kakutani, Koichiro Maeno, Kotaro Nishida, Masahiro Kurosaka
Proc. of IEEE International Conference on Systems, Man, and Cybernetics, pp. 2152-2156, Manchester, UK, October, 2013.
- [55] A Proposal Method of Mechanical Analysis of Lachman Test by Using Quantitative Measurement System With Force Sensor
Shogo Kawaguchi, **Kouki Nagamune**, Yuichiro Nishizawa, Yuichi Hoshino, Tomoyuki Matsumoto, Seiji Kubo, Takehiko Matsushita, Ryosuke Kuroda, Masahiro Kurosaka

- Proc. of IEEE International Conference on Systems, Man, and Cybernetics, pp. 2157-2162, Manchester, UK, October, 2013.
- [56] An Early Development of Force Distribution Sensor Using Pressure-sensitive Conductive Rubber for Soft Tissue Balancing in Total Knee Arthroplasty
Mohd Hanafi Mat Somy, **Kouki Nagamune**, Takashi Kamiya, Shogo Kawaguchi, Tomoyuki Matsumoto, Ryosuke Kuroda, Masahiro Kurosaka
Proc. of IEEE International Conference on Systems, Man, and Cybernetics, pp.2556-2560, Manchester, UK, October, 2013.
- [57] An Evaluation Method of Force Concentration in PS Type of Total Knee Arthroplasty with Force Distribution Measurement System
Takashi Kamiya, Shogo Kawaguchi, Mohd Hanafi Mat Som, **Kouki Nagamune**, Tomoyuki Matsumoto, Takehiko Matsushita, Ryosuke Kuroda, Masahiro Kurosaka
Proc. of IEEE International Conference on Systems, Man, and Cybernetics, pp.2561-2564, Manchester, UK, October, 2013.
- [58] An Evaluation System for Risk Factors of the Recurrent Patellar Subluxation : Position and Profile
Akira Maki, **Kouki Nagamune**, Shinya Oka, Yuichiro Nishizawa, Daisuke Araki, Takehiko Matsushita, Ryosuke Kuroda, Masahiro Kurosaka
Proc. of the 9th International Conference on Signal Image Technology and Internet Based Systems, Kyoto, Japan, December, 2013.
- [59] An Automated Analysis for Anatomical Structure of Distal Femur from MDCT Image by Contour Tracing
Yosuke Uozumi, **Kouki Nagamune**, Daisuke Araki, Yuichi Hoshino, Takehiko Matsushita, Ryosuke Kuroda, Masahiro Kurosaka
Proc. of the 9th International Conference on Signal Image Technology and Internet Based Systems, Kyoto, Japan, December, 2013.
- [60] Analysis of the Multiple Ultrasound Echoes for Measurement of Cortical Bone Thickness
Muhamad Khairul Ali Hassan, **Kouki Nagamune**
Proc. of IEEE International Symposium on Bioelectronics and Bioinformatics, P211, Chung Li, Taiwan, April, 2014.
- [61] An Automated Determination of Blumensaat Line Using Fuzzy System Based on Physician Experience from Femur CT Image
Yosuke Uozumi, **Kouki Nagamune**, Naoki Nakano, Kanto Nagai, Yuichiro Nishizawa, Yuichi Hoshino, Takehiko Matsushita, Ryosuke Kuroda, and Masahiro Kurosaka
Proc. of IEEE International Conference on Fuzzy Systems, pp. 1831-1836, Beijing, China, July, 2014.
- [62] An Evaluation System of High Risk Factors for Daily Motions Using Force Sensors
Shogo Kawaguchi, **Kouki Nagamune**
Proc. of World Automation Congress, ID-1569917211, Hawaii, USA, August, 2014.
- [63] Automated Extraction of Tibial Eminence in CT Image Using Shape Matching
Yosuke Uozumi, **Kouki Nagamune**, Naoki Nakano, Kanto Nagai, Daisuke Araki, Yuichi Hoshino, Takehiko Matsushita, Ryosuke Kuroda, and Masahiro Kurosaka
Proc. of World Automation Congress, ID-1569916971, Hawaii, USA, August, 2014.
- [64] Real-time 3D Reconstruction of Endoscopy and Microfiber Line Laser
Zhongjie Long, **Kouki Nagamune**, Xiaoli Xu, Daisuke Araki, Yuichi Hoshino, Takehiko Matsushita, Ryosuke Kuroda, and Masahiro Kurosaka
International Symposium on Test Automation and Instrumentation, pp. 262-267, Beijing, China, September, 2014.
- [65] Performance of Conductive Rubber-based Sensor Array Calibration Using Cubic Spline
Mohd Hanafi Mat Som, **Kouki Nagamune**, Shogo Kawaguchi
Proc. of IEEE International Conference on Systems, Man, and Cybernetics, ID-1385, San Diego, USA, October, 2014.
- [66] A Verification of Bimodality on Quantitative Measurement System for Lachman Test Using Force Sensor
Shogo Kawaguchi, **Kouki Nagamune**, Yuichiro Nishizawa, Daisuke Araki, Yuichi Hoshino, Tomoyuki Matsumoto, Takehiko Matsushita, Ryosuke Kuroda, Masahiro Kurosaka
Proc. of IEEE International Conference on Systems, Man, and Cybernetics, ID-1702, San Diego, USA, October, 2014.
- [67] Wavelet Decomposition Processing Method : Cortical Bone Thickness Measurement Using Ultrasound Sensor
Muhamad Khairul Ali Hassan, **Kouki Nagamune**, Kenichiro Kakutani, Koichiro Maeno, Kotaro Nishida, Masahiro Kurosaka
Proc. of IEEE International Conference on Systems, Man, and Cybernetics, ID-1715, San Diego, USA, October, 2014.
- [68] Influence of EndoButton Attitude and Displacement in Anterior Cruciate Ligament Reconstruction Using Bone Tunnel Axis
Yosuke Uozumi, **Kouki Nagamune**, Naoki Nakano, Kanto Nagai, Yuichiro Nishizawa, Shinya Oka, Daisuke Araki, Yuichi Hoshino, Takehiko Matsushita, Ryosuke Kuroda, Masahiro Kurosaka
Proc. of International Conference on Soft Computing and Intelligent Systems and International Symposium on Advanced Intelligent Systems, ID-117, Kitakyushu, Japan, December, 2014.
- [69] Development of Manual Testing Measurement System
Feng Zhang, **Kouki Nagamune**, Shogo Kawaguchi
Proc. of International Conference on Soft Computing and Intelligent Systems and International Symposium on Advanced Intelligent Systems, ID-118, Kitakyushu, Japan, December, 2014.
- [70] A Development of Force Distribution Measurement System Around Greater Trochanter Under Pelvic Belt
Yusuke Shimizu, **Kouki Nagamune**, Kesuke Oe, Lee sangyang, Takahiro Nikura, Ryosuke Kuroda, Masahiro Kurosaka
Proc. of International Conference on Soft Computing and Intelligent Systems and International Symposium on Advanced Intelligent Systems, ID-119, Kitakyushu, Japan, December, 2014.

- [71] A Development of Tension and Length Measurement System for Knee Bending Motion in Medial Patello-Femoral Ligament Reconstruction
Kouki Nagamune, Shogo Kawaguchi
 Proc. of International Conference on Informatics, Electronics and Vision, Kitakyushu, Japan, June, 2015
- [72] 3D Interactive Trace Teaching System with Anatomical Model – A Pilot Study of System Configuration -
 Yosuke Uozumi, **Kouki Nagamune**
 Proc. of International Conference on Informatics, Electronics and Vision, Kitakyushu, Japan, June, 2015
- [73] A Virtual Reality System for Occupational Therapy with Hand Motion Capture and Force Feedback – A Pilot Study of System Configuration –
Kouki Nagamune, Yosuke Uozumi, Yoshitada Sakai
 Proc. of Human-Computer Interaction, Los Angeles USA, August 2015.
- [74] Computer-Aided Segmentation System of Posterior Cruciate Ligament in Knee Joint from CT and MRI Using Anatomical Information
 Yosuke Uozumi, **Kouki Nagamune**, Kyonori Mizuno
 Proc. of IEEE International Conference on Systems, Man, and Cybernetics, pp. 2295-2298, Hong Kong, China, October, 2015.
- [75] A Study of In Vitro Kinematics of A Posterior Stabilized Fixed Bearing Prosthesis
 Mohd Hanafi Mat Som, **Kouki Nagamune**, Shogo Kawaguchi, Yusuke Shimizu
 Proc. of IEEE International Conference on Systems, Man, and Cybernetics, pp. 2277-2282, Hong Kong, China, October, 2015.
- [76] Detection of the Ultrasonic Propagation Time Shift in the Clamp-on Ultrasonic Flowmeter for Gas
 Hiroshi Nishiguchi, Toshiyuki Sawayama, **Kouki Nagamune**
 Proc. of Symposium on Ultrasonic Electronics, vol. 36, 3J1-1, Tsukuba, Japan, November, 2015.
- [77] Analysis of Fixation Degree on External Fixation Device in Unstable Pelvic Ring Fracture
Kouki Nagamune, Shogo Kawaguchi, Keisuke Oe
 Proc. of International Symposium on Advanced Science and Technology in Experimental Mechanics, Matsue, Japan, November, 2015.
- [78] An ultrasonic evaluation system of stem fixation in total hip arthroplasty
Kouki Nagamune, Kiyonori Mizuno
 Proc. of World Automation Congress, ID-16357865, Puerto Rico, USA, August, 2016.
- [79] Gait analysis with six axes inertial sensor and force sensor for daily motion
 Keita Aoike, **Kouki Nagamune**
 Proc. of 11th International Conference on Computer Science & Education, Nagoya, Japan, August, 2016.
- [80] A Development of Evaluation System for Pelvic Belt by Using Force Sensor
Kouki Nagamune, Keisuke Oe
 Proc. of Joint 8th International Conference on Soft Computing and Intelligent Systems and 17th International Symposium on Advanced Intelligent Systems, pp. 822-826, Sapporo, Japan, August, 2016.
- [81] Gait analysis of normal subjects by using force sensor and six inertial sensor with wireless module
 Keita Aoike, **Kouki Nagamune**, Koji Takayama, Ryosuke Kuroda, Masahiro Kurosaka
 Proc. of IEEE International Conference on Systems, Man, and Cybernetics, Budapest, Hungary, October, 2016.
- [82] A Development of Measurement System for Walking with Turning Using 6-axis Inertial Sensors and Its Reliability Evaluation
 Yuki Azuma, **Kouki Nagamune**, Ryosuke Kuroda
 Joint 17th World Congress of International Fuzzy Systems Association and 9th International Conference on Soft Computing and Intelligent Systems, ID-27, Otsu, Japan, June, 2017.
- [83] Identification of Medial Proximal Stem Shape by Measurement of Five Ultrasound Probes Inside Stem Model,
 Ayaka Gonda, **Kouki Nagamune**, Kiyonori Mizuno
 The 2017 IEEE International Conference on Fuzzy Systems, F-0328, Naples, Italy, July, 2017.
- [84] Comparison of Medial Proximal Femur Shape by Measurement Used Ultrasound Probe With Two Stem Models
 Ayaka Gonda, **Kouki Nagamune**, Kiyonori Mizuno
 The 2017 IEEE International Conference on System, Man, and Cybernetics, pp. 3067-3070, Banff, Canada, Oct., 2017.
- [85] Comparison of Passenger Unit Movement Between Stair and Level Walkings Using Inertial Sensors
 Yuki Azuma, **Kouki Nagamune**, Ryosuke Kuroda
 The 2017 IEEE International Conference on System, Man, and Cybernetics, pp. 3062-3066, Banff, Canada, Oct., 2017.
- [86] Comparison of Real and Virtual Rehabilitation Using Hand Measurement Device Based on Six-Axis
 Yujiro Tsuzuki, **Kouki Nagamune**
 The 13th IEEE Biomedical and Life Science Circuits and Systems, pp. 232-235, Turin, Italy, Oct., 2017.
- [87] A Development of Measurement System for Foot Pressure by Using Optical Force Sensors
 Makoto Yamada, **Kouki Nagamune**
 Proc. of World Automation Congress, pp. 14-17, DOI: 10.23919/WAC.2018.8430401, Stevenson, USA, June, 2018.
- [88] A Development of Ankle Joint Range of Motion Measurement System Using Electromagnetic Tracking Device and Force Sensor
 Ryo Sakashita, **Kouki Nagamune**, Ryosuke Kuroda
 Proc. of World Automation Congress, pp. 10-13, DOI: 10.23919/WAC.2018.8430462, Stevenson, USA, June, 2018.
- [89] An Evaluation of Reaction Time of Dual Task with Eye Tracker and Leap Motion
 Keisuke Takata, **Kouki Nagamune**, Ryosuke Kuroda
 The 2018 IEEE International Conference on System, Man, and Cybernetics, pp. 3823-3826, DOI:

- 10.1109/SMC.2018.00647, Miyazaki, Japan, Oct., 2018.
- [90] A Development of Motion Measurement System of Lower Limb During Isotonic Contraction of Knee Extension Using MMT
Shun Mitamura, **Kouki Nagamune**
The 2019 IEEE International Conference on System, Man, and Cyberneticcs, pp. 1182-1186, DOI: 10.1109/SMC.2019.8914370, Bari, Italy, Oct., 2019.
- [91] Effect of Cutting Maneuvers on Center of Foot Pressure Movement in University Tennis Players
Naotaka Tomita, **Kouki Nagamune**, Makoto Yamada
The 2019 IEEE International Conference on System, Man, and Cyberneticcs, pp. 1177-1181, DOI: 10.1109/SMC.2019.8914639, Bari, Italy, Oct., 2019.
- [92] A Development of a System to Measure Radioulnar Distance in Wrist-Joint Rotation Using Three-Dimensional Electromagnetic Sensor
Kouki Nagamune, Akito Nakano
The 2019 International Conference on Machine Learning and Cybernetics (ICMLC), DOI: 10.1109/ICMLC48188.2019.8949284, Kobe, Japan, Jul., 2019.
- [93] Angle Measurement of Two Rods in External Fixation Bracket Based on Image Processing
Kaifeng Liu, **Kouki Nagamune**, Keisuke Oe
The 2019 1st International Conference on Electrical, Control and Instrumentation Engineering (ICECIE), DOI: 10.1109/ICECIE47765.2019.8974750, Kuala Lumpur, Malaysia, Nov., 2019
- [94] A Development of Measurement System for Radioulnar Instability by Using 3D Electromagnetic Sensor and Pressure Sensor
Akito Nakano, **Kouki Nagamune**, Atsuyuki Inui, Shintaro Mukohara, Kohei Yamaura, Ryosuke Kuroda
The 2019 1st International Conference on Electrical, Control and Instrumentation Engineering (ICECIE), DOI: 10.1109/ICECIE47765.2019.8974783, Kuala Lumpur, Malaysia, Nov., 2019
- [95] A Development of Measurement System of Elbow Joint for Spasticity by Using Motor
Masanori Adachi, **Kouki Nagamune**
The 2019 1st International Conference on Electrical, Control and Instrumentation Engineering (ICECIE), DOI: 10.1109/ICECIE47765.2019.8974736, Kuala Lumpur, Malaysia, Nov., 2019
- [96] Development of a Measuring System for Lateral Translation of the Knee Joint During Walking Using 6-axis Inertial Sensors
Tsubasa Abe, **Kouki Nagamune**
Proc. of World Automation Congress, pp. 121-124, DOI: 10.23919/WAC50355.2021.9559460, Taipei, Taiwan, Aug., 2021.
- [97] Extension of the Interface for Visual Feedback of Center of Foot Pressure in Insole Type Measurement Device
Nomura Shoei, **Nagamune Kouki**
Proc. of World Automation Congress, pp. 160-163, DOI: 10.23919/WAC50355.2021.9559569, Taipei, Taiwan, Aug., 2021.
- [98] Analysis of Patella Movement and Posture During Knee Flexion Using a Depth Camera
Atsunori Uesaka, **Kouki Nagamune**, Takehiko Matsushita, Ryosuke Kuroda
Proc. of World Automation Congress, pp. 40-43, DOI: 10.23919/WAC50355.2021.9559598, Taipei, Taiwan, Aug., 2021.