

## CURRICULUM VITAE

**Hiroataka Iijima, PT, PhD**

### Personal:

Date of Birth: February 19, 1987

Place of Birth: Saitama, Japan

Hobby: watching movie and sports



### Work Address:

Hiyoshi, Kohoku-ku, Yokohama 223-8522, Japan.

Department of System Design Engineering, Keio University

Phone: +81-45-563-1141

Fax: +81-45-566-1660

E-mail: iijima.hiroataka.4m@yt.sd.keio.ac.jp

### Current Position:

Post-doctoral Fellow (Japan Society for the Promotion of Science), Department of System Design Engineering, Keio University

Visiting Researcher, Department of Physical Therapy, Human Health Sciences, Graduate School of Medicine, Kyoto University

---

### Education:

#### Ph.D. Human Health Science

Kyoto University, Japan, March, 2017

**Thesis:** *“Exercise intervention increases expression of bone morphogenetic proteins and prevents the progression of cartilage-subchondral bone lesions in a post-traumatic rat knee model”*

**Advisor:** Prof. Hiroshi Kuroki

#### MS.c. Human Health Science

Kyoto University, Japan, March, 2014

**Thesis:** *“Investigating weakness of knee cartilage covered by menisci and changes of cartilage and subchondral bone in early knee osteoarthritis”*

**Advisor:** Prof. Hiroshi Kuroki

#### B.S. Healthcare and Welfare

Saitama Prefectural University, Japan, March, 2009

**Thesis:** *“Effects of Physical Therapy Modality on Musculoskeletal Disease: A Systematic Review”*

**Advisor:** Prof. Kiyomi Takayanagi

2005–2009

Department of Physical Therapy, Saitama Prefectural University, Saitama, Japan

(B.S. Thesis) Advisor: Kiyomi Takayanagi

2012–2014

Department of Physical Therapy, Graduate School of Medicine, Kyoto University, Kyoto, Japan

(MSc. Thesis) Advisor: Hiroshi Kuroki

2014–2017

Department of Physical Therapy, Graduate School of Medicine, Kyoto University, Kyoto, Japan

(Ph.D. Thesis) Advisor: Hiroshi Kuroki

---

## **Positions and Honors:**

### *Positions and Employment*

2009–2012 Physical Therapist, Juntendo University Hospital, Chiba

2015–2017 Research Fellow of Japan Society for the Promotion of Science (DC2), Kyoto University, Kyoto

2016–2017 Part-time Lecturer, Kyoto University, Kyoto

2017–present Research Fellow of Japan Society for the Promotion of Science (PD), Keio University, Yokohama

### *Other Experience and Professional Memberships*

2009–present Member, The Japanese Physical Therapy Association

2012–present Member, Osteoarthritis Research Society International

2012–present Member, The Japanese Society of Cartilage Metabolism

2017–present Member, The Japanese Association of Rehabilitation Medicine

### *Honor*

2003 Scholarship, Furuoka Scholarship Foundation

2005 Scholarship, Japan Student Services Organization

2009 Best Bachelor Student Award, Department of Physical Therapy, Saitama Prefectural University

2009 Best Student Award, The Japanese Rehabilitation Association

2013 Best Presentation Award, First Research Symposium in Saitama Prefectural University

2015 Selected Publication for Osteoarthritis Research Society International Research News Letter, Osteoarthritis Research Society International

2015 Selected Poster Presentation, Osteoarthritis Research Society International Young Investigator Committee, 2015 Osteoarthritis Research Society International World Congress on Osteoarthritis

2016 Selected Publication for Osteoarthritis Research Society International Research News Letter, Osteoarthritis Research Society International

2016 Award for Recognized Reviewer - Osteoarthritis and Cartilage

2016 Award for Outstanding Contribution in Reviewing - Osteoarthritis and Cartilage

2017 Selected Publication for Osteoarthritis Research Society International Research News Letter, Osteoarthritis Research Society International

2017 Selected Paper, The Japanese Society for Bone and Mineral Research

---

## Research Interests:

### Biological Response of Cartilage-Bone to Mechanical Loading *in vivo*

My previous studies revealed that physiological level exercise could prevent the progression of post-traumatic osteoarthritic changes in articular cartilage and subchondral bone *via* increasing of bone morphogenetic protein (BMP) in a pre-clinical model of rat meniscus injury model<sup>1-3</sup>.

1. **Iijima H**, Ito A, Nagai M, Tajino J, Yamaguchi S, Kiyon W, Nakahata A, Zhang J, Wang T, Aoyama T, Nishitani K, Kuroki H. Physiological exercise loading suppresses post-traumatic osteoarthritis progression via an increase in bone morphogenetic proteins expression in an experimental rat knee model. *Osteoarthritis Cartilage* 2017 25(6):964–975.
2. **Iijima H**, Aoyama T, Ito A, Tajino J, Yamaguchi S, Nagai M, Kiyon W, Zhang X, Kuroki H. Exercise intervention increases expression of bone morphogenetic proteins and prevents the progression of cartilage-subchondral bone lesions in a post-traumatic rat knee model. *Osteoarthritis Cartilage* 2016;24(6):1092–102.
3. **Iijima H**, Aoyama T, Ito A, Yamaguchi S, Nagai M, Tajino J, Zhang X, Kuroki H. Effects of short-term gentle treadmill walking on subchondral bone in a rat model of instability-induced osteoarthritis. *Osteoarthritis Cartilage* 2015;23:1563–74.

### Regenerative Rehabilitation After Mesenchymal Stem Cell-based Therapy for Knee Osteoarthritis

My researches also contribute to promote effective regenerative rehabilitation, as defined integration of approaches from cartilage-bone biology and rehabilitation medicine, with the ultimate goal of developing innovative and effective diagnostic and therapeutic methods that promote the tissue regeneration and functional recovery in individuals with musculoskeletal disease<sup>4,5</sup>. My recent work shed light on a potential role of rehabilitation to promote functional recovery after Mesenchymal Stem Cell treatment in individuals with knee osteoarthritis<sup>6</sup>.

4. Yamaguchi S, Aoyama T, Ito A, Nagai M, **Iijima H**, Tajino J, Zhang X, Wataru K, Kuroki H. Effect of Low-Intensity Pulsed Ultrasound after Mesenchymal Stromal Cell Injection to Treat Osteochondral Defects: An In Vivo Study. *Ultrasound Med Biol* 2016;42(12):2093–2913.

5. Yamaguchi S, Aoyama T, Ito A, Nagai M, **Iijima H**, Tajino J, Zhang X, Kiyon W, Kuroki H. The effect of exercise on the early stages of mesenchymal stromal cell-induced cartilage repair in a rat osteochondral defect model. *PLoS One* 2016;11(3):e0151580.
6. **Iijima H**, Isho T, Kuroki H, Takahashi M, Aoyama T. Effectiveness of Mesenchymal Stem Cells for Treating Patients with Knee Osteoarthritis: A Meta-analysis toward the Establishment of Effective Regenerative Rehabilitation. *Nature Regenerative Medicine* 2018 in press.

### **Identification of Modifiable Risk Factors Associated with Progression of Knee Osteoarthritis**

In addition to experimental research, I worked with Associate Prof. Aoyama to identify the modifiable risk factors associated with progression of knee osteoarthritis using epidemiological approaches. My researches addressed an important role of altered biomechanics during gait on knee pain and structural abnormality in individuals with knee OA<sup>7-9</sup>.

7. **Iijima H**, Fukutani N, Yamamoto Y, Hiraoka M, Miyano K, Jinnouchi M, Kaneda E, Isho T, Aoyama T, Kuroki H, Matsuda S. Association of varus thrust with prevalent patellofemoral osteoarthritis: a cross-sectional study. *Gait Posture* 2017;58:394-400.
8. Fukutani N, **Iijima H**, Fukumoto T, Uritani D, Kaneda E, Ota K, Aoyama T, Tsuboyama T, Matsuda S. Association between varus thrust and Pain and Stiffness and Activity of Daily Living in patients with medial knee osteoarthritis. *Phys Ther* 2016;96:167-75.
9. **Iijima H**, Fukutani N, Aoyama T, Fukumoto T, Uritani D, Kaneda E, Ota K, Kuroki H, Matsuda S. Clinical phenotype classifications based on static varus alignment and varus thrust in Japanese patients with medial knee osteoarthritis. *Arthritis Rheumatol* 2015;67:2354-62.

### **Human Dynamics and Biomechanical Analysis of Human Locomotion**

Recently, I have started to examine locomotion in individuals with knee osteoarthritis using the novel technique, Laser Range Sensor-based leg tracking system, which was developed by my coworker Associate Prof. Takahashi<sup>10</sup>. This novel technique could provide new insight in understanding the pathogenesis of knee osteoarthritis and could be applied for effect measurement of mesenchymal stem cell-based therapy and physical rehabilitation in the clinical setting in the future.

10. Yorozu A, Takahashi M. Improved Leg Tracking Considering Gait Phase and Spline-based Interpolation during Turning Motion in Walk Tests. *Sensors* 2015;15(9):22451-72.
11. **Iijima H**, Yorozu A, Suzuki Y, Eguchi R, Aoyama T, Takahashi M. Specific contribution of hip abductor muscle strength to turning movement in individuals with knee osteoarthritis. Osteoarthritis Cartilage (under review).

---

**Journal Publications:**

1. **Iijima H**, Isho T, Kuroki H, Takahashi M, Aoyama T. Effectiveness of Mesenchymal Stem Cells for Treating Patients with Knee Osteoarthritis: A Meta-analysis toward the Establishment of Effective Regenerative Rehabilitation. *Nature Regenerative Medicine* 2018 in press.
2. Morino S, Ishihara M, Umezaki F, Hatanaka H, **Iijima H**, Yamashita M, Aoyama T, Takahashi M. Low back pain and causative movements in pregnancy: a prospective cohort study. *BMC Musculoskeletal Disorders* 2017;18(1):416.
3. **Iijima H**, Fukutani N, Yamamoto Y, Hiraoka M, Miyanobu K, Jinnouchi M, Kaneda E, Isho T, Aoyama T, Kuroki H, Matsuda S. Association of varus thrust with prevalent patellofemoral osteoarthritis: a cross-sectional study. *Gait Posture* 2017;58:394–400.
4. Tanimura-Nagai M, Harada H, Aoyama T, Yamaguchi S, Ito A, Tajino J, **Iijima H**, Zhang X, Kuroki H, Kobayashi M. Pathohistological investigation of osteochondral tissue obtained during total knee arthroplasty after osteochondral autologous transfer: a case report. *BMC Res Notes*. 2017 Jun 6;10(1):194.
5. **Iijima H**, Ohi H, Aoyama T, Kaneda E, Ohi K, Abe K. Association of Frontal Plane Knee Alignment With Foot Posture in Patients With Medial Knee Osteoarthritis. *BMC Musculoskeletal Disorders* 2017;18(1):246.
6. **Iijima H**, Ohi H, Isho T, Aoyama T, Fukutani N, Kaneda E, Ohi K, Abe K, Kuroki H, Matsuda S. Association of bilateral flat feet with knee pain and disability in patients with knee osteoarthritis: A cross-sectional study. *J Orthop Res* 2017;35(11):2490–8.
7. **Iijima H**, Fukutani N, Isho T, Yamamoto Y, Hiraoka M, Miyanobu K, Jinnouchi M, Kaneda E, Aoyama T, Kuroki H, Matsuda S. Changes in clinical symptoms and functional disability in patients with coexisting patellofemoral and tibiofemoral osteoarthritis: a 1-year prospective cohort study. *BMC Musculoskeletal Disorders* 2017;18(1):126.
8. **Iijima H**, Aoyama T, Nishitani K, Ito H, Fukutani N, Isho T, Kaneda E, Kuroki H, Matsuda S. Coexisting Lateral Tibiofemoral Osteoarthritis Is Associated with Worse Knee Pain in Patients with Mild Medial Osteoarthritis. *Osteoarthritis Cartilage* 2017;25(8):1274–81.
9. **Iijima H**, Fukutani N, Isho T, Yamamoto Y, Hiraoka M, Miyanobu K, Jinnouchi M, Kaneda E, Aoyama T, Kuroki H, Matsuda S. Relationship between pedometer-based physical activity and physical function in patients with osteoarthritis of the knee: a cross-sectional study. *Arch Phys Med Rehabil* 2017;98(7):1382–88.
10. **Iijima H**, Ito A, Nagai M, Tajino J, Yamaguchi S, Kiyan W, Nakahata A, Zhang J, Wang T, Aoyama T, Nishitani K, Kuroki H. Physiological exercise loading suppresses post-traumatic osteoarthritis progression via an increase in bone morphogenetic proteins expression in an experimental rat knee model. *Osteoarthritis Cartilage* 2017 25(6):964–975.

11. Xiang Ji, Takakuwa T, Takahashi M, **Iijima H**, Morino S, Ishihara M, Kawagoe M, Hadanaka Y, Umezaki F, Yamashita M, Aoyama T. Postpartum radiographic changes in pelvic morphology and its relation with symptoms of pregnancy-related symphysis pain, *Clin Exp Obst Gynecol* 2017, in press.
12. Yamaguchi S, Aoyama T, Ito A, Nagai M, **Iijima H**, Tajino J, Zhang X, Wataru K, Kuroki H. Effect of Low-Intensity Pulsed Ultrasound after Mesenchymal Stromal Cell Injection to Treat Osteochondral Defects: An In Vivo Study. *Ultrasound Med Biol* 2016;42(12):2093–2913.
13. Fukutani N, **Iijima H**, Aoyama T, Yamamoto Y, Hiraoka M, Miyanobu K, Jinnouchi M, Kaneda E, Tsuboyama T, Matsuda S. Knee pain during activities of daily living and its relationship with physical activity in patients with early and severe knee osteoarthritis. *Clinical Rheumatology* 2016;35(9):2307–16.
14. Yamaguchi S, Aoyama T, Ito A, Nagai M, **Iijima H**, Tajino J, Zhang X, Kiyam W, Kuroki H. The effect of exercise on the early stages of mesenchymal stromal cell-induced cartilage repair in a rat osteochondral defect model. *PLoS One* 2016;11(3):e0151580.
15. **Iijima H**, Aoyama T, Ito A, Tajino J, Yamaguchi S, Nagai M, Kiyam W, Zhang X, Kuroki H. Exercise intervention increases expression of bone morphogenetic proteins and prevents the progression of cartilage-subchondral bone lesions in a post-traumatic rat knee model. *Osteoarthritis Cartilage* 2016;24(6):1092–102.
16. Nagai M, Ito A, Tajino J, **Iijima H**, Yamaguchi S, Zhang X, Aoyama T, Kuroki H. Re-mobilization cause cyst formation in immobilization-induced knee cartilage degeneration with site specificity in an immobilized rat model. *J Anat* 2016;228:929–39.
17. Zhang X, Aoyama T, Yasuda T, Oike M, Ito A, Tajino J, Nagai M, Fujioka R, **Iijima H**, Yamaguchi S, Kakinuma N, Kuroki H. Effect of microfabricated microgroove-surface devices on the morphology of mesenchymal stem cells. *Biomed Microdevices* 2015;17(6):116.
18. **Iijima H**, Aoyama T, Tajino J, Ito A, Nagai M, Yamaguchi S, Zhang X, Kiyam W, Kuroki H. Subchondral plate porosity colocalizes with the point of mechanical load during ambulation in a rat knee model of post-traumatic osteoarthritis. *Osteoarthritis Cartilage* 2016;24(2):354–63.
19. **Iijima H**, Fukutani N, Aoyama T, Fukumoto T, Uritani D, Kaneda E, Ota K, Kuroki H, Matsuda S. Clinical impact of coexisting patellofemoral osteoarthritis in Japanese patients with medial knee osteoarthritis. *Arthritis Care Res (Hoboken)* 2016 68;493–501.
20. Fukutani N, **Iijima H**, Fukumoto T, Uritani D, Kaneda E, Ota K, Aoyama T, Tsuboyama T, Matsuda S. Association between varus thrust and Pain and Stiffness and Activity of Daily Living in patients with medial knee osteoarthritis. *Phys Ther* 2016;96:167–75.
21. **Iijima H**, Fukutani N, Aoyama T, Fukumoto T, Uritani D, Kaneda E, Ota K, Kuroki H, Matsuda S. Clinical phenotype classifications based on static varus alignment and varus thrust in Japanese patients with medial knee osteoarthritis. *Arthritis Rheumatol* 2015;67:2354–62.

22. Ito A, Nagai M, Tajino J, Yamaguchi S, **Iijima H**, Zhang X, Aoyama T, Kuroki H. Culture temperature affects human chondrocyte messenger RNA expression in monolayer and pellet culture systems. *PLoS One* 2015;26(5):e0128082.
23. **Iijima H**, Aoyama T, Ito A, Yamaguchi S, Nagai M, Tajino J, Zhang X, Kuroki H. Effects of short-term gentle treadmill walking on subchondral bone in a rat model of instability-induced osteoarthritis. *Osteoarthritis Cartilage* 2015;23:1563–74.
24. Tajino J, Ito A, Nagai M, Zhang X, Yamaguchi S, **Iijima H**, Aoyama T, Kuroki H. Intermittent application of hypergravity by centrifugation attenuates disruption of rat gait induced by 2 weeks of simulated microgravity. *Behav Brain Res* 2015;287:276–84.
25. Ito A, Aoyama T, Yoshizawa M, Nagai M, Tajino J, Yamaguchi S, **Iijima H**, Zhang X, Kuroki H. The effects of short-term hypoxia on human mesenchymal stem cell proliferation, viability, and p16INK4A mRNA expression: Investigation using a simple hypoxic culture system with a deoxidizing agent. *J Stem Cells Regen Med*;2015;11(1):25–31.
26. Nagai M, Aoyama T, Ito A, **Iijima H**, Yamaguchi S, Tajino J, Zhang X, Akiyama H, Kuroki H. Alteration of cartilage-surface collagen fibers differs locally after immobilization of knee joints in rats. *J Anat* 2015;226(5):447–57.
27. Tajino J, Ito A, Nagai M, Zhang X, Yamaguchi S, **Iijima H**, Aoyama T, Kuroki H. Discordance in Recovery Between Altered Locomotion and Muscle Atrophy Induced by Simulated Microgravity in Rats. *J Mot Behav.* 2015;47(5):397–406.
28. Ito A, Aoyama T, **Iijima H**, Tajino J, Nagai M, Yamaguchi S, Zhang X, Kuroki H. Culture temperature affects redifferentiation and cartilaginous extracellular matrix formation in dedifferentiated human chondrocytes. *J Orthop Res*, 2015;33(5):633–9.
29. **Iijima H**, Isho T, Aoyama T. Effects of knee orthoses on walking capacity and biomechanics in patients with knee osteoarthritis: A critical review. *OA Musculoskeletal Medicine* 2014;2(2):13.
30. Nagai M, Aoyama T, Ito A, **Iijima H**, Yamaguchi S, Tajino J, Zhang X, Akiyama H, Kuroki H. Contributions of biarticular myogenic components to the limitation of the range of motion after immobilization of rat knee joint. *BMC Musculoskelet Disord.* 2014;15:224.
31. Zhang X, Aoyama T, Ito A, Tajino J, Nagai M, Yamaguchi S, **Iijima H**, Kuroki H. Regional comparisons of porcine menisci. *J Orthop Res*, 2014;32(12):1602–1611.
32. Ito A, Aoyama T, Tajino J, Nagai M, Yamaguchi S, **Iijima H**, Zhang X, Akiyama H, Kuroki H. Effects of the thermal environment on articular chondrocyte metabolism: A fundamental study to facilitate establishment of an effective thermotherapy for osteoarthritis. *J Jpn Phys Ther Assoc* 2014;1:14–21.
33. **Iijima H**, Aoyama T, Ito A, Tajino J, Nagai M, Zhang X, Yamaguchi S, Akiyama H, Kuroki H. Destabilization of the medial meniscus leads to subchondral bone defects and site-specific

cartilage degeneration in an experimental rat model. *Osteoarthritis Cartilage* 2014;22(7):1036–43.

34. **Iijima H**, Aoyama T, Ito A, Tajino J, Nagai M, Zhang X, Yamaguchi S, Akiyama H, Kuroki H. Immature articular cartilage and subchondral bone covered by menisci are potentially susceptible to mechanical load. *BMC Musculoskelet Disord* 2014;15:101.
35. Ito A, Aoyama T, Tajino J, Nagai M, Yamaguchi S, **Iijima H**, Zhang X, Akiyama H, Kuroki H. Evaluation of reference genes for human chondrocytes cultured in several different thermal environments. *Int J Hyperthermia* 2014;30(3):210–6.
36. Ito A, Aoyama T, **Iijima H**, Nagai M, Yamaguchi S, Tajino J, Zhang X, Akiyama H, Kuroki H. Optimum temperature for extracellular matrix production by articular chondrocytes. *Int J Hyperthermia* 2014;30(2):96–101.
37. Yamaguchi S, Aoyama T, Ito A, Nagai M, **Iijima H**, Zhang X, Tajino J, Kuroki H. Effects of Exercise Level on Biomarkers in a Rat Knee Model of Osteoarthritis. *J Orthop Res* 2013;31(7):1026–31.

#### **Manuscript under review or under preparation:**

1. **Iijima H**, Aoyama T, Fukutani N, Isho T, Yamamoto Y, Hiraoka M, Miyano K, Jinnouchi M, Kaneda E, Kuroki H, Matsuda S. Psychological health impact on knee pain and physical function in patients with knee osteoarthritis: an exploratory cross-sectional study. *BMC Psychology*.
2. **Iijima H**, Shimoura K, Ono T, Aoyama T, Takahashi M. Proximal Gait Adaptations in Individuals with Medial Knee OA: A Systematic Review with Meta-analysis. *Osteoarthritis Cartilage*.
3. **Iijima H**, Shimoura K, Aoyama T, Takahashi M. Biomechanical Characteristics of Stair Ambulation in Patients with Knee OA: A Systematic Review with Meta-analysis Toward A Better Definition of Clinical Hallmarks. *Gait Posture*.
4. **Iijima H**, Suzuki Y, Aoyama T, Takahashi M. Lower quadriceps strength in individuals with coexisting medial and lateral osteoarthritis: toward an identification of modifiable risk factors in symptomatic phenotype. *Osteoarthritis Cartilage*.
5. **Iijima H**, Suzuki Y, Aoyama T, Takahashi M. Low back pain interacts with knee pain to predict disability level in individuals with knee osteoarthritis: a cross-sectional study. *Osteoarthritis Cartilage*.
6. **Iijima H**, Yorozu A, Suzuki Y, Eguchi R, Aoyama T, Takahashi M. Specific contribution of hip abductor muscle strength to turning movement in individuals with knee osteoarthritis. *Osteoarthritis Cartilage*.
7. **Iijima H**, Fukutani N, Aoyama T, Kaneda E, Eguchi R, Takahashi M, Kuroki H, Matsuda S. Effects of Interaction Between Varus Thrust and Ambulatory Physical Activity on Knee Pain in



Individuals with Knee Osteoarthritis: An Exploratory Study with 12-Month Follow-Up. Archives of Physical Medicine and Rehabilitation.

8. **Iijima H**, Ohi H, Fukutani N, Aoyama T, Kaneda E, Abe K, Takahashi M, Matsuda S. Inverted Rearfoot Posture in Subjects with Coexisting Patellofemoral Osteoarthritis in Medial Knee OA: An exploratory study. Journal of Foot and Ankle Research.
9. Ohi H, **Iijima H**, Fukutani N, Aoyama T, Kaneda E, Ohi K, Ito H, Matsuda S, Abe K. Varus thrust visualized during gait was associated with inverted foot in patients with knee osteoarthritis: an exploratory study. Gait Posture.
10. Kiyon W, Nakagawa N, Ito A, **Iijima H**, Nishitani K, Tanima-Nagai M, Mukai S, Yamaguchi S, Nakahata A, Zhang J, Aoyama T. Ultrasound Parameters for Human Osteoarthritic Subchondral Bone Ex Vivo: Comparison with Micro-Computed Tomography Parameters. Ultrasound Medicine and Biology.
11. Xiang J, Morino S, **Iijima H**, Ishihara M, Kawagoe M, Hatanaka Y, Umezaki F, Yamashita M, Aoyama T. Pregnancy-related sacroiliac joint pain is associated with variations of hip and pelvic geometry in a longitudinal analysis. American Journal of Obstetrics & Gynecology.
12. Shimoura K, **Iijima H**, Takahashi M, Aoyama T. Immediate Effect of Transcutaneous electrical nerve stimulation on pain and physical performance outcomes in patients with osteoarthritis of the knee: study protocol of a randomized controlled trial. BMC Musculoskeletal Disorders.
13. Ito A, Aoyama T, Nishitani K, Tajino J, **Iijima H**, Kuroki H. Periodic mild heat stimuli diminish extracellular matrix synthesis in pellet cultured human chondrocytes. International Journal of Hyperthermia.
14. Sonoo, **Iijima H**. Biomechanical alterations of sit-to-stand motion in individuals with knee osteoarthritis. Gait Posture.

Complete List of Published Work in My Bibliography:

<https://www.ncbi.nlm.nih.gov/myncbi/browse/collection/54021151/?sort=date&direction=ascending>

Research Gate:

[https://www.researchgate.net/profile/Hiroataka\\_Iijima](https://www.researchgate.net/profile/Hiroataka_Iijima)

LinkedIn:

<https://www.linkedin.com/in/hirotaka-ijima-pt-phd-95204b13a/>

**Seminars and Invited Lectureships Related to Research:**

1. April 2013 – Rehabilitation Research Seminar, Kyoto Hakuai Hospital  
“Biology and Rehabilitation of Knee Osteoarthritis”
  2. September 2013 – Rehabilitation Research Seminar, Fifth Functional Innovation Research Institute “Identification of Varus Thrust-Based Novel Subgroup in Knee Osteoarthritis”
  3. November 2013 – Invited Lecture, First Research Symposium in Saitama Prefectural University  
“Biology of Knee Osteoarthritis”
  4. January 2014 – Research Seminar, Nozomi Orthopaedic Clinic  
“Therapeutic Strategy for Patients with Knee Osteoarthritis”
  5. March 2014 – Research Seminar, Rehabilitation Day Service Acty  
“Reconsidering of Physical Therapy from Pathology of Knee Osteoarthritis: Risk and Benefit of Exercise Therapy”
  6. July 2015 – Lecture of Pharmaceutical Sciences in Tokushima University  
“Shuttle Between Bedside and Bench: As A Physical Therapist”
  7. January 2017 – Lecture of Pharmaceutical Sciences in Tokushima University  
“Current and Future Research of Knee Osteoarthritis: Toward 2020 years”
  8. April 2017 – Lecture of Motor Function Analysis in Kyoto University  
“Regenerative Rehabilitation and Knee Osteoarthritis”
- 

**Referee/Reviewer Experience:**

1. Peer Reviewer, Osteoarthritis and Cartilage (Recognized Reviewer, Outstanding Contribution in Reviewing in 2016)
2. Peer Reviewer, Clinical Rheumatology
3. Peer Reviewer, The Journal of Rheumatology

**Research Support and/or Scholastic Performance:***Ongoing Research*

17J03084, Grant-in-Aid for Japan Society for the Promotion of Science Research Fellows (PD)

04/01/2017-03/31/2020

“Dynamic Diagnostic System for Knee Osteoarthritis and Tailormade Rehabilitation”

Role: PI

*Completed Research*

15J08195, Grant-in-Aid for Japan Society for the Promotion of Science Research Fellows (DC2)

04/01/2015-03/31/2017

“Histopathological Changes of Physiological Exercise in A Rat Knee Model of Post-traumatic Osteoarthritis ”

Role: PI

*Pending*

Grant-in-Aid for Japan Society for the Promotion of Science Young Scientists B

“Multiple Sensor-Based Predictive Algorithm for Musculoskeletal Disease”

Role: PI

Grant-in-Aid for Japan Society for the Promotion of Science Overseas Research Fellowships

“To be determined”

Role: PI

---

**Academic Responsibilities:**

Graduate Student Advising

*In Progress*

Master’s Thesis Kanako Shimoura *To be determined.*

Doctoral Thesis Hiroshi Ohi *To be determined*

Doctoral Thesis Yusuke Suzuki *To be determined*

Doctoral Thesis Atsushi Jike *To be determined*

*Completed*

Master’s Thesis Hiroshi Ohi *Relationship between varus thrust during gait and foot posture in individuals with knee osteoarthritis*

Doctoral Thesis Naoto Fukutani *Association of Varus Thrust With Pain and Stiffness and Activities of Daily Living in Patients With Medial Knee Osteoarthritis*