

Sehoon Ha

CONTACT INFORMATION

Disney Research
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RESEARCH INTERESTS

Computer Graphics (Physics-based Animation, Computational Design),
Robotics (Control, Motion Planning), Biomechanics.

EDUCATION

Georgia Institute of Technology Atlanta, Georgia

Ph.D. in Computer Science, Aug, 2015

- Thesis: *Developing agile motor skills on virtual and real humanoids*
- Advisor: Dr. C. Karen Liu
- Area of Study: Computer Graphics

Korea Advanced Institute of Science and Technology Daejeon, South Korea

B.S. in Computer Science, Aug. 2009

GPA: 3.99/4.3, Summa Cum Laude

EMPLOYMENT HISTORY

Disney Research Pittsburgh Post Doctoral Researcher. Advisor: Dr. Katsu Yamane	Pittsburgh, Pennsylvania Sep. 2015 –
Disney Research Pittsburgh Lab Associate. Advisor: Dr. Katsu Yamane	Pittsburgh, Pennsylvania May. 2014 – Aug. 2014
Adobe Creative Technology Lab Research Intern. Mentors: J. McCann and J. Popović	Seattle, Washington May. 2012 – Aug. 2012
Georgia Institute of Technology, College of Computing Graduate Research Assistant	Atlanta, Georgia Aug. 2010 – Aug. 2015
Georgia Institute of Technology, College of Computing Visiting Researcher	Atlanta, Georgia Aug. 2009 – Aug. 2010

REFEREED JOURNAL PUBLICATIONS

- [ERAS17] Y.S. Song, **S. Ha**, H. Hsu, L.H. Ting, and C. K. Liu, *Stair Negotiation Made Easier Using Novel Interactive Energy-Recycling Assistive Stairs*, In *PLoS One*
- [ITD14] **S. Ha** and C. K. Liu, *Iterative Training Of Dynamic Skills Inspired By Human Coaching Technique*, In *ACM Transactions on Graphics 2014*
- [PSB13] **S. Ha**, J. McCann, C. K. Liu, and J. Popović, *Physics Storyboards*, In *Computer Graphics Forum (Proceedings of Eurographics 2013)*
- [FLM12] **S. Ha**, Y. Ye, and C. K. Liu, *Falling and Landing Motion Control for Character Animation*, In *ACM Transactions on Graphics (Proceedings of SIGGRAPH Asia 2012)*
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REFEREED
CONFERENCE
PUBLICATIONS

[JOR17] S. Ha, S. Coros, A. Alspach, J. Kim, and K. Yamane, *Joint Optimization of Robot Design and Motion Parameters using the Implicit Function Theorem* In *Proceedings of Robotics: Science and Systems 2017* **Best Conference Paper Finalist (Top 3)**

[TLO16] S. Ha, S. Coros, A. Alspach, J. Kim, and K. Yamane, *Task-based Limb Optimization for Legged Robots* In *IEEE International Conference on Intelligent Robots and Systems 2016*

[EO16] S. Ha and C. K. Liu, *Evolutionary Optimization for Parameterized Whole-body Dynamic Motor Skills* In *IEEE International Conference on Robotics and Automation 2016*

[MCP15] S. Ha and C. K. Liu, *Multiple Contact Planning for Minimizing Damage of Humanoid Falls* In *IEEE International Conference on Intelligent Robots and Systems 2015*

[RHE15] S. Ha and K. Yamane, *Reducing Hardware Experiments for Model Learning and Policy Optimization* In *IEEE International Conference on Robotics and Automation 2015*

[HMR11] S. Ha, Y. Bai, and C. K. Liu, *Human Motion Reconstruction from Force Sensors*, In *ACM SIGGRAPH/Eurographics Symposium on Computer Animation 2011*

THESIS

[PHDTHESIS] S. Ha, *Developing agile motor skills on virtual and real humanoids*, College of Computing, Georgia Institute of Technology

AWARDS,
FELLOWSHIP AND
HONORS

13th , ACM International Collegiate Programming Contest World Finals	Apr. 2006
Gold Prize , 5th Korea Collegiate Programming Olympiad	Nov. 2005
3rd , ACM International Collegiate Programming Contest Seoul Site	Nov. 2005
5th , ACM International Collegiate Programming Contest Seoul Site	Nov. 2004
4th , ACM International Collegiate Programming Contest Seoul Site	Nov. 2003
Korea Presidential Science Scholarship	Jul. 2003
Republic of Korea Army	Aug. 2006 – Jul. 2008

PROFESSIONAL
ACTIVITIES

Program Committee: Motion in Games 2016
Conference Review: SIGGRAPH 2016, SIGGRAPH Asia 2015, 2016, Eurographics 2015, 2016, ICRA 2016, IROS 2015, 2016
Journal Review: Transactions on Graphics, Transactions on Robotics, PLOS

MEDIA COVERAGE

[SPECTRUM15] Robots Learning Judo Techniques to Fall Down Without Exploding, In *IEEE Spectrum*

[MITTR15] An Algorithm Helps Robots Fall Safely, In *MIT Technology Review*

[GTNEWS15] How to Fall Gracefully If Youre a Robot, In *Georgia Tech News Center*

SKILLS Motion Planning [**FLM12, ITD14, MCP15, EO16**] and Optimal Control [**RHE15**]
 Computational Design of Legged Robots [**TLO16**]
 Optimization Algorithms for Humanoid Control [**ITD14, EO16**]
 Supervised Learning [**HMR11, ITD14, RHE15**] and Reinforcement Learning [**MCP15**]

LANGUAGES Fluent in Korean and English

Last update: OCT, 2016