CURRICULUM VITAE

Joon-Suk Lee

Associate Professor / Computer Science Program Coordinator
Department of Engineering and Computer Science
P.O. Box 9068
Virginia State University
301Sd Hunter McDaniel Building
Carter G. Woodson Avenue
Petersburg, VA 23806, USA

Office: (804) 524-5425
Cell: (540) 200-8803
E-mail: joonsukl@acm.org
Skype: joon_suk_lee
http://joonlee.org

Research Interests

Human Computer Interaction (HCI), Interaction Design, Computer Supported Cooperative Work (CSCW), Computer Supported Collaborative Learning (CSCL), Computer-Mediated Communication (CMC), Conversational Analysis, Discourse Analysis

Research Projects

Sensor Driven Mobile Application Development Study: Currently investigating students' sensor driven application development processes.
status*: on-going*

Micro-Coordination Phase II*: Currently designing a series of research works that extend the original dissertation work.*
status*: on-going*

Couple Arguing & Attention Study: Assisted in planning and designing two controlled experiments. Currently involved in analyzing the collected data.
status*: on-going*

Micro-Coordination (dissertation work): Designed and implemented Tuple Space-based applications to investigate micro-coordination among co-located people. Conducted two controlled experimental studies with over 400 participants using Tuple-Space-based applications. This work was supported by NSF Grant. IIS-1018607 HCC-Small.
status*: completed. more publication pending.*

Playground Game: Conducted an observational study at a local middle school investigating how students coordinate behaviors in a game-club context.
status*: completed. more publication pending.*

Vivid Embodiment (Placemark & ThoughtSwap): Assisted in developing software, running tests, and conducting a multi-institutional study of collaborative writing tools.
status*: completed*

Education

May 2013

Ph.D. in Computer Science Virginia Tech, Blacksburg, VA
Specialization: Human Computer Interaction / Computer Supported Collaborative Work / Computer Supported Collaborative Learning
Advisor: Deborah Tatar
Committee: Aditya Johri, Manuel Perez, Scott McCrickard, Steve Harrison

May 1998

Master of Science in Computer Science Brown University, Providence, RI
Specialization: Object-Oriented Databases and Query Optimization
Advisor: Stan Zdonik

Research Project:

Developed an original version of the "COKO Compiler" for Sparcstations (Solaris) using Yacc and Lex, together with C++ and Prolog.

May 1995

Bachelor of Science in Computer Science Pace University, New York, NY
Magna Cum Laude

Employment - university

Fall 2013 ~

Virginia State University, Department of Mathematics and Computer Science *Petersburg, VA*
Associate Professor *(tenure granted 2018)*

Spring 2011 - Spring 2013

Virginia Tech, Computer Science Department *Blacksburg, VA*
Research Assistant

Micro-Coordination Project
Supervisor: Deborah Tatar

Fall 2008 - Fall 2010

Virginia Tech, Computer Science Department *Blacksburg, VA*
Teaching Assistant

* Spring 2010 & Fall 2010: Undergraduate level data structures and algorithms
(CS 3114 - Data Structure and Algorithms)
* Fall 2009: Undergraduate level artificial intelligence
(CS 4804 - Introduction to AI).
* Spring 2010: Undergraduate level data structures and algorithms
(CS 3114 - Data Structure and Algorithms)
* Fall 2008: Graduate level software engineering
(CS 5704 - Software Engineering)
* Fall 2008: Graduate level HCI
(CS 5774 - User Interface Software)

Summer 2008

Virginia Tech, Computer Science Department *Blacksburg, VA*
Research Assistant

Vivid Embodiment Project
Supervisor: Deborah Tatar

* Developed shared writing tool for use in outdoor environments.

* Developed an application deployment manager in Java. (http://poet.cs.vt.edu/tuple_games/)
* Developed Windows/Mac native installable Tuple applications. (http://poet.cs.vt.edu/tuple_games/)

Spring 2008

Virginia Tech, Mechanical Engineering Department *Blacksburg, VA*
Research Assistant

VTPL Project
Supervisor: John Ferris

* Supported Vehicle Terrain Performance Laboratory (VTPL) to establish an enhanced data acquisition work process by evaluating existing process and providing automated work process solutions.
* Provided an improved data analysis solution to VTPL by developing C modules that replaced time consuming MATLAB codes.
* Developed MATLAB process manager that could handle multiple MATLAB processes dynamically in parallel.

1997

Brown University, Computer Science Department *Providence, RI*
Research Assistant

Developed a query optimization language compiler for object-oriented databases. Implementation involved construction of a compiler and an execution engine for the query optimization language. The work also included integration of Prolog and C++. (http://www.cs.brandeis.edu/~cokokola)

Employment - professional

May 2010 - August 2010

Research, Google *Mountain View, CA*
Research Intern

Conducted a field study with 11 participants. The study involved interviewing 11 participants twice a week for 8 weeks at participants' homes or workplaces, and analyzing the interview data. This work is published as a full paper at DIS 2012.

June 2004 - May 2006

New Business Planning Department, SeoWon Technology *Seoul, Korea*
Technical Advisor / General Manager

Managed an application development team to develop short-range wireless (Bluetooth) network applications.

Managed a software library development team to develop HSMS/GEM networking libraries for LCD industry.

Managed several hardware development projects including a mechanical cable cutting system and a pipe-jointing machine. The product development team consisted of 2 PLC engineers, 5 hardware engineers and 3 software engineers.

April 2002 - June 2004

Telecommunication R&D Center, SK C&C *Seoul, Korea*
Research Engineer / Software Specialist

Designed and developed database system for global positioning system (GPS). Oracle and a memory database were used to develop the system. The final product is commercially available at SK Telecom, Korea (Platform - UNIX System)

Research work on various networking protocols including ITCP, WTCP, SNOOP, SOCKS, TTCP, SACK, IPSEC, IP Relay and ECN. The work involved preliminary implementation of protocols and field testing for mobile use. (Platform - Linux System)

Developed two commercial wireless network accelerator products based on wireless TCP research work. This involved considerable managerial as well as engineering work for commercializing the products. The final products are now used in SK Telecom network. (Platform - Linux System)

August 1998 - April 2002

R&D Center, EO Technics Co., Ltd. *Seoul, Korea*
System and Network Programmer

Worked as a liaison between EO Technics and American customers.

Designed and developed laser marker controlling software. The final products were installed in various semi-conductor producing companies including Samsung, Hynix, Amkor, Texas Instruments, AMD, Cypress, ASE, Lucent Technologies, National Semiconductor, and Toshiba. (Platform - Windows 2000/XP System)

Designed and developed remote control laser marking software. The final product was exhibited at the Semi-Singapore 1999. (Platform - Windows 2000/XP System)

Designed and developed factory automation processing units using SECS/HSMS/GEM. (Platform - Windows 2000/XP System)

Implemented SEMI SECS/HSMS/GEM standards. (Platform - Windows 2000/XP System)

Designed and developed a product inventory system. The final product was used internally for two years at EO Technics. (Platform - Windows 2000/XP System)

Teaching

Spring 2020

CSCI 400: Senior Seminar
CSCI 493: Senior Project I
CSCI 610: Graduate Seminar I (graduate level)
CSCI 611: Graduate Seminar II (graduate level)
CSCI 605: Master Project (graduate level)

Fall 2019

CSCI 400: Senior Seminar
CSCI 610: Graduate Seminar I (graduate level)
CSCI 611: Graduate Seminar II (graduate level)
CSCI 640: Special Topics in Computer Science - Research Methods in HCI (graduate level)
CSCI 605: Master Project (graduate level)

Spring 2019

CSCI 250/251: Introduction to Programming in Java II with Lab
CSCI 400: Senior Seminar
CSCI 610: Graduate Seminar I (graduate level)
CSCI 611: Graduate Seminar II (graduate level)
CSCI 605: Master Project (graduate level)

Fall 2018

CSCI 400: Senior Seminar
CSCI 610: Graduate Seminar I (graduate level)
CSCI 611: Graduate Seminar II (graduate level)
CSCI 640: Special Topics in Computer Science - Research Methods in HCI (graduate level)
CSCI 601: Thesis II

Spring 2018

CSCI 389: Human Computer Interaction
CSCI 400: Senior Seminar
CSCI 493: Senior Project I (section 01 & 02)
CSCI 610: Graduate Seminar I (graduate level)
CSCI 611: Graduate Seminar II (graduate level)

Fall 2017

CSCI 400: Senior Seminar
CSCI 494: Senior Project II
CSCI 456: Advanced Database Applications (undergraduate level)
CSCI 556: Advanced Database Applications (graduate level)
CSCI 610: Graduate Seminar I (graduate level)
CSCI 611: Graduate Seminar II (graduate level)
CSCI 640: Special Topics in Computer Science - Research Methods in HCI (graduate level)
CSCI 641: Special Topics in Computer Science - (Independent Study Project) (graduate level)

Spring 2017

CSCI 356: Database Systems
CSCI 389: Human Computer Interaction
CSCI 493: Senior Project I
CSCI 640: Special Topics in Computer Science - Research Methods in HCI (graduate level)

Fall 2016

CSCI 494: Senior Project II
CSCI 456: Advanced Database Applications (undergraduate level)
CSCI 556: Advanced Database Applications (graduate level)
CSCI 640: Special Topics in Computer Science - Research Methods in HCI (graduate level)

Spring 2016

CSCI 250/251: Introduction to Programming in Java II with Lab
CSCI 356: Database Systems
CSCI 493: Senior Project I

Fall 2015

CSCI 250/251: Introduction to Programming in Java II with Lab
CSCI 392: Advanced Algorithms and Data Structures
CSCI 456: Advanced Database Applications (undergraduate level)
CSCI 556: Advanced Database Applications (graduate level)

Spring 2015

CSCI 150/151: Introduction to Programming in Java I with Lab
CSCI 493: Senior Project I
CSCI 101-1: Introduction to Computer Science Profession
CSCI 101-2: Introduction to Computer Science Profession

Fall 2014

CSCI 250/251: Introduction to Programming II (in Java) with Lab
CSCI 392: Advanced Algorithms and Data Structures
CSCI 101-1: Introduction to Computer Science Profession
CSCI 101-2: Introduction to Computer Science Profession

Spring 2014

CSCI 150/151: Introduction to Programming in Java I with Lab
CSCI 387: Data Structures
CSCI 101-1: Introduction to Computer Science Profession
CSCI 101-2: Introduction to Computer Science Profession

Fall 2013

CSCI 250/251: Introduction to Programming in C++ II with Lab
CSCI 392: Advanced Algorithms and Data Structures
CSCI 456: Advanced Database Applications (undergraduate level)
CSCI 556: Advanced Database Applications (graduate level)

Publications

Dissertation

D1. **Lee, J.S.** (May 2013)
Micro-coordination: Looking into the details of face-to-face coordination,
Ph.D. Dissertation, Virginia Tech, Blacksburg, VA, USA

Book Chapter

B2. Yglesias. S., Tatar, D., Harrison, S. and **Lee, J.** Balancing Behaviors: A design phenomenology for couples argumentation via different media. In (S. Tettagh, Ed.) Emotions and Technology. Amsterdam: Elsevier.

B1. Tatar, D., Lin, S. and **Lee, J.S.**, **Playground Games and the Dissemination of Control in Computing and Learning**, In (DiGiano, C., Goldman, S. & Chorost, M., Eds.) Educating Learning Technology Designers. Mahwah, New Jersey: Lawrence Erlbaum Associates.

Journal

J1. **Lee, J.S.**, Damevski, K. and Chen, H. (2016) **Exploring Computer Science Students' Learning of Sensor-Driven Mobile App Design: A Case Study**, International Journal of Teaching and Case Studies (IJTCS)

Conference Proceedings

C18. Cowart G., Williamson D., Farhat N., **Lee J.S.** (2019) **Do Humans STILL Have a Monopoly on Creativity or Is Creativity Overrated?** In: Kurosu M. (eds) Human-Computer Interaction. Perspectives on Design. HCII 2019. Lecture Notes in Computer Science, vol 11566. Springer, Cham **[Best Paper Award for the Human-Computer Interaction Thematic Area]**

C17. Clark K., Donzo L., and **Lee J.S.** (2018) **Competitively Versus Cooperatively? An Analysis of the Effect of Gameplay on Human Emotions and Behaviors.** In: Kurosu M. (eds) Human-Computer Interaction. Interaction Technologies. HCII 2018. Lecture Notes in Computer Science, vol 10903. Springer, Cham

C16. **Lee J.S.**, Dickey-Kurdziolek M., and Branham S. (2018) **A Design Provocation for Humble Designers and Empowered Users.** In: Marcus A., Wang W. (eds) Design, User Experience, and Usability: Designing Interactions. DUXU 2018. Lecture Notes in Computer Science, vol 10919. Springer, Cham

C15. **Lee J.S.** (2017) **Processless Design Extended.** In: Marcus A., Wang W. (eds) Design, User Experience, and Usability: Theory, Methodology, and Management. DUXU 2017. Lecture Notes in Computer Science, vol 10288. Springer, Cham

C14. **Lee, J.S.**, Yang, S.W., Munson, A., and Donzo L. (2017) **What People Do on Yik Yak: Analyzing Anonymous Microblogging User Behaviors** In: Meiselwitz G. (eds) Social Computing and Social Media. Applications and Analytics. SCSM 2017. Lecture Notes in Computer Science, vol 10283. Springer, Cham

C13. **Lee, J.S.**, Tatar, D. **Sounds of Silence: Exploring Contributions to Conversations, Non-Responses and the Impact of Mediating Technologies in Triple Space**, In Proceedings of the Conference on Computer Supported Cooperative Work (CSCW), 2014, Baltimore, Maryland, USA **[ACM]**

C12. **Lee, J.S.**, Tatar, D. **Impact of Mediating Technologies on Talk and Emotion: Questioning "Commonsense"**, In Proceedings of the Conference on Collaborative Computing: Networking, Applications and Worksharing (CollaborateCOM), 2013, Austin, Texas, USA [25% Acceptance Rate] **[IEEE]**

C11. **Lee, J.S.** and Tatar, D. **Contributions to Conversations: Extended to Triads in Triple-Space**, Twenty-third Annual Meeting of the Society for Text and Discourse (ST&D), 2013, Valencia, Spain

C10. **Lee, J.S.**, **Triple Space: Technology Mediated Triadic Interaction**, In Proceedings of US-Korea Conference on Science, Technology, and Entrepreneurship (UKC) 2013, New York/New Jersey, USA

C09. **Lee, J.S.**, Tatar, D. **Form Factor Matters**, In Proceedings of the Conference on Computer Supported Cooperative Work (CSCW), 2013, San Antonio, Texas, USA **[ACM]**

C08. **Lee, J.S.**, Tatar, D., and Pedersen, E. **Time, Topic and Trawl: Stories About How We Reach Our Past**, In Proceedings of the Conference on the Design of Interactive Systems (DIS), 2012, Newcastle, UK [20% Acceptance Rate] **[ACM]**

C07. **Lee, J.S.**, Branham, S., Tatar, D., and Harrison, S. **Processlessness: Staying Open to Interactional Possibilities**, In Proceedings of the Conference on the Design of Interactive Systems (DIS), 2012, Newcastle, UK [20% Acceptance Rate] **[ACM]**

C06. **Lee, J.S.** Tatar, D., and Harrison, S. **Micro-coordination: because we did not already learn everything we need to know about working with others in kindergarten**, In Proceedings of the Conference on Computer Supported Cooperative Work (CSCW), 2012, Seattle, WA, USA **[ACM]**

C05. **Lee, J.S.** and Tatar, D. **"Good Enough" Pointing in Pervasive Computing**, In Proceedings of the Conference on the Collaboration Technologies and Systems, CHCI&ID, 2012, Denver, Colorado, USA **[IEEE]**

C04. Kurdziolek, M., Branham, S. and **Lee, J.S.**, **What does it mean to design a nudge?**, Proceedings of the Conference on Gender, Bodies, and Technology (GBT), 2012, Roanoke, VA, USA

C03. **Lee, J.S.**, **Combining Context-Free and Context-Specific Pointing**, In Proceedings of US-Korea Conference on Science, Technology, and Entrepreneurship (UKC) 2011, Park City, Utah, USA.

C02. **Lee, J.S.**, **The Nature of Coordination in a Co-dependent Situation: Activism, Participatory Decision-making, and Technological Citizenship in the Small**, Proceedings of the Conference on Gender, Bodies, and Technology (GBT), 2010, Roanoke, VA, USA

C01. Tatar, D., **Lee, J.S.** and Alaloula **Playground Games: A design strategy for supporting and understanding coordinated activity**, In Proceedings of the Conference on the Design of Interactive Systems (DIS 2008), Capetown, South Africa [33% Acceptance Rate] **[ACM]**

Workshop & Poster

W3. Huston E.K., and **Lee J.S.** (2018) Effects of Video Games on HBCU Students. In: Stephanidis C. (eds) HCI International 2018 – Posters' Extended Abstracts. HCI 2018. Communications in Computer and Information Science, vol 852. Springer, Cham

W2. **Lee, J.S.**, Tatar, D. and Harrison, S. **Triple Space Framework: Investigatory Framework for F2F Interactions**, CSCW 2015 Workshop on Supporting "Local Remote" Collaboration, In Proceedings of the Conference on Computer Supported Collaborative Work (CSCW), 2015, Vancouver, Canada

W1. Janelle Williams, and **Lee, J.S. The Effects of Mind Reading, Task Type, and Materiality of Mediating Technology Upon Group Interactions**, Capital Region Celebration of Women in Computing (CAPWIC) 2015, Virginia, USA **[2nd Place in the Graduate Poster Contest]**

Other

O1. **Lee, J.S.**, **Micro-Coordination: Triple Space Offline Social Interactions**, HCIC 2012 Boaster Paper, Pacific Grove, CA, USA

Thesis Advising

September 2018 ~ August 2019

Gregory Cowart, M.S. (Master's Thesis)

* Publication: Cowart G., Williamson D., Farhat N., Lee J.S. (2019) Do Humans STILL Have a Monopoly on Creativity or Is Creativity Overrated? In: Kurosu M. (eds) Human-Computer Interaction. Perspectives on Design. HCII 2019. Lecture Notes in Computer Science, vol 11566. Springer, Cham [Best Paper Award for the Human-Computer Interaction Thematic Area]

September 2016 ~ May 2018

Kenneth Clark, M.S. (Master's Thesis) / Dalhgren Naval Base

* Publication: Clark K., Donzo L., and Lee J.S. (2018) Competitively Versus Cooperatively? An Analysis of the Effect of Gameplay on Human Emotions and Behaviors. In: Kurosu M. (eds) Human-Computer Interaction. Interaction Technologies. HCI 2018. Lecture Notes in Computer Science, vol 10903. Springer, Cham

September 2016 ~ May 2018

Erick Huston, M.S. (Master's Thesis) / Dalhgren Naval Base

* Publication: Huston E.K., and Lee J.S. (2018) Effects of Video Games on HBCU Students. In: Stephanidis C. (eds) HCI International 2018 – Posters' Extended Abstracts. HCI 2018. Communications in Computer and Information Science, vol 852. Springer, Cham

September 2014 ~

Janelle C. Williams (Master's Thesis) / Federal Reserve Bank

Exhibitions & Demos

March 2011

Tuple game demo sessions at the Department of Computer Science Open House, Virginia Tech

February 2009

Tuple game demo sessions at Virginia Tech Kids' Tech University Event (Feb. 2, 2009)

April 2007

Tuple game demo sessions at Virginia Tech Women in Computing Day Event (April. 13, 2007)

1999, 2000, 2001

Product Exhibition at SEMICON Singapore & SEMICON Korea

Invited Talks & Presentations

T17. — 20 July 2018

A Design Provocation for Humble Designers and Empowered Users
Conference Presentation: HCII 2018, Las Vegas, NV, USA

T16. — 09 August 2017

HCI Research at VSU
Invited Talk: Apple HBCU Summit 2017, Cupertino, CA, USA

T15. — 13 July 2017

Processless Design Extended
Conference Presentation: HCII 2017, Vancouver, Canada

T14. — 13 July 2017

What People Do on Yik Yak: Analyzing Anonymous Microblogging User Behaviors
Conference Presentation: HCII 2017, Vancouver, Canada

T13. — 30 January 2015

Triple Space Framework
Invited Talk at New Jersey Institute of Technology, New Jersey, USA

T12. — 19 February 2014

Sounds of Silence: Exploring Contributions to Conversations, Non-Responses and the Impact of Mediating Technologies in Triple Space
Conference Presentation: CSCW 2014, Baltimore, Maryland, USA

T11. — 23 October 2013

Impact of Mediating Technologies on Talk and Emotion: Questioning "Commonsense"
Conference Presentation: CollaborateCOM 2013, Austin, Texas, USA

T10. — 09 August 2013

Triple Space: Technology Mediated Triadic Interaction

Conference Presentation: US-Korea Conference on Science, Technology, and Entrepreneurship (UKC) 2013, New York/ New Jersey, USA

T09. — 17 July 2013

Contributions to Conversations: Extended to Triads in Triple-Space
Conference Presentation: Annual Meeting of the Society for Text and Discourse (ST&D), 2013, Valencia, Spain

T08. — 27 February 2013

Form Factor Matters: Isolation in Triple Space
Conference Presentation: CSCW 2013, San Antonio, Texas, USA

T07. — 13 June 2012

T**ime, Topic and Trawl: Stories About How We Reach Our Past**
Conference Presentation: DIS 2012, Newcastle, UK

T06. — 13 June 2012

Processlessness: Staying Open to Interactional Possibilities
Conference Presentation: DIS 2012, Newcastle, UK

T05. — 23 May 2012

"Good Enough" pointing in pervasive computing
Conference Presentation: CTS 2012, Denver, Colorado, USA

T04. — 21 May 2012

Micro-Coordination: Let's Talk About Not-Talking
Invited Talk at Colorado University, Boulder, Colorado, USA

T03. — 28 April 2012

What does it mean to design a "nudge"?
Conference Presentation: Gender, Bodies and Technology (GBT 2012), Roanoke, VA, USA
Co-Presented with *Meg Dickey-Kurdziolek* and *Stacy Branham*

T02. — 14 February 2012

Let's Talk About Not-Talking
Micro-coordination: Because We did not Already Learn Everything We Need to Know about Working with Others in Kindergarten
Conference Presentation: CSCW 2012, Seattle, Washington, USA

T01. — 24 April 2010

The Nature of Coordination in a Co-dependent Situation: Activism, Participatory Decision-making, and Technological Citizenship in the Small
Conference Presentation: Gender, Bodies and Technology (GBT 2010), Roanoke, VA, USA

Professional Activities

Volunteer Teacher

Teaching a robotics class at Grace and Hope Academy, Petersburg (2018.09 ~)

Session Chair

International Conference on Social Computing and Social Media (2018, 2019)

Associate Chair

ACM SIGCHI Conference on Designing Interactive Systems (DIS) 2016

Reviewer

IEEE International Symposium on Multimedia 2015
International Conference on Interaction Design and Children (IDC) 2012, 2013
ACM CHI Conference on Human Factors in Computing Systems (CHI) 2013, 2014, 2015
Computer Supported Cooperative Work (CSCW), the Journal of Collaborative Computing and Work Practices 2014

S.V.

ACM Conference on Human Factors in Computing Systems (CHI) 2010

Volunteer

Virginia Tech Woman in Computing Day Event 2007, 2009, 2012, 2013

Member

Association for Computing Machinery (ACM)
Institute of Electrical and Electronics Engineers(IEEE)
Society for Text & Discourse (ST&D)
European Alliance for Innovation (EAI)
Korean-American Scientists and Engineers Association (KSEA)
Upsilon Pi Epsilon

Skill Sets

Computer Language

C/C++, Java, Python, R, Swift, Ruby on Rails, Prolog, Sed/Awk, Tcl/Tk, Lisp, ML, Basic, Pascal, Fortran

Tools

JMP, SPSS, Visual Studio, Xcode, Eclipse, Rational Rose, Borland Together, Photoshop, Final Cut Pro, AfterEffect

Research Method & Methodology

Ethnography, Ethnomethodology, Design Ethnography, Contextual Inquiry, Conversational Analysis, Behavioral Analysis, Qualitative Analysis, Quantitative Analysis, Semi-Structured Interview

Language

Korean, English