

# Bongshin Lee

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## RESEARCH INTERESTS

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### Information Visualization and Visual Analytics

- Inclusive Data Visualization
- Multimodal Interaction for Data Visualization
- Mobile Data Visualization
- Personal Data Visualization
- Data-Driven Storytelling

### Human-Computer Interaction

- Self-monitoring
- Mobile User Interfaces and Interaction
- User Interfaces for Healthcare
- Interactive Machine Learning

## EDUCATION

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May 06            **Ph.D.**, Computer Science, University of Maryland, College Park, MD

Dec. 02            **M.S.**, Computer Science, University of Maryland, College Park, MD

Feb. 98            **M.S.**, Computer Science, Yonsei University, Seoul, Korea

Feb. 96            **B.S.**, Computer Science, Yonsei University, Seoul, Korea  
*Magna Cum Laude*

## WORK EXPERIENCE

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Jul. 06 – Present    **Microsoft Research, WA**  
Senior Principal Researcher (Sep. 2019 – Present)  
Principal Researcher (Jul. 2019 – Aug. 2019; due to a company-wide title change)  
Senior Researcher (Sep. 2015 – Jun. 2019)  
Researcher (Jul. 2006 – Aug. 2015)

- Nov. 14 – Aug. 15 **Seoul National University**, Seoul, Korea  
Adjunct Professor  
Department of Computer Science and Engineering, College of Engineering
- Jun. 02 – May 06 **University of Maryland, College Park**, MD  
Graduate Research Assistant  
Human-Computer Interaction Lab (HCIL), Computer Science Department  
Advisor: Benjamin B. Bederson
- May 04 – Aug. 04 **Microsoft Research**, WA  
Research Intern, Visualization and Interaction Research (VIBE) Group  
Mentors: Mary Czerwinski and George Robertson
- Jun. 03 – Aug. 03 **Microsoft Research**, WA  
Research Intern, Visualization and Interaction Research (VIBE) Group  
Mentor: Patrick Baudisch
- Jun. 01 – Aug. 01 **Telcordia Technologies, Inc.**, NJ  
Summer Intern, Information Services Research Group  
Mentor: John R. Wullert II
- Nov. 99 – Jul. 00 **Inzoo Network**, Seoul, Korea  
Software Engineer
- Mar. 98 – May 99 **Datawave System, Inc.**, Seoul, Korea  
Software Engineer
- Mar. 96 – Feb. 98 **Yonsei University**, Seoul, Korea  
Graduate Research Assistant  
Multimedia/Graphics Lab, Computer Science Department  
Advisor: Yoon-Chul Choy

## **TEACHING EXPERIENCE**

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- Oct. 2021 Instructor, VIS 2021 Tutorial  
IEEE VIS Full Paper Review Model and Process: Becoming a (Better) Program  
Committee Member  
(Co-taught with Dr. Petra Isenberg from Inria, and Dr. Anastasia Bezerianos from  
Université Paris-Saclay)
- Oct. 2019 Instructor, VIS 2019 Tutorial  
Beyond Paper Types: How to Evaluate and Communicate VIS Research Contributions  
(Co-taught with Dr. Petra Isenberg from Inria, Prof. John Stasko from Georgia Institute  
of Technology, Prof. Daniel Weiskopf from University of Stuttgart, and Prof. Ross  
Maciejewski from Arizona State University)
- Sep. 2019 Instructor, UbiComp 2019 Tutorial  
**Data Visualization** for UbiComp and ISWC Research

(Co-taught with Prof. Eun Kyoung Choe from University of Maryland, College Park, and Dr. Petra Isenberg from Inria)

- Winter 2016      Instructor, Seoul National University, Seoul, Korea  
Foundations in **Human-Computer Interaction**  
(Co-taught with Prof. Eun Kyoung Choe from Pennsylvania State University)
- Winter 2015      Instructor, Yonsei University, Seoul, Korea  
**Human-Computer Interaction** and Design Thinking  
(Co-taught with Prof. Eun Kyoung Choe from Pennsylvania State University)
- Spring 2007      Instructor, Microsoft, Redmond, WA  
Advanced **Korean**
- Aug. 00 – May 02    Teaching Assistant, University of Maryland, College Park, MD  
**C++ Programming, Human-Computer Interaction, and Developing User Interfaces**  
[\[Teaching Excellence Award for Graduate Teaching Assistant\]](#)
- Jun. 00            Instructor, Samsung Cutting-edge Technology Research Center, Kyunggi, Korea  
**MFC Programming and ATL/COM Programming**
- Sep. 96 – Aug. 97    Teaching Assistant, Yonsei University, Seoul, Korea  
**C++ Programming**
- May 97            Instructor, Samsung Cutting-edge Technology Research Center, Kyunggi, Korea  
**MFC Programming**
- Jun. 96            Instructor, Samsung Information Technology Academy, Seoul, Korea  
**Visual Basic Programming**

## **AWARDS, HONORS, AND RECOGNITIONS**

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- Oct. 2023          VIS 2023 Best Paper Honorable Mention Award (for Data Formulator)  
IEEE VIS
- Nov. 2022          ISS 2022 Honorable Mention Award (for NoteWordy)  
ACM ISS
- Oct. 2021          VIS 2021 Certificate of Appreciation (for Outstanding Service to the VIS Conference)  
IEEE VIS
- Oct. 2021          ASSETS 2021 Best Paper Nominee (for High-Quality Alt Text Authoring)  
ACM SIGACCESS
- May 2021          CHI 2021 Honorable Mention Paper (for Data@Hand)  
ACM SIGCHI
- May 2021          CHI 2021 Honorable Mention Paper (for CAST)  
ACM SIGCHI

Oct. 2020	IEEE Visualization Academy IEEE VGTC
Oct. 2020	InfoVis 2020 Best Paper Honorable Mention Award (for Data Visceralization) IEEE InfoVis
Apr. 2020	CHI 2020 Honorable Mention Paper (for InChorus) ACM SIGCHI
Nov. 2019	AMIA 2019 Distinguished Paper Nominee (for Persuasive Data Videos) AMIA
May 2019	CHI 2019 Honorable Mention Paper (for ActiveInk) ACM SIGCHI
Dec. 2018	Shortlist (for Charticulator) KANTAR Information is Beautiful Awards
Oct. 2018	2008: 10 Year Test of Time Award IEEE InfoVis
Oct. 2018	InfoVis 2018 Best Paper Honorable Mention Award (for Charticulator) IEEE InfoVis
Jun. 2018	2017 Best Associate Editor Award IEEE TVCG
Jun. 2017	IDC 2017 Best Paper Nominee (for Plan & Play) ACM IDC
Jun. 2016	Distinguished Contribution (for ModelTracker) Spring 2016 MLADS, Microsoft, Redmond, WA
Apr. 2015	PacificVis 2015 Best Paper Award (for SketchInsight) IEEE PacificVis
Apr. 2014	CHI 2014 Honorable Mention Paper (for Understanding Quantified-Selfers) ACM SIGCHI
Nov. 2013	AMIA 2013 Student Paper Competition Finalist (for Performance Feedback) AMIA
Nov. 2012	ITS 2012 Best Paper Nominee (for TouchWave) ACM ITS
May 2011	CHI 2011 Honorable Mention Paper (for CueT) ACM SIGCHI
May 2011	CHI 2011 Honorable Mention Paper (for Copy-Aware Computing Ecosystem) ACM SIGCHI

- Jun. 2010 Golden Volcano Award, Engineering Forum Pavilion (for AllocRay)  
Microsoft, Redmond, WA
- Mar. 2010 Thought Leadership Award, Productivity Science Fair  
(for Copy-Aware Computing Ecosystem)  
Microsoft, Redmond, WA
- Apr. 2008 Gold Star Bonus Award  
Microsoft, Redmond, WA
- May 2005 Department Award  
(in recognition of the First Place Tie IEEE InfoVis Contest 2004)  
Computer Science Department, University of Maryland, College Park, MD
- Dec. 2004 Finalist, Microsoft Research PhD Fellowship 2005-2006  
Microsoft Research, Redmond, WA
- Aug. 2004 1<sup>st</sup> place in IEEE InfoVis Contest 2004  
IEEE InfoVis
- May 2001 Teaching Excellence Award for Graduate Teaching Assistant  
Computer Science Department, University of Maryland, College Park, MD
- Mar. 96 – Feb. 98 Industry Academic Liaison Scholarship  
LG Electronics Inc., Seoul, Korea
- Nov. 94 3<sup>rd</sup> place in Samsung Myungin-jun, Software Competition  
Samsung Electronics Co. Ltd., Seoul, Korea
- Sep. 94, Sep. 93 Top Student Prize  
Computer Science Department, Yonsei University, Seoul, Korea
- Mar. 93 – Feb. 96 Jongha Scholarship  
Jongha Scholarship Foundation, Seoul, Korea
- Sep. 92 Undergraduate Scholarship  
Computer Science Department, Yonsei University, Seoul, Korea

## **PUBLICATIONS**

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### Books edited and Book chapters

- Lee, B., Dachselt, R., Isenberg, P., Choe, E.K. (2021) **Mobile Data Visualization**. CRC Press.
- Langner, R., Besançon, L., Collins, C., Dwyer, T., Isenberg, P., Isenberg, T., Lee, B., Perin, C., Tominski, C. (2021) **Introduction to Mobile Data Visualization**, *Mobile Data Visualization*, CRC Press, 1–32.
- Brehmer, M., Lee, B., Stasko, J., Tominski, C. (2021) **Interacting with Visualization on Mobile Devices**, *Mobile Data Visualization*, CRC Press, 67–110.

Isenberg, P., Lee, B., Qu, H., Cordeil, M. (2018) **Immersive Visual Data Stories**, *Immersive Analytics*, Springer, 165–184.

Lee, B., Dwyer, T., Baur, D., Veira, X.G. (2018) **Watches to Augmented Reality: Devices and Gadgets for Data-Driven Storytelling**, *Data-Driven Storytelling*, CRC Press, 135–149.

Stolper, C.D., Lee, B., Henry Riche, N., Stasko, J. (2018) **Data-Driven Storytelling Techniques: Analysis of a Curated Collection of Visual Stories**, *Data-Driven Storytelling*, CRC Press, 85–105.

Chevalier, F., Tory, M., Lee, B., Dörk, M., van Wijk, J., Santucci, G., Hullman, J. (2018) **From Analysis to Communication: Supporting the Lifecycle of a Story**, *Data-Driven Storytelling*, CRC Press, 151–183.

Borgo, R., Lee, B., Bach, B., Fabrikant, S., Jianu, R., Kerren, A., Kobourov, S., McGee, F., Micallef, L., von Landesberger, T., Ballweg, K., Diehl, S., Simonetto, P., Zhou, M. (2017) **Crowdsourcing for Information Visualization: Promises and Pitfalls**, *Evaluation in the Crowd. Crowdsourcing and Human-Centered Experiments: Dagstuhl Seminar 15481*, Springer, 109–155.

Robertson, G.G., Czerwinski, M., Fisher, D., Lee, B. (2009) **Selected Human Factors Issues in Information Visualization**, *Reviews of Human Factors and Ergonomics, Volume 5*, 41–81.

### Peer-reviewed journal papers

Wang, C., Thompson, J.R., Lee, B. (2024) **Data Formulator: AI-powered Concept-driven Visualization Authoring**, *IEEE TVCG (VIS 2023)*, in press. [\[Best Paper Honorable Mention Award\]](#)

Chen, C., Lee, B., Wang, Y., Chang, Y., Liu, Z. (2024) **Mystique: Deconstructing SVG Charts for Layout Reuse**, *IEEE TVCG (VIS 2023)*, in press.

Lee, J.G.W., Lee, K., Lee, B., Choi, S., Seo, J., Choe, E.K. (2023) **Personal Health Data Tracking by Blind and Low-Vision People: A Survey Study**, *JMIR*, Vol. 25, e43917. PMID: 37140967; PMCID: PMC10196896.

Rey, B., Lee, B., Choe, E.K., Irani, P. (2023) **Investigating In-Situ Personal Health Data Queries on Smartwatches**, *IMWUT (UbiComp 2023)*, 6 (4), Article No. 179.

Han, C., Jo, J., Li, A., Lee, B., Deussen, O., Wang, Y. (2023) **SizePairs: Achieving Stable and Balanced Temporal Treemaps using Hierarchical Size-based Paring**, *IEEE TVCG (VIS 2022)*, Vol. 29, No. 1, pp.193-202.

Cabrera, Á.A. Ribeiro, M.T., Lee, B., DeLine, R., Perer, A., Drucker, S.M. (2022) **What Did My AI Learn? How Data Scientists Make Sense of Model Behavior**, *ACM ToCHI*, 30 (1), Article No. 1.

Luo, Y., Lee, B., Kim, Y.-H., Choe, E.K. (2022) **NoteWordy: Investigating Touch and Speech Input on Smartphones for Personal Data Capture**, *PACM HCI (ISS 2022)*, 6, 568–591. [\[Honorable Mention Award\]](#)

Cheng, H., Wang, J., Wang, Y., Lee, B., Zhang, H., Zhang, D. (2022) **Investigating the Role and Interplay of Narrations and Animations in Data Videos**, *Computer Graphics Forum (EuroVis 2022)*, 41 (3), 527–539.

- Lee, B., Srinivasan, A., Isenberg, P., Stasko, J. (2021) **Post-WIMP Interaction for Information Visualization**, *Foundation and Trends in Human-Computer Interaction*, 14 (1), 1–95.
- Marriott, K., Lee, B., Butler, M., Cutrell, E., Ellis, K., Goncu, C., Hearst, M., McCoy, K., Szafir, D.A. (2021) **Inclusive Data Visualization for People with Disabilities: A Call to Action**, *Interactions*, 28 (3), 47–51.
- Lee, B., Brown, D., Lee, B., Hurter, C., Drucker, S.M., Dwyer, T. (2021) **Data Visceralization: Enabling Deeper Understanding of Data Using Virtual Reality**, *IEEE TVCG (InfoVis 2020)*, 27 (2), 1095–1105. [\[Best Paper Honorable Mention Award\]](#)
- Wu, A., Tong, W., Dwyer, T., Lee, B., Isenberg, P., Qu, H. (2021) **MobileVisFixer: Tailoring Web Visualizations for Mobile Phones Leveraging an Explainable Reinforcement Learning Framework**, *IEEE TVCG (InfoVis 2020)*, 27 (2), 464–474.
- Srinivasan, A., Lee, B., Stasko, J. (2021) **Interweaving Multimodal Interaction with Flexible Unit Visualizations for Data Exploration**, *IEEE TVCG*, 27 (8), 3519–3533.
- Jo, J., L’Yi, S., Lee, B., Seo, J. (2021) **ProReveal: Progressive Visual Analytics with Safeguards**, *IEEE TVCG*, 27 (7), 3109–3122.
- Ge, T., Zhao, Y., Lee, B., Ren, D., Chen, B., Wang, Y. (2020) **Canis: A High-level Language for Data-Driven Chart Animations**, *Computer Graphics Forum (EuroVis 2020)*, 39 (3), 607–617.
- Eichmann, P., Edge, D., Evans, N., Lee, B., Brehmer, M., White, C. (2020) **Orchard: Exploring Multivariate Heterogeneous Networks on Mobile Phones**, *Computer Graphics Forum (EuroVis 2020)*, 39 (3), 115–126.
- Lee, B., Choe, E.K., Isenberg, P., Marriott, K., Stasko, J. (2020) **Reaching Broader Audiences with Data Visualization**, *IEEE CG&A*, 40, 82–90. (Visualization Viewpoints)
- Choe, E.K., Lee, B. (2020) **Toward Supporting Personalized Tracking Experience in Healthcare**, *ACM Interactions*, 27 (1), 84–87. (Health Matters Forum)
- Satyanarayan, A., Lee, B., Ren, D., Heer, J., Stasko, J., Thompson, J., Brehmer, M., Liu, Z. (2020) **Critical Reflections on Visualization Authoring Systems**, *IEEE TVCG (InfoVis 2019)*, 26 (1), 461–471.
- Brehmer, M., Lee, B., Isenberg, P., Choe, E.K. (2020) **A Comparative Evaluation of Animation and Small Multiples for Trend Visualization on Mobile Phones**, *IEEE TVCG (InfoVis 2019)*, 26 (1), 364–374.
- Wang, Y., Chu, X., Zhang, K., Bao, C., Li, X., Zhang, J., Fu, C.-W., Hurter, C., Deussen, O., Lee, B. (2020) **ShapeWordle: Tailoring Wordles using Shape-aware Archimedean Spirals**, *IEEE TVCG (InfoVis 2019)*, 26 (1), 991–1000.
- Lee, B., Isaacs, K., Szafir, D.A., Marai, G.E., Turkay, C., Tory, M., Carpendale, S., Endert, A. (2019) **Broadening Intellectual Diversity in Visualization Research Papers**, *IEEE CG&A*, 39 (4), 78–85. (Visualization Viewpoints)
- Kim, Y., Lee, B., Choe, E.K. (2019) **Investigating Data Accessibility of Personal Health Apps**, *JAMIA*, 26 (5), 412–419. PMID: 30861531; PMCID: PMC6433179.

- Ren, D., Lee, B., Brehmer, M. (2019) **Charticulator: Interactive Construction of Bespoke Chart Layouts**, *IEEE TVCG (InfoVis 2018)*, 25 (1), 789–799. [\[Best Paper Honorable Mention Award\]](#)
- Brehmer, M., Lee, B., Isenberg, P., Choe, E.K. (2019) **Visualizing Ranges over Time on Mobile Phones: A Task-Based Crowdsourced Evaluation**, *IEEE TVCG (InfoVis 2018)*, 25 (1), 619–629.
- Blascheck, T., Besançon, L., Bezerianos, A., Lee, B., Isenberg, P. (2019) **Glanceable Visualization: A Study of Perception Time for Data Comparison Tasks on Smartwatches**, *IEEE TVCG (InfoVis 2018)*, 25 (1), 630–640.
- Feustel, C., Aggarwal, S., Lee, B., Wilcox, L. (2018) **People Like Me: Designing for Reflection on Aggregate Cohort Data in Personal Informatics Systems**, *PACM IMWUT (UbiComp 2018)*, 2 (3), 107:1–107:21.
- Daskalova, N., Lee, B., Huang, J., Ni, C., Lundin, J. (2018) **Investigating the Effectiveness of Cohort-Based Sleep Recommendations**, *PACM IMWUT (UbiComp 2018)*, 2 (3), 101:1–101:19.
- Choe, E.K., Lee, B., Andersen, T.O., Wilcox, L., Fitzpatrick, G. (2018) **Harnessing the Power of Patient-Generated Data**, *IEEE Pervasive Computing*, 17 (2), 50–56. (Conferences)
- Borgo, R., Micallef, L., Bach, B., McGee, F., Lee, B. (2018) **Information Visualization Evaluation using Crowdsourcing**, *Computer Graphics Forum (EuroVis 2018 STAR)*, 37 (3), 573–595.
- Kim, Y.-H., Jeon, J.H., Lee, B., Choe, E.K., Seo, J. (2017) **OmniTrack: A Flexible Self-Tracking Approach Leveraging Semi-Automated Tracking**, *PACM IMWUT (UbiComp 2017)*, 1 (3), 67:1–67:28.
- Ren, D., Lee, B., Höllerer, T. (2017) **Stardust: Accessible and Transparent GPU Support for Information Visualization Rendering**, *Computer Graphics Forum (EuroVis 2017)*, 36 (3), 179–188.
- McKenna, S., Henry Riche, N., Lee, B., Boy, J., Meyer, M. (2017) **Visual Narrative Flow: Exploring Factors Shaping Data Visualization Story Reading Experiences**, *Computer Graphics Forum (EuroVis 2017)*, 36 (3), 377–387.
- Brehmer, M., Lee, B., Bach, B., Henry Riche, N., Munzner, T. (2017) **Timelines Revisited: A Design Space and Considerations for Expressive Storytelling**, *IEEE TVCG*, 23 (9), 2151–2164.
- Thudt, A., Lee, B., Choe, E.K., Carpendale, S. (2017) **Expanding Research Methods for a Realistic Understanding of Personal Visualization**, *IEEE CG&A*, 37 (2), 12–18. (Visualization Viewpoints)
- Choe, E.K., Abdullah, S., Rabbi, M., Thomaz, E., Epstein, D.A., Cordeiro, F., Kay, M., Abowd, G.D., Choudhury, T., Fogarty, J., Lee, B., Matthews, M., Kientz, J.A. (2017) **Semi-Automated Tracking: A Balanced Approach for Self-Monitoring Applications**, *IEEE Pervasive Computing*, 16 (1), 74–84.
- Ren, D., Amershi, S., Lee, B., Suh, J., Williams, J.D. (2017) **Squares: Supporting Interactive Performance Analysis for Multiclass Classifiers**, *IEEE TVCG (VAST 2016)*, 23 (1), 61–70.
- Amini, F., Henry Riche, N., Lee, B., Monroy-Hernández, A., Irani, P. (2017) **Authoring Data-Driven Videos with DataClips**, *IEEE TVCG (InfoVis 2016)*, 23 (1), 501–510.
- Edge, D., Yang, X., Kotturi, Y., Wang, S., Feng, D., Lee, B., Drucker, S. (2016) **SlideSpace: Heuristic Design of a Hybrid Presentation Medium**, *ACM ToCHI*, 23 (3), 16:1–16:30.



- Jo, J., Lee, B., Seo, J. (2015) **WordlePlus: Expanding Wordle's Use through Natural Interaction and Animation**, *IEEE CG&A Special Issue on Human-Centered Data Visualization*, 35 (6), 20–28.
- Lee, B., Henry Riche, N., Isenberg, P., Carpendale, S. (2015) **More than Telling a Story: Transforming Data into Visually Shared Stories**, *IEEE CG&A*, 35 (5), 84–90. (Visualization Viewpoints) [[Noted in the Magazine Roundup section of the \*IEEE ComputingEdge\*](#)]
- Choe, E.K., Lee, B., schraefel, m.c. (2015) **Characterizing Visualization Insights from Quantified-Selfers' Personal Data Presentations**, *IEEE CG&A Special Issue on Personal Visualization and Visual Analytics*, 35 (4), 28–37.
- Morris, M.R., Danielescu, A., Drucker, S., Fisher, D., Lee, B., schraefel, m.c., Wobbrock, J.O. (2014) **Stuck in a Rut: Reducing Legacy Bias in Gesture Elicitation Studies**, *ACM Interactions*, 21 (3), 40–45.
- Lee, B., Kazi, R.H., Smith, G. (2013) **SketchStory: Telling More Engaging Stories with Data through Freeform Sketching**, *IEEE TVCG (InfoVis 2013)*, 19 (12), 2416–2425.
- Hullman, J., Drucker, S., Henry Riche, N., Lee, B., Fisher, D., Adar, E. (2013) **A Deeper Understanding of Sequence in Narrative Visualization**, *IEEE TVCG (InfoVis 2013)*, 19 (12), 2406–2415.
- Isenberg, P., Isenberg, T., Hesselmann, T., Lee, B., von Zadow, U., Tang, A. (2013) **Data Visualization on Interactive Surfaces: A Research Agenda from the DEXIS Workshop**, *IEEE CG&A*, 33 (2), 16–24. (Visualization Viewpoints)
- Lee, B., Isenberg, P., Henry Riche, N., Carpendale, S. (2012) **Beyond Mouse and Keyboard: Expanding Design Considerations for Information Visualization Interactions**, *IEEE TVCG (InfoVis 2012)*, 18 (12), 2689–2698.
- Walny, J., Lee, B., Johns, P., Henry Riche, N., Carpendale, S. (2012) **Understanding Pen and Touch Interaction for Data Exploration on Interactive Whiteboards**, *IEEE TVCG (InfoVis 2012)*, 18 (12), 2779–2788.
- Kandel, S., Heer, J., Plaisant, C., van Ham, F., Henry Riche, N., Weaver, C., Lee, B., Brodbeck, D., Buono, P. (2011) **Research Directions for Data Wrangling: Visualizations and Transformations for Usable and Credible Data**, *Information Visualization*, 10, 271–288.
- Lee, B., Henry Riche, N., Karlson, A.K., Carpendale, S. (2010) **SparkClouds: Visualizing Trends in Tag Clouds**, *IEEE TVCG (InfoVis 2010)*, 16 (6), 1182–1189.
- Koh, K., Lee, B., Kim, B., Seo, J. (2010) **ManiWordle: Providing Flexible Control over Wordle**, *IEEE TVCG (InfoVis 2010)*, 16 (6), 1190–1197.
- Henry Riche, N., Lee, B., Plaisant, C. (2010) **Understanding Interactive Legends: A Comparative Evaluation with Standard Widgets**, *Computer Graphics Forum (EuroVis 2010)*, 29 (3), 1193–1202.
- Skeels, M., Lee, B., Smith, G., Robertson, G.G. (2010) **Revealing Uncertainty for Information Visualization**, *Information Visualization*, 9 (1), 70–81. (Extended version of the AVI paper)
- Dwyer, T., Lee, B., Fisher, D., Quinn, K.I., Isenberg, P., Robertson, G., North, C. (2009) **A Comparison of User-Generated and Automatic Graph Layouts**, *IEEE TVCG (InfoVis 2009)*, 15 (6), 961–968.

Kim, B., Lee, B., Knoblach, S., Hoffman, E., Seo, J. (2009) **GeneShelf: A Web-based Visual Interface for Large Gene Expression Time-Series Data Repositories**, *IEEE TVCG (InfoVis 2009)*, 15 (6), 905–912.

Lee, B., Nachmanson, L., Robertson, G., Carlson, J.M., Heckerman, D. (2009) **PhyloDet: A Scalable Visualization Tool for Mapping Multiple Traits to Large Evolutionary Trees**, *Bioinformatics*, 25 (19), 2611–2612. (Applications Note)

Robertson, G.G., Fernandez, R., Fisher, D., Lee, B., Stasko, J. (2008) **Effectiveness of Animation in Trend Visualization**, *IEEE TVCG (InfoVis 2008)*, 14 (6), 1325–1332. [\[2008: 10 Year Test of Time Award\]](#)

Kuntzen, T., Timm, J., Berical, A., Lennon, N., Berlin, A.M., Young, S.K., Lee, B., Heckerman, D., Carlson, J., Reyor, L.L., Kleyman, M., McMahon, C.M., Birch, C., zur Wiesch, J.S., Ledlie, T., Koehrsen, M., Kodira, C., Roberts, A.D., Lauer, G.M., Rosen, H.R., Bihl, F., Cerny, A., Spengler, U., Liu, Z., Kim, A.Y., Xing, Y., Schneidewind, A., Madey, M.A., Fleckenstein, J.F., Park, V.M., Galagan, J.E., Nusbaum, C., Walker, B.D., Lake-Bakaar, G.V., Daar, E.S., Jacobson, I.M., Gomperts, E.D., Edlin, B.R., Donfield, S.M., Chung, R.T., Talal, A.H., Marion, T., Birren, B.W., Henn, M.R., Allen, T.M. (2008) **Naturally Occurring Dominant Resistance Mutations to HCV Protease and Polymerase Inhibitors in Treatment-naïve Patients**, *Hepatology*, 48 (6), 1769–1778.

Lee, B., Brown, K., Hathout, Y., Seo, J. (2008) **GOTreePlus: An Interactive Gene Ontology Browser**, *Bioinformatics*, 24 (7), 1026–1028. (Applications Note)

Lee, B., Robertson, G.G., Czerwinski, M., Parr, C.S. (2007) **CandidTree: Visualizing Structural Uncertainty in Similar Hierarchies**, *Information Visualization*, 6, 233–246. (Extended version of the Interact paper)

Tan, D.S., Smith, G., Lee, B., Robertson, G.G. (2007) **AdaptiviTree: Adaptive Tree Visualization for Tournament-Style Brackets**, *IEEE TVCG (InfoVis 2007)*, 13 (6), 1113–1120.

Kim, B., Lee, B., Seo, J. (2007) **Visualizing Set Concordance with Permutation Matrix and Fan Diagram**, *Interacting with Computers*, 19 (5-6), 630–643.

Parr, C.S., Lee, B., Bederson, B.B. (2007) **EcoLens: Integration and Interactive Visualization of Ecological Datasets**, *Ecological Informatics*, 2 (1), 61–69.

Kang, H., Plaisant, C., Lee, B., Bederson, B.B. (2007) **NetLens: Iterative Exploration of Content-Actor Network Data**, *Information Visualization Special Issue on Visual Analytics*, 6, 18–31. (Extended version of the VAST paper)

Lee, B., Parr, C.S., Plaisant, C., Bederson, B.B., Veksler, V.D., Gray, W.D., Kotfila, C. (2006) **TreePlus: Interactive Exploration of Networks with Enhanced Tree Layouts**, *IEEE TVCG Special Issue on Visual Analytics*, 12 (6), 1414–1426.

Herrnson, P.S., Bederson, B.B., Lee, B., Francia, P.L., Sherman, R.M., Conrad, F.G., Traugott, M., Niemi, R.G. (2005) **Early Appraisals of Electronic Voting**, *Social Science Computer Review*, 23 (3), 274–292.

Parr, C.S., Lee, B., Campbell, D., Bederson, B.B. (2004) **Visualizations for Taxonomic and Phylogenetic Trees**, *Bioinformatics*, 20 (17), 2997–3004.

Lee, B., Lee, K.-H., Ko, S.-K., Choy, Y.-C. (1999) **Design and Implementation of Indexing and Query Languages for an Efficient Retrieval of SGML Documents**, *J. KIPS*, 6 (12). (in Korean)

### Peer-reviewed conference/workshop papers

Thompson, J.R., Martinez, J.J., Sarikaya, A., Cutrell, E., Lee, B. (2023) **Chart Reader: Accessible Visualization Experiences Designed with Screen Reader Users**, *Proc. CHI 2023*, Paper No. 802.

Lee, J.G.W., Lee, B., Choe, E.K. (2023) **Decorative, Evocative, and Uncanny: Reactions on Ambient-to-Disruptive Health Notifications via Plant-Mimicking Shape-Changing Interfaces**, *Proc. CHI 2023*, Paper No. 320.

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## Patents

41 patents are granted, and 18 patents are pending.

## **RESEARCH GRANTS**

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ARC (Australian Research Council) Discovery Project Grant, **Accessible Data Exploration and Analysis for Blind People**, AS\$650,000, 2022 – 2025, Marriott, K. (Chief Investigator; CI), Butler, M. (CI), Zukerman, I. (CI), Qu, L. (CI), Lee, B. (Partner Investigator)

## **WORKSHOP & MEETUP ORGANIZATIONS**

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Inclusive Data Visualization, Dagstuhl Seminar, 2023

Human Data Interaction, VIS 2021

Inclusive Data Visualization, Microsoft Research, 2020

Interactive Visualization for Interpretable Machine Learning: Beyond Visualization and Steering of the Parametric Space, Shonan Seminar, 2019

Mobile Data Visualization, Dagstuhl Seminar, 2019

Contribution Types for VIS: Broadening Intellectual Diversity of Visualization Research Papers, VIS 2018 Meetups

Multimodal Interaction for Data Visualization, AVI 2018

Data Visualization on Mobile Devices, CHI 2018

Leveraging Patient-Generated Data for Collaborative Decision Making in Healthcare, PervasiveHealth 2017

Immersive Analytics: Exploring Future Visualization and Interaction Technologies for Data Analytics, VIS 2017

Immersive Analytics: Exploring Future Interaction and Visualization Technologies for Data Analytics, ISS 2016

Human-Centered Machine Learning, CHI 2016

DEXIS 2015: Visual Data Exploration on Interactive Surfaces, ITS 2015

DEXIS 2011: Visual Data Exploration on Interactive Surfaces, ITS 2011

## **PROFESSIONAL SERVICE**

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### Community Leadership

- VGTC Chair: Jul. 2022 – Present
- VGTC Chair Elect: Dec. 2021 – Jun. 2022

### Conference Committees

Steering/Executive Committees:

- IEEE VIS Executive Committee (VEC) Member, 2021–2022
- ACM ISS Steering Committee Member, 2019–Present

Organizing Committees:

- Papers Co-Chair: CHI 2025
- Overall Papers Co-Chair: VIS 2022, 2021
- Papers Subcommittee Co-Chair: CHI 2022, 2021
- Conference Co-Chair: ISS 2019
- Papers Co-Chair: PacificVis 2018
- Symposium Co-Chair: PacificVis 2017
- Doctoral Symposium Co-Chair: ISS 2016
- Papers Co-Chair: InfoVis 2016, 2015
- Workshops Co-Chair: CHI 2015
- Posters Co-Chair: VIS 2014, 2013
- Organizing Committee: GD 2012
- Posters Co-Chair: PacificVis 2012
- Panels Co-Chair: VisWeek 2012
- Tutorials Co-Chair: VisWeek 2011
- Discovery Exhibition Co-Chair: VisWeek 2009
- Contest Co-Chair: InfoVis 2008
- Print Publications Co-Chair: CHI 2009, 2008

#### Editorial Boards:

- IEEE Transactions on Visualization and Computer Graphics (October 2015–October 2019)

#### Program Committees:

- IEEE Information Visualization Conference (InfoVis 2020–2018, 2014–2012, 2010–2008)
- IEEE Conference on Visual Analytics Science and Technology (VAST 2017)
- EG/VGTC Conference on Data Visualization (EuroVis 2016)
- ACM Conference on Human Factors in Computing Systems (CHI 2017, 2015)
- ACM International Conference on Interactive Surfaces and Spaces (ISS 2018–2016)
- International Symposium on Big Data Visual and Immersive Analytics (BDVA 2018)
- BELIV Workshop (BELIV 2018, 2016)
- Graphics Interface (GI 2015)
- Advanced Visual Interfaces (AVI 2020, 2018, 2016, 2014, 2012, 2010)
- IEEE Pacific Visualization Symposium (PacificVis 2020, 2017, 2013–2011)
- IEEE Working Conference on Software Visualization (VISSOFT 2013)
- Conference on Visualization and Data Analysis (VDA 2012, 2011)
- Workshop on the Creation, Curation, Critique and Conditioning of Principles and Guidelines in Visualization (VisGuides 2018)
- Workshop on Social Media Visualization (SocMedVis 2012)
- International Conference on Information Visualization Theory and Applications (IVAPP 2010)
- International Conference on Visual Information Systems (VISUAL 2007)

#### Reviewer

#### Journals:

- ACM Transactions on Computer-Human Interaction (TOCHI)
- ACM Transactions on Intelligent Systems and Technology (TIST)
- ACM Transactions on Interactive Intelligent Systems (TiiS)
- PACM on Interactive, Mobile, Wearable and Ubiquitous Technologies (IMWUT)
- IEEE Transactions on Visualization and Computer Graphics (TVCG)
- IEEE Computer Graphics and Applications (CG&A)
- IEEE Pervasive Computing
- Computer Graphics Forum (CGF)
- Information Visualization (IVS)
- International Journal of Human-Computer Studies (IJHCS)
- Journal of the American Society for Information Science and Technology (JASIST)

#### Conferences:

- ACM Conference on Human Factors in Computing Systems (CHI 2023, 2020–2007)
- ACM Symposium on User Interface Software and Technology (UIST 2020–2018, 2015–2012, 2008–2006, UIST Posters 2003)
- ACM Special Interest Group on Computer Graphics and Interactive Techniques (SIGGRAPH 2015)
- ACM International Conference on Interactive Surfaces and Spaces (ISS 2018–2016)

- ACM International Conference on Interactive Tabletops and Surfaces (ITS 2015–2013)
- IEEE Information Visualization Conference (InfoVis 2018, 2017, 2014–2006, 2004)
- EG/VGTC Conference on Data Visualization (EuroVis 2017, 2016, 2014, 2012, 2011)
- Advanced Visual Interfaces (AVI 2016, 2014, 2012, 2010, 2006)
- Conference on Visualization and Data Analysis (VDA 2012)
- IEEE Conference on Visual Analytics Science and Technology (VAST 2010)
- IEEE Pacific Visualization Symposium (PacificVis 2020, 2017, 2015, 2013–2011)
- IEEE Working Conference on Software Visualization (VISSOFT 2013)
- Graphics Interface (GI 2015, 2013, 2011)
- EAI International Conference on Pervasive Computing Technologies for Healthcare (PervasiveHealth 2016)
- International Symposium on Big Data Visual and Immersive Analytics (BDVA 2018)
- International Symposium on Graph Drawing (GD 2015, 2014)
- International Conference on Intelligent User Interfaces (IUI 2013)
- International Conference on Ubiquitous Computing (UbiComp 2016, 2015, 2011)
- International Conference on Information Visualization Theory and Applications (IVAPP 2010)
- International Conference on Visual Information Systems (VISUAL 2007)
- International Conference on Pervasive Computing (Pervasive 2007 Posters)

#### Workshops:

- International Workshop on Evaluation in Visualization (BELIV 2020, 2018, 2016)
- Workshop on the Creation, Curation, Critique and Conditioning of Principles and Guidelines in Visualization (VisGuides 2020, 2018)
- Visualization Psychology Workshop (VisPsych 2020)
- Workshop on Social Media Visualization (SocMedVis 2012)

#### Grants:

- Natural Sciences and Engineering Research Council of Canada (2016 Discovery Grants Competition)

#### Etc.

Doctoral Colloquium Panelist: VIS 2023, 2021, 2018

Test of Time Awards Committee: VIS 2023 (for VAST 2013), VIS 2020 (for InfoVis 2000)

Video Showcase Jury: CHI 2015, 2014

Poster PC: ITS 2014

Discovery Exhibition Awards Committee: VisWeek 2011, 2010

Made “Classification Datasets” available for IEEE InfoVis Contest 2003, Visualization and Pairwise Comparisons of Trees

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## **PROFESSIONAL MEMBERSHIP**

Association for Computing Machinery (ACM)

Institute of Electrical and Electronics Engineers (IEEE)

IEEE Visualization and Graphics Technical Community (VGTC)

## **REFERENCES**

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Available upon request.