Daniel Leithinger

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https://orcid.org/0000-0003-4342-7082

EDUCATION

Ph.D. Media Arts and Sciences, 2015
MIT Media Lab (Massachusetts Institute of Technology)   Cambridge, MA
ENEL Fellow 2010-2011, MIT Energy Fellow 2012-2013
Research Advisor: Prof. Hiroshi Ishii (Tangible Media Group)

M.Sc. Media Arts and Sciences, 2010
MIT Media Lab (Massachusetts Institute of Technology)   Cambridge, MA
Research Advisor: Prof. Hiroshi Ishii (Tangible Media Group)

M.Sc. Digital Media, 2007
Upper Austria University of Applied Sciences (FH Oberösterreich)   Hagenberg, Austria
Research Advisor: Prof. Michael Haller. Graduated with highest distinction.

B.Sc. Media Technology and Design, 2005
Upper Austria University of Applied Sciences (FH Oberösterreich)   Hagenberg, Austria

PROFESSIONAL EXPERIENCE

Design Innovation Fellow and Visiting Assistant Professor (08/2024 – present)
Cornell University   Ithaca, NY
Department of Design Tech

Visiting Assistant Professor (01/2024 – present)
University of Colorado at Boulder   Boulder, CO
ATLAS Institute & Department of Computer Science

Assistant Professor (01/2018 – 12/2023)
University of Colorado at Boulder   Boulder, CO
ATLAS Institute & Department of Computer Science, Director of THING Lab

Co-Founder and Chief Design Officer (09/2015 – 06/2017)
Lumii Inc, now Fathom Optics   Boston, MA
Development of 3D design software and print technology

Research Affiliate (11/2016 – 08/2017)
MIT Media Lab, Tangible Media Group   Cambridge, MA

Graduate Research Assistant (09/2008 – 08/2015)
MIT Media Lab, Tangible Media Group   Cambridge, MA

Research Intern (06/2010 - 09/2010)
Disney Research Pittsburgh   Pittsburgh, PA
Development of novel human-computer interfaces.

Research Engineer (11/2007 - 08/2008)
National University of Singapore   Singapore
Design and development of future architectural workspaces.

Student Intern (08/2007 - 09/2007)
FH Oberösterreich Research & Development   Hagenberg, Austria
Design and development of interactive meeting rooms.

Student Intern (02/2005 - 07/2005)
HIT Laboratory NZ   Christchurch, NZ
Development of interactive museum exhibits.

Programmer
Ars Electronica Futurelab (07/2004 - 09/2004)   Linz, Austria
Development of interactive museum exhibits.

Web Developer
MAVI International (06/2001 - 09/2002)   Schlierbach, Austria
Design and development of websites and multimedia CDs.

Austrian Memorial Service
Holocaust Memorial Center (02/2000 - 03/2001)   Detroit, MI
Support museum staff in the museum library.

AWARDS AND HONORS

2023	CHI: Best Demo Award Runner-Up (TactorBots)
2022	DIS: Best Pictorial Honorable Mention Award (EmotiTactor)
2020	UIST: Best Paper Honorable Mention (RealitySketch)
2018	CHI: Golden Mouse Award (DropletIO)
2016	CHI: Best Paper Honorable Mention (Materiable)
2015	Mass Challenge Accelerator: Gold Award Startup (Lumii)
2015	A' Design Award (Transform)
2015	CHI: Golden Mouse Award (Transform)
2014	Fast Company Innovation by Design Award (inFORM)
2014	Red Dot Award: Design Concept (inFORM)
2014	Core 77 Design Awards: Interaction Student Winner (inFORM)
2014	IDEA Award: Bronze Winner (inFORM)
2014	Laval Virtual ReVolution Award: Winner (inFORM)
2013	CHI: Best Paper Honorable Mention (Sublimate)
2012	UIST: Best Paper Award (Jamming User Interfaces)
2011	UIST Student Innovation Contest: Winner People's Choice Award (Snail Interface)
2011	RTT Emerging Technology Contest: Winner (Recompose)
2010	Siggraph Research Challenge: Second Place (Relief)
2008	RTT Emerging Technology Contest: Winner (City Planning Space)
2007	Laval Virtual ReVolution Award: Winner (SDS)
2006	Europrix Top Talent Award: Nominee Content Tools & Interface Design (SDS)
2005	Austrian State Prize for Multimedia & e-Business: Jury Award (Coeno)
2005	Europrix Top Talent Award: Winner Content Tools & Interface Design (Coneo)
2005	Austrian State Prize for Multimedia & e-Business: Overall Winner (Gullivers World)
2005	World Summit Award 2005: Best of in e-Entertainment (Gullivers World)

GRANTS

2022: NASA STTR Grant (with Diamond Age Technology): HECTARE: $45k
2021: Sony Gift Grant (With UW and Pratt, TOIO robots): Together Apart: $10k
2020: Rio Seed Grant (Co-PI, supporting Julia Uhr): A Virtual Reality Programming Language based on African Philosophy
2019: Adobe Gift Grant: RealitySketch: Embedding Responsive Graphics and Visualizations in AR through Dynamic Sketching: $5k
2018: Ericsson Gift Grant: ARRA: $60k
2018: Engineering Excellence Fund: Large Mocap Studio: $43k

STUDENTS ADVISED

PhD Students:
- Ryo Suzuki (2018 - 2020) Assistant Professor at University of Calgary
- Purnendu (2019-2020) co-advised with Prof. Carson Bruns
- Ran Zhou (2021- current)

- Casey Hunt (2021 - current) co-advised with Prof. Ellen Do
- David Hunter (2022 - current) co-advised with Prof. Ellen Do
- Suibi Che-Chuan Weng (2022 - current) co-advised with Prof. Ellen Do

PhD Dissertation Committee Member:
Clement Zheng (ATLAS CTD), Matt Whitlock (CS), Eric Acome (MechE), Shanel Wu (ATLAS CTD), Fiona Bell (ATLAS CTD), Annika Muehlbradt (CS)

PhD Preliminary Exam Committee Member:
Ruhan Yang (ATLAS CTD), Chris Hill (ATLAS CTD), Annie Kelly (ATLAS CTD)

TEACHING EXPERIENCE

CU Boulder: Assistant Professor
Physical Telepresence (Spring 2023, Fall 2021), Computational Foundations (Spring 2022), Object (Spring 2021), Elastic Spaces (Fall 2020), Radical Design (Summer 2019), Fundamentals of Human Computer Interaction (Spring 2019, Fall 2020), Haptic Interfaces (Fall 2018), Physical Computing Interfaces (Spring 2018)

MIT Media Lab:
Hacking the Holodeck: Instructor (January 2017)
Tangible Interfaces: Teaching Assistant (Fall 2012, 2011)
New Paradigms for HCI: Teaching Assistant (Spring 2009)

ACADEMIC LEADERSHIP AND SERVICE

Program Committee:
ACM User Interface Software and Technology Symposium 2020, 2021, 2022, 2023
ACM CHI Conference on Human Factors in Computing Systems 2019, 2020, 2021, 2022, 2023
ACM Conference on Interactive Tabletops and Surfaces 2018
ACM Conference on Tangible, Embedded and Embodied Interaction (TEI) 2021
Student Volunteer Chair: ACM User Interface Software and Technology Symposium 2014, TEI 2010
Demo Chair: ACM International Conf on Interactive Tabletops and Surfaces, Cambridge, MA
Demo Chair: 14th ACM International Conference on Ubiquitous Computing, Pittsburgh

Reviewer for Conferences and Journals:
ACM CHI Conference on Human Factors in Computing Systems
ACM Symposium on User Interface Software and Technology
ACM International Joint Conference on Pervasive and Ubiquitous Computing
ACM International Conference on Tangible, Embedded and Embodied Interaction
ACM International Conference on Interactive Tabletops and Surfaces
ACM SIGCHI Conference on Designing Interactive Systems
ACM SIGGRAPH Conference
ACM Transactions on Computer-Human Interaction
IEEE Pervasive Computing Journal

PUBLICATIONS
Peer reviewed conference papers:

Casey Lee Hunt, Kaiwen Sun, Kaitlyn Tseng, Priyanka Balasubramaniyam, Allison Druin, Amanda Huynh, Daniel Leithinger, and Jason Yip. 2024. Making a Metaphor Sandwich: Analyzing Children's use of Metaphor During Tabletop Telepresence Robot Supported Participatory Design. In Proceedings of the 23rd Annual ACM Interaction Design and Children Conference (IDC '24). Association for Computing Machinery, New York, NY, USA, 173–188.
https://doi.org/10.1145/3628516.3656272

Yuzhen Zhang, Ruixiang Han, Ran Zhou, Peter Gyory, Clement Zheng, Patrick C. Shih, Ellen Yi-Luen Do, Malte F Jung, Wendy Ju, and Daniel Leithinger. 2024. Wizard of Props: Mixed Reality

Prototyping with Physical Props to Design Responsive Environments. In Proceedings of the Eighteenth International Conference on Tangible, Embedded, and Embodied Interaction (TEI '24). Association for Computing Machinery, New York, NY, USA, Article 47, 1–15. https://doi.org/10.1145/3623509.3633395

Casey Lee Hunt, Kaiwen Sun, Zahra Dhuliawala, Fumi Tsukiyama, Iva Matkovic, Zachary Schwemler, Anastasia Wolf, Zihao Zhang, Allison Druin, Amanda Huynh, Daniel Leithinger, and Jason Yip. 2023. Designing Together, Miles Apart: A Longitudinal Tabletop Telepresence Adventure in Online Co-Design with Children. In Proceedings of the 22nd Annual ACM Interaction Design and Children Conference (IDC '23). Association for Computing Machinery, New York, NY, USA, 52–67. https://doi.org/10.1145/3585088.3589359 (historically 30% AR)

Ran Zhou, Zachary Schwemler, Akshay Baweja, Harpreet Sareen, Casey Lee Hunt, and Daniel Leithinger. 2023. TactorBots: A Haptic Design Toolkit for Out-of-lab Exploration of Emotional Robotic Touch. In Proceedings of the 2023 CHI Conference on Human Factors in Computing Systems (CHI '23). Association for Computing Machinery, New York, NY, USA, Article 370, 1–19. https://doi.org/10.1145/3544548.3580799 (historically 23% AR)

Zhou, Ran, Harpreet Sareen, Yufei Zhang, and Daniel Leithinger. "EmotiTactor: Exploring How Designers Approach Emotional Robotic Touch." In Designing Interactive Systems Conference, pp. 1330-1344. 2022. **(Honorable Mention Award)** https://doi.org/10.1145/3532106.3533487 (< 30% AR)

Ryo Suzuki, Eyal Ofek, Mike Sinclair, Daniel Leithinger, and Mar Gonzalez-Franco. 2021. HapticBots: Distributed Encountered-type Haptics for VR with Multiple Shape-changing Mobile Robots. In The 34th Annual ACM Symposium on User Interface Software and Technology (UIST '21). Association for Computing Machinery, New York, NY, USA, 1269–1281. https://doi.org/10.1145/3472749.3474821 (historically 21% AR)

Purnendu, Sasha M Novack, Eric Acome, Christoph Keplinger, Mirela Alistar, Mark D Gross, Carson Bruns, and Daniel Leithinger. 2021. Electriflow: Soft Electrohydraulic Building Blocks for Prototyping Shape-changing Interfaces. In Designing Interactive Systems Conference 2021 (DIS '21). Association for Computing Machinery, New York, NY, USA, 1280–1290. https://doi.org/10.1145/3461778.3462093 (historically 25% AR)

H. Hedayati, R. Suzuki, D. Leithinger and D. Szafir, "PufferBot: Actuated Expandable Structures for Aerial Robots," 2020 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), 2020, pp. 1338-1343. https://doi.org/10.1109/IROS45743.2020.9341088 (47% AR)

Ryo Suzuki, Rubaiat Habib Kazi, Li-yi Wei, Stephen DiVerdi, Wilmot Li, and Daniel Leithinger. 2020. RealitySketch: Embedding Responsive Graphics and Visualizations in AR through Dynamic Sketching. In Proceedings of the 33rd Annual ACM Symposium on User Interface Software and Technology (UIST '20). Association for Computing Machinery, New York, NY, USA, 166–181. **(Best Paper Honorable Mention Award)**. https://doi.org/10.1145/3379337.3415892 (historically 21% AR)

Ryo Suzuki, Hooman Hedayati, James L Bohn, Clement Zheng, Daniel Szafir, Ellen Yi-Luen Do, Mark D Gross, Daniel Leithinger. 2020. RoomShift: Room-scale Dynamic Haptics for VR with Furniture-moving Swarm Robots. *In Proceedings of the 2020 CHI Conference on Human Factors in Computing Systems (CHI '20).* ACM, New York, NY, USA. https://doi.org/10.1145/3313831.3376523 (historically 23% AR)

Ryo Suzuki, Ryosuke Nakayama, Dan Liu, Yasuaki Kakehi, Mark D. Gross, and Daniel Leithinger. 2020. LiftTiles: Constructive Building Blocks for Prototyping Room-scale Shape-changing Interfaces. *In Proceedings of the 14th ACM International Conference on Tangible, Embedded and Embodied Interaction (TEI '20).* ACM, New York, NY, USA. https://doi.org/10.1145/3374920.3374941 (28% AR)

Ryo Suzuki, Clement Zheng, Yasuaki Kakehi, Tom Yeh, Ellen Yi-Luen Do, Mark D. Gross, and Daniel Leithinger. 2019. ShapeBots: Shape-changing Swarm Robots. In *Proceedings of the 32nd Annual ACM*

Symposium on User Interface Software and Technology (UIST '19). ACM, New York, NY, USA, 493-505. https://doi.org/10.1145/3332165.3347911 (historically 21% AR)

Clement Zheng, Jeeeun Kim, Daniel Leithinger, Mark D Gross, Ellen Yi-Luen Do. 2019. Mechamagnets: Designing and Fabricating Haptic and Functional Physical Inputs with Embedded Magnets. In *Proceedings of the thirteenth international conference on Tangible, Embedded, and Embodied Interaction (TEI '19)*. ACM, New York, NY, USA. https://doi.org/10.1145/3294109.3295622 (33% AR)

Ryo Suzuki, Junichi Yamaoka, Daniel Leithinger, Tom Yeh, Mark D. Gross, Yoshihiro Kawahara, and Yasuaki Kakehi. 2018. Dynablock: Dynamic 3D Printing for Instant and Reconstructable Shape Formation. In *Proceedings of the 31st Annual ACM Symposium on User Interface Software and Technology (UIST '18)*. ACM, New York, NY, USA, 99-111. https://dl.acm.org/doi/10.1145/3242587.3242659?cid=81319495312 (21% AR)

Ken Nakagaki, Udayan Umapathi, Daniel Leithinger, and Hiroshi Ishii. 2017. AnimaStage: Hands-on Animated Craft on Pin-based Shape Displays. In *Proceedings of the 2017 Conference on Designing Interactive Systems (DIS '17)*. ACM, New York, NY, USA, 1093-1097. https://doi.org/10.1145/3064663.3064670 (22% AR)

Ken Nakagaki, Luke Vink, Jared Counts, Daniel Windham, Daniel Leithinger, Sean Follmer, and Hiroshi Ishii. 2016. Materiable: Rendering Dynamic Material Properties in Response to Direct Physical Touch with Shape Changing Interfaces. In *Proceedings of the 2016 CHI Conference on Human Factors in Computing Systems* (CHI '16). ACM, New York, NY, USA, 2764-2772. **(Best Paper Honorable Mention Award)**. https://doi.org/10.1145/2858036.2858104 (23% AR)

Philipp Schoessler, Daniel Windham, Daniel Leithinger, Sean Follmer, and Hiroshi Ishii. 2015. Kinetic Blocks: Actuated Constructive Assembly for Interaction and Display. In *Proceedings of the 28th Annual ACM Symposium on User Interface Software & Technology* (UIST '15). ACM, New York, NY, USA, 341-349. https://doi.org/10.1145/2807442.2807453 (24% AR)

Daniel Leithinger, Sean Follmer, Alex Olwal, and Hiroshi Ishii. 2014. Physical Telepresence: Shape Capture and Display for Embodied, Computer-mediated Remote Collaboration. In *Proceedings of the 27th annual ACM symposium on User interface software and technology* (UIST '14). ACM, New York, NY, USA. https://doi.org/10.1145/2642918.2647377 (22% AR)

Sean Follmer, Daniel Leithinger, Alex Olwal, Akimitsu Hogge, and Hiroshi Ishii. 2013. inFORM: dynamic physical affordances and constraints through shape and object actuation. In *Proceedings of the 26th annual ACM symposium on User interface software and technology* (UIST '13). ACM, New York, NY, USA, 417-426. https://dl.acm.org/doi/10.1145/2501988.2502032 (20% AR)

Daniel Leithinger, Sean Follmer, Alex Olwal, Samuel Luescher, Akimitsu Hogge, Jinha Lee, and Hiroshi Ishii. 2013. Sublimate: state-changing virtual and physical rendering to augment interaction with shape displays. In *Proceedings of the 2013 ACM annual conference on Human factors in computing systems* (CHI '13). ACM, New York, NY, USA, 1441-1450. **(Best Paper Honorable Mention Award)** https://dl.acm.org/doi/10.1145/2470654.2466191 (20% AR)

Sean Follmer, Daniel Leithinger, Alex Olwal, Nadia Cheng, and Hiroshi Ishii. 2012. Jamming user interfaces: programmable particle stiffness and sensing for malleable and shape-changing devices. In *Proceedings of the 25th annual ACM symposium on User interface software and technology* (UIST '12). ACM, New York, NY, USA, 519-528. **(Best Paper Award)** https://dl.acm.org/doi/10.1145/2380116.2380181 (historically 21% AR)

Daniel Leithinger, David Lakatos, Anthony DeVincenzi, Matthew Blackshaw, and Hiroshi Ishii. 2011. Direct and Gestural Interaction with Relief: a 2.5D Shape Display. In *Proceedings of the 24th annual ACM symposium on User interface software and technology* (UIST '11). ACM, New York, NY, USA, 541-548. https://dl.acm.org/doi/10.1145/2047196.2047268 (26% AR)

Jamie Zigelbaum, Alan Browning, Daniel Leithinger, Olivier Bau, and Hiroshi Ishii. 2010. g-stalt: a chirocentric, spatiotemporal, and telekinetic gestural interface. In *Proceedings of the fourth*

international conference on Tangible, embedded, and embodied interaction (TEI '10). ACM, New York, NY, USA, 261-264. https://dl.acm.org/doi/10.1145/1709886.1709939 (historically 29% AR)

John Kestner, Daniel Leithinger, Jaekyung Jung, and Michelle Petersen. 2009. Proverbial wallet: tangible interface for financial awareness. In *Proceedings of the 3rd International Conference on Tangible and Embedded Interaction* (TEI '09). ACM, New York, NY, USA, 55-56. https://dl.acm.org/doi/10.1145/1517664.1517683 (historically 29% AR)

Daniel Leithinger, Michael Haller, "Improving Menu Interaction for Cluttered Tabletop Setups with User-Drawn Path Menus," in *Horizontal Interactive Human-Computer Systems, International Workshop* on, pp. 121-128, Second Annual IEEE International Workshop on Horizontal Interactive Human-Computer Systems (TABLETOP'07), 2007. http://dx.doi.org/10.1109/TABLETOP.2007.24

Michael Haller, Peter Brandl, Daniel Leithinger, Jakob Leitner, Thomas Seifried, and Mark Billinghurst. 2006. Shared design space: sketching ideas using digital pens and a large augmented tabletop setup. In *Proceedings of the 16th international conference on Advances in Artificial Reality and Tele-Existence* (ICAT'06), Zhigeng Pan, Adrian Cheok, Michael Haller, Rynson H. Lau, and Hideo Saito (Eds.). Springer-Verlag, Berlin, Heidelberg, 185-196. http://dx.doi.org/10.1007/11941354_20

Michael Haller, Mark Billinghurst, Daniel Leithinger, Jakob Leitner, and Thomas Seifried. 2005. Coeno: enhancing face-to-face collaboration. In *Proceedings of the 2005 international conference on Augmented tele-existence* (ICAT '05). ACM, New York, NY, USA, 40-47. http://doi.acm.org/10.1145/1152399.1152408

Peer reviewed journal articles:

Hedayati, Hooman, Ryo Suzuki, Wyatt Rees, Daniel Leithinger, and Daniel Szafir. "Designing Expandable-Structure Robots for Human-Robot Interaction." Frontiers in Robotics and AI 9. 2022. https://doi.org/10.3389/frobt.2022.719639

Daniel Leithinger, Sean Follmer, Alex Olwal and Hiroshi Ishii, "Shape Displays: Spatial Interaction with Dynamic Physical Form," in *IEEE Computer Graphics and Applications*, vol. 35, no. 5, pp. 5-11, Sept.-Oct. 2015. https://doi.org/10.1109/MCG.2015.111.

Lightly reviewed conference or workshop papers:

Daniel Leithinger, Ran Zhou, Eric Acome, Ahad Mujtaba Rauf, Teng Han, Craig Shultz, and Joe Mullenbach. 2023. Electro-actuated Materials for Future Haptic Interfaces. In The 36th Annual ACM Symposium on User Interface Software and Technology (UIST '23 Adjunct), October 29–November 01, 2023, San Francisco, CA, USA. ACM, New York, NY, USA, 3 pages. https://doi.org/10.1145/3586182.3617434

Ran Zhou, Zachary Schwemler, Akshay Baweja, Harpreet Sareen, Casey Lee Hunt, and Daniel Leithinger. 2023. Demonstrating TactorBots: A Haptic Design Toolkit for Exploration of Emotional Robotic Touch. In Extended Abstracts of the 2023 CHI Conference on Human Factors in Computing Systems (CHI EA '23). Association for Computing Machinery, New York, NY, USA, Article 438, 1–5. https://doi.org/10.1145/3544549.3583897

Cathy Mengying Fang, Ryo Suzuki, and Daniel Leithinger. 2023. VR Haptics at Home: Repurposing Everyday Objects and Environment for Casual and On-Demand VR Haptic Experiences. In Extended Abstracts of the 2023 CHI Conference on Human Factors in Computing Systems (CHI EA '23). Association for Computing Machinery, New York, NY, USA, Article 312, 1–7. https://doi.org/10.1145/3544549.3585871

Suibi Che–Chuan Weng, Torin Hopkins, Rishi Vanukuru, Chad Tobin, Amy Banic, Daniel Leithinger, and Ellen Yi–Luen Do. "How Field of View Affects Awareness of an Avatar During a Musical Task in Augmented Reality." In *2023 IEEE Conference on Virtual Reality and 3D User Interfaces Abstracts and*

Workshops (VRW), pp. 633-634. IEEE, 2023.
https://doi.ieeecomputersociety.org/10.1109/VRW58643.2023.00159

Purnendu, Sasha Novack, Eric Acome, Mirela Alistar, Christoph Keplinger, Mark D. Gross, Carson Bruns, and Daniel Leithinger. 2021. Electriflow: Augmenting Books With Tangible Animation Using Soft Electrohydraulic Actuators. In ACM SIGGRAPH 2021 Labs (SIGGRAPH '21). Association for Computing Machinery, New York, NY, USA, Article 8, 1–2.
https://doi.org/10.1145/3450616.3464523

Ryo Suzuki, Ryosuke Nakayama, Dan Liu, Yasuaki Kakehi, Mark D. Gross, and Daniel Leithinger. 2019. LiftTiles: Modular and Reconfigurable Room-scale Shape Displays through Retractable Inflatable Actuators. In *The Adjunct Publication of the 32nd Annual ACM Symposium on User Interface Software and Technology (UIST '19)*. ACM, New York, NY, USA, 30-32. https://doi.org/10.1145/3332167.3357105

Peter Gyory, Clement Zheng, Daniel Leithinger, and Ellen Yi-Luen Do. 2019. HOT SWAP: Probing Embodied Game Interfaces With Reconfigurable Controllers. In *Companion Publication of the 2019 on Designing Interactive Systems Conference 2019 Companion (DIS '19 Companion)*. ACM, New York, NY, USA, 183-187. https://doi.org/10.1145/3301019.3323901

Udayan Umapathi, Patrick Shin, Ken Nakagaki, Daniel Leithinger, and Hiroshi Ishii. 2018. Programmable Droplets for Interaction. In Extended Abstracts of the 2018 CHI Conference on Human Factors in Computing Systems (CHI EA '18). Association for Computing Machinery, New York, NY, USA, Paper VS15, 1. DOI:https://doi.org/10.1145/3170427.3186607

Luke Vink, Viirj Kan, Ken Nakagaki, Daniel Leithinger, Sean Follmer, Philipp Schoessler, Amit Zoran, and Hiroshi Ishii. 2015. TRANSFORM as Adaptive and Dynamic Furniture. In Proceedings of the 33rd Annual ACM Conference Extended Abstracts on Human Factors in Computing Systems (CHI EA '15). Association for Computing Machinery, New York, NY, USA, 183. DOI:https://doi.org/10.1145/2702613.2732494

Hiroshi Ishii, Daniel Leithinger, Sean Follmer, Amit Zoran, Philipp Schoessler, and Jared Counts. 2015. TRANSFORM: Embodiment of "Radical Atoms" at Milano Design Week. In *Proceedings of the 33rd Annual ACM Conference Extended Abstracts on Human Factors in Computing Systems* (CHI EA '15). https://doi.org/10.1145/2702613.2702969

Daniel Leithinger and Hiroshi Ishii. 2010. Relief: a scalable actuated shape display. In *Proceedings of the fourth international conference on Tangible, embedded, and embodied interaction* (TEI '10). ACM, New York, NY, USA, 221-222. https://dl.acm.org/doi/10.1145/1709886.1709928

PATENTS

Thomas Anthony Baran, Matthew Waggener Hirsch, Daniel Leithinger. 2016. Multi-View Displays and Associated Systems and Methods. US10645375B2

Sean Follmer, Daniel Leithinger, Hiroshi Ishii, Alex Olwal. 2013. Methods and Apparatus for Jammable HCI Interfaces. US9298264

Daniel Leithinger, David Lakatos, Anthony DeVincenzi, Matthew Blackshaw, Hiroshi Ishii. 2012. Methods and apparatus for actuated 3D surface with gestural interactivity. US9298264

Philip Jackson, Ivan Poupyrev, Daniel Leithinger, Leonid Sigal. 2011. Elastomeric Input Device. US8823639