

Tomoko Ichikawa

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As an educator and practitioner of clear and effective visual communication design of complex information, I believe that good design requires analysis and should be content- and context-driven. Current research interests include understanding new forms of visualization—particularly how they contrast to existing forms, and various structures of storytelling. A perennial topic of interest is how to teach non-designers principles of good communication design.

EDUCATION

Masters of Science, Visual Communication

1988

Illinois Institute of Technology/
Institute of Design, Chicago IL

Thesis: *An Application of Sign Systems
in Instructional Manuals: Correlating
Information Types and Sign Systems*

Bachelors of Arts, Communication

1984

International Christian University,
Tokyo, Japan

Area of concentration: Intercultural and
inter-personal communication

PROFESSIONAL EXPERIENCE

Illinois Institute of Technology/Institute of Design

| Chicago, IL 1993 - present

2017 - present *Clinical Professor of Design*

2013 - 2017 *Sr. Lecturer of Design*

2010 - 2013 *Visiting Assistant Professor*

1993 - 2010 *Adjunct Faculty*

Coursework ranges from foundational teaching to advanced workshop of communication design, the consistent goal being clear and effective communication. Students are challenged to produce content- and purpose-driven work at various levels.

UIHealth, Institute for Healthcare Delivery Design

| Chicago, IL 2018 - present

Partner

Designing communication materials tailored to patients, caregivers and clinicians. Housed in the Population Health Sciences Program at University of Illinois Chicago.

Maykawa Studios, LLC

| Chicago, IL 2005 - present

Principal + Information Designer

Assisting organizations in refining and visualizing key messages to various stakeholders.

Doblin, Inc.

| Chicago, IL 1992 - 2005

Senior Information Designer

Working collaboratively in an innovation planning firm, responsibilities included assisting internal teams to communicate large business concepts to various levels in client organization, developing and producing workshop experiences, assisting research team members to develop new analysis tools.

Siegel & Gale

| New York, NY 1988 - 1992

Information Designer

Collaborated with technical writers in the Simplified Communication Group to assist Fortune 500 companies—primarily in the service sector—with innovative communication approaches and outputs that leveraged new technology to improve brand and customer relationships.

ACADEMIC ACTIVITIES

PUBLICATIONS

BOOK SECTIONS

Heller, Steven & Lita Talarico. 2009. "Visualizing Various Information Types across Multiple Channels." *Design School Confidential*. Rockport Publishers

Institute for Information Design Japan ed. 2003. "Arena Scan." *Information Design Source Book*, IIDj Graphic-sha Publishing.

PAPERS

Ichikawa, Tomoko. "Visualization as experience." 2016. *Digital Studies/Le champ numérique*, North America, 0, jul. 2016. <https://www.digitalstudies.org/articles/10.16995/dscn.32/>

In process:

Arya, Ritu., Tomoko Ichikawa, Brian Callender et al. "**Communicating the External Beam Radiation Experience (CEBRE): Perceived Benefits of a Graphic Narrative Patient Education Tool.**" Submitted to *Practical Radiation Oncology*, In press, [https://www.practicalradonc.org/article/S1879-8500\(19\)30264-4/fulltext](https://www.practicalradonc.org/article/S1879-8500(19)30264-4/fulltext)

Rosenberg, Amanda., Irene Loomis, Tomoko Ichikawa, Alexander Langerman. "**The interrelation between institutional goals and surgical case responsibilities at a large academic medical center.**"

PUBLISHED DIAGRAMS

Fong, Abigail J., Meghan Smith and Alexander Langerman. 2016. "**Efficiency improvement in the operating room.**" *Journal of Surgical Research*. Aug 2016 (204) 371-383. <http://dx.doi.org/10.1016/j.jss.2016.04.054>

Erwin, Kim., Veronica Fitzpatrick, Sarah Norell and Melissa Gilliam. "**Development of a Framework and Tool to Facilitate Cost-of-Care Conversations With Patients During Prenatal Care.**" *Annals of Internal Medicine* May 2019 (170):9. S67. doi:10.7326/M18-2207

PRESENTATIONS/PANELS/WORKSHOP

exploreID series: *Graphic Narratives in Healthcare*. Panel participant, November 6, 2019

Chicago Design Week: *Owning Our Ethics: Principles for Design(ers)*. Panel participant, November 1, 2017

Ichikawa, Tomoko., Kim Erwin, and Stan Ruecker. "**Confusing, Misleading, and What Now?: Critiquing Visualizations.**" Paper presented in the panel *Thinking Critically About Information Visualization* at the Canadian Society for Digital Humanities/ Société canadienne des humanités numériques (CSDH/SCHN) annual conference at the 2014 Congress of the Social Sciences and Humanities, Brock University, May 28-30, 2014.

Erwin, Kim., Stan Ruecker, Tomoko Ichikawa, and Jennifer Windsor. "**Task-Relevant Visualization in the Humanities.**" Paper presented in the panel *Thinking Critically About Information Visualization* at the Canadian Society for Digital Humanities/ Société canadienne des humanités numériques (CSDH/SCHN) annual conference at the 2014 Congress of the Social Sciences and Humanities, Brock University, May 28-30, 2014.

Illinois Institute of Technology, *Clear communication in scientific research posters*, Department of Physics/Chemistry, PhD candidates, Co-instructor: Kim Erwin, 2013

TEACHINGS

ACADEMIC RESEARCH PROJECTS

2020 *Driver Assistance Control and Human-Automation Interface Design for Energy Efficient Semi-Automated Hybrid Electric Vehicles*. Cross-disciplinary project. PI: Baisravan HomChaudhuri, Assistant Professor, Mechanical and Aerospace Engineering, Illinois Institute of Technology

2017 *CEBRE: Communicating the External Beam Radiation Experience*. Co-instructor Dr. Daniel Golden, University of Chicago Hospital. (Awarded ClearMark Award of Distinction, Center for Plain Language) Illinois Institute of Technology, Institute of Design

- 2015 *Mapping Gaps in Access to Justice*. Co-leader Kulsum Ameji, Esq. Illinois Institute of Technology, Institute of Design
- 2014 *Data Visualization Tools for Designers*. Illinois Institute of Technology, Institute of Design
- 2013 *The Emerging Visual Language in Data Visualizations*. Illinois Institute of Technology, Institute of Design
- 2013 *Records for Life*, Gates Foundation competition, (Awarded honorable mention) Illinois Institute of Technology, Institute of Design

COMMUNICATION DESIGN WORKSHOP PROJECTS

- 2019 *Prototype Design of a Decision Making Tool for Caregivers of Dementia in the African American Community*: Investigating the decision making pathways for caregivers and designing of a tool to assist with that process to provide thoughtful care in a community where there is disparity. Collaboration with University of Chicago Hospital
- 2019 *Communicating the complex process of gynecological brachytherapy radiation treatment to patients using graphic narratives*: Using graphic narratives as a technique to design accessible patient education materials discussing three complex and sensitive treatment processes. Collaboration with University of Chicago Hospital's Department of Radiation and Cellular Oncology.
- 2018 *Navigating the complex approval process for food entrepreneurs to start, run and grow their business in Chicago*: Translating text-only instructions from the City of Chicago's Office of Business Administration and Consumer Protection into a visual map, that outlines the procedural steps of acquiring business licenses for food entrepreneurs. Collaboration with Chicago Food Policy Action Council (CFPAC)
- 2017 *Visualizing the connections between artists at the Jane Addams Hull-House*: Manually created visualizations that reveal the relationships between the resident artists who played a major role in the art curriculum and activities in the early 20th century at Chicago's settlement house renown for labor reform. In partnership with Jane Addams Hull-House, Chicago, IL
- 2018 *Census+*: Combining datasets from the U.S. census and other data source, students engaged in data journalism by surfacing stories to visualize in a printed as well as online format. Generated algorithms to query the dataset. Co-instructor: Prof. Zach Pino
- 2017 *Visualizing Real Time data*: Exploring nature of data that is real-time, creating algorithm-generated visualizations that query and update as the data changes. Co-instructor: Prof. Zach Pino
- 2016 *Visualizing Spaces and Worlds*: Exploring algorithm-generated spatial data visualization in 2D interactive mode as well as developing and printing 3D physical data artifacts. Co-instructor: Prof. Zach Pino
- 2015 *Visualizing Time*: Exploring temporal data visualization, of events that span short (60 mins), medium (one year) and long (80-100 years) durations of time. Co-instructor: Prof. Zach Pino
- 2015 *Creating engaging artifacts that promotes critical thinking for design*: Developing a game, Critical Loop, that educates designers/developers of Internet of Things technologies. Embeds concepts from Science and Technology Studies that enables designers to be critical of what they create during the conceptualization and development phases. Co-instructor: Prof. Laura Forlano

2014 *Visualizing Communication in an Operating Room Setting*: Working with a premier medical teaching school, students visually modeled various aspects of communication between the key members in a surgical setting.

RECURRING CLASSES

Introduction to Communication Design I

14-week course to provide new students without design background a basic understanding and command of communication design. First half of class introduces basic concepts (typography, use of imagery, etc); second half focuses on application of these concepts to highly content-driven material. (Years taught: 2006 - present)

Communication Design Workshop

14-week course where students explore complex information and its visual representation, both in exploratory as well as sponsored applied projects. (Years taught: 2005, 2010 - present)

Fundamentals of Visual Communication

7-week concentration course that equips design students with minimal 2D visual communication training with basic communication design concepts and effective techniques and approaches. (Years taught: 2012 - present)

Diagram Development

7-week course covering various types of static diagrams, their characteristics, functions and appropriate uses. An inquiry into the difference between descriptive and prescriptive diagrams is covered. (Years taught: 2013 - present)

Modeling Complexity

7-week course visualizing topics that contain elements of complexity by focusing on key attributes such as interconnectivity, causality, temporal development, stock and flow, and visual abstraction. (Years taught: 2014, 2016, 2017, 2019)

Advanced Diagramming

7-week course covering principles of dynamic and interactive diagrams. (Years taught: 2014 - 2018)

PhD diagram coaching

Individual coaching of PhD students on displaying their research areas in diagrammatic form for concept exploration as well as presentation.

GUEST LECTURE

Illinois Institute of Technology, FPE 541-01 Principles of Food Packaging, *Designing Food Packaging for People*, (Years presented: 2015, 2016, 2018)

Illinois Institute of Technology, iPRO classes. (Years presented: 2012, 2013)

GRANTS/SPONSORSHIP

\$50,000	2019	Radiation Oncology Institute <i>Visual communication design solution to explain external beam radiation</i>
\$37,000	2019	IIT/WISER Institute, Cross-disciplinary Seed Funding Grant (CSFG) <i>Driver Assistance Control and Human-Automation Interface Design for Energy Efficient Semi-Automated Hybrid Electric Vehicles</i>

- \$ 7,000 2019 University of Chicago Bucksbaum Institute for Clinical Excellence
Prototype Design of a Decision Making Tool for Caregivers of Dementia in the African American Community
- \$ 7,000 2018 University of Chicago Bucksbaum Institute for Clinical Excellence
CoGBE: Communicating the Gynecological Brachytherapy Experience
- \$ 7,000 2017 University of Chicago Bucksbaum Institute for Clinical Excellence
CEBRE: Communicating the External Beam Radiation Experience

ACADEMIC ADVISING

PhD Dissertation Committee

Sandra J.H. Rolnicki, *Applications of Natural Language Processing to Measure and Assess Risk in U.S. Financial System*, Illinois Institute of Technology, Stuart School of Business, 2018

Master of Design, Master of Design Methods students.

Illinois Institute of Technology, Institute of Design. 2013 ~ present.

CONTRIBUTIONS TO UNIVERSITY SERVICE

- 2018 Institute of Design Faculty Search Committee, Illinois Institute of Technology
- 2016 Institute of Design Dean Search Committee, Illinois Institute of Technology

PROFESSIONAL ACTIVITIES

RECENT PROFESSIONAL PROJECTS

2018 UIHealth/Institute for Healthcare Delivery Design

Difficult-to-treat & Severe Asthma in Adolescent and Adult Patients: Diagnosis and Management A pocket guide for health professionals, commissioned by Global Initiative for Asthma (GINA). Translates expert diagnosis and management decision making process into a visual format for higher comprehension to help disseminate the knowledge worldwide.

COST, Prepregnancy cost-of-care conversation guide In collaboration with Sinai Hospital, a tool to assist cost-of-care conversations with low-income patients during prenatal care. Primary funding by Robert Wood Johnson Foundation

PROFESSIONAL WORKSHOPS/PRESENTATIONS

- 2017 World Information Architecture (WIA) Day, *Bumpy Flat Bumpy: Changing the shape of information to represent the world*, Chicago IL
- 2017 NorthShore Hospital System, *Human-Centered Design in the Discharge Process*, Executive Education, Illinois Institute of Technology, Institute of Design.
- 2014 CGEE, Brazil's Center for Strategic Studies and Management, *Introduction to Design Thinking: Communicating through visualizations*, Executive Education, Illinois Institute of Technology, Institute of Design.

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2012 Motorola CXD, *Making visuals work better in presentations*, Executive Education,
Chicago IL

QUOTES/MENTIONS

Forbes, January 21, 2013

Bender, Andrew *American Airlines' Makeover: Design Pros Weigh In*

<http://www.forbes.com/sites/andrewbender/2013/01/21/american-airlines-makeover-design-pros-weigh-in/>

New York Times, January 06, 2014

Hardy, Quentin *A Makeover for Maps*

<http://bits.blogs.nytimes.com/2014/01/06/a-makeover-for-maps/?action=click&module=Search®ion=searchResults%230&version=&url=http%3A%2F%2Fquery.nytimes.com%2Fsearch%2Fsite%2Fsearch%2F%23%2Fquentin%2Bhardy%2Bmaps%2F>