Grace Hsu, MS, CMI

biomedical visualization

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EDUCATION

University of Illinois at Chicago, Chicago, IL, 2015
Master of Science in Biomedical Visualization

Harvard University, Cambridge, MA, 2013
Master of Liberal Arts in Biotechnology (Life Science concentration)

University of Waterloo, Waterloo, ON, 2004
Bachelor of Science, Honours Biochemistry, Co-operative Education Program

RELEVANT WORK EXPERIENCE

Scientific Animator, The Animation Lab - University of Utah
Oct 2018 – Present, Salt Lake City, UT

- Create original storyboards, 2D/3D illustrations and animations depicting complex molecular and cellular processes
- Work closely with a team of researchers and other animators/illustrators in the Lab
- Independently manage the full production cycle from intake meetings, concept art, sketches, storyboarding, 3D modeling, animation, rendering/compositing, and archive
- Communicate effectively with scientific collaborators and provide constructive feedback and mentorship to others on the team.
- Directed summer interns to create scientific illustrations and animations

Experiential Instructional Designer-Developer, Jump Simulation and Education Center
Sep 2016 – Oct 2018, Peoria, IL

- Through collaboration with other team members, designed and created engaging and effective instructional materials with sound instructional design principles
- Created interactive eLearning, medical illustration and animations using Adobe CC
- Developed and provided recommendations for design of educational materials and activities, including AR/VR modules
- Ensured communication, coordination, development and integration of educational work plan with all areas affected, including course facilitators, instructors, end users, information services, technology integration and site leadership as needed

Freelance Medical Illustrator
Jan 2014 – Present

- Created visually compelling illustrations in collaboration with a design agency for re-branding of Inozyme Pharma's website and slide deck
- Worked collaboratively with the Chief Scientific Officer of NK Gen Biotech to create illustrations for their website and marketing materials
- Review scientific materials, branding guidelines, and client goals to fully understand and execute the scientific story, target audience, and messaging for creative deliverables

Creative and Communications Lead, LifeLearn Inc.
Feb – Jul 2016, Guelph, ON

- Designed brochures and logos for veterinary branding and marketing, used by clients at Western Veterinary Conference 2016
- Led a website re-branding project for a veterinary ultrasound company. Created wireframes and UI designs based on interviewing key stakeholders

UI/UX Designer, Boyd Lab, University of Illinois at Chicago
Aug 2014 – May 2015, Chicago, IL

- Designed the UI for mobile application and produced wireframes for interactive components
- Conducted semi-structured user interviews to gather insights for app design
- Engaged and collaborated with stakeholders, end users and programmer
- Created 2D animations to explain medication information for low literacy patients

SKILLS

SOFTWARE

Adobe Illustrator
Adobe Photoshop
Adobe InDesign
Adobe After Effects
Adobe Premiere
Adobe XD
ZBrush
Chimera
Autodesk Maya
Autodesk 3ds Max
Unity

KNOWLEDGE

Storyboarding
Concept Art
3D Modeling/Animation
Wireframes & Prototyping
Graphic Design
UI/UX Design
2D Animation
Illustration
Research & Development
Web Design
MEL Script

SERVICE & MEMBERSHIPS

Interaction Design Foundation Member, 2022

Vesalius Trust Board, Director, 3-year term started in June 2022

GNSI online exhibition coordinator, Annual Meeting 2022

American Society for Cell Biology Member, 2019-2020

AMI Annual Conference Workshop Co-Chair, 2019

Association of Medical Illustrators Professional Member, 2013 – 2020

Society for Simulation in Healthcare Member, 2016 – 2017

American Medical Informatics Association Student Member, Jan 2015 – Jan 2016

Association of Medical Illustrators Meeting Student Volunteer, 2014

Treasurer of the Student Association of Medical Artists, UIC, May 2014 – May 2015

Representative on the Harvard Graduate Council, Sep 2012 – Apr 2013

AWARDS & GRANTS

2nd place Cell Bio 2020 image competition video award for animation of TRIM5α Forming a Lattice around HIV Capsid

ASCB Public Engagement Grant: Finding a Refuge in Visualization: teaching scientific animation to high school students from refugee background. 2020-2021

Science Communication Fellow at Natural History Museum of Utah, 2019-2020

Jump ARCHES grant recipient for KneeVIEW: A Virtual Education Window for Musculoskeletal Training , 2017

Nelva B. Richardson Scholarship from Biomedical Visualization Program at UIC, 2015

UIC Graduate Student Travel Award, 2015

Vesalius Trust Research Grant, 2015

UIC Women In Science and Engineering Graduate Student Research Award Honorable Mention, 2015

Scientific Innovation Team Award for galactose-α-1,3-galactose Project at Momenta Pharmaceuticals, 2010

Award for Team Spirit for Sanofi Pasteur's Melanoma Project, 2005

PRESENTATIONS AND INVITED TALKS

Presenter at Guild of Natural Science Illustrators annual meeting, August 13, 2022
Title: "Molecular Visualization Workflow of the Animation Lab (UCSF Chimera & PDB)"

Panelist on Southern California Young Women in Bio 6th Bio-Influencer Session, April 14, 2021

Horizons in Molecular Biology (Virtual meeting), September 14-17, 2020
14th Career Fair of the International Ph.D. Student Symposium Horizons in Molecular Biology, Max Planck Institute for Biophysical Chemistry

AMI Annual Meeting. July 18-21, 2018, Newton, MA.
Title: "Technology, Design and Growing Opportunities in Simulation-based Education"

American Thoracic Society International Conference. May 18-23, 2018, San Diego, CA
Title: "Gamifying Tobacco-Free Kids: Employing Medical Visualization and Games in Youth Anti-Tobacco Outreach.

Spectrum of Ideas Showcase at IMSH. January 14, 2018, Los Angelas, CA
Title: "Engaging Young Minds: Getting Adolescents Thinking About Health"

Poster Presentation: Crawford SY, **Hsu GI**, Wirth SM, Cuellar S, Venepalli NK, Nayak AK, Boyd AD. Patient-centered design in developing mobile application to improve adherence to oral anticancer medications. American Pharmacists Association (APhA) Annual Meeting & Exposition. San Francisco, CA. March 25, 2017.

Poster Presentation at UIC Student Research Forum. April 2, 2015, Chicago, IL
Title: "Design of Customized Mobile Application for Patient Adherence to Oral Anticancer Medications Utilizing User-Centered Design and Animation"

Poster Presentation and Lighting talk at Visualization of Biological Data Meeting.
March 26, 2015, Cambridge, MA
Title: "Communicating Research using Visual Molecular Dynamics (VMD)"

Stenstrom Scholars Presentation at O.A. Parkes Symposium & International Student Conference. March 13, 2015, Augusta, GA
Title: "Molecular Visualization using Visual Molecular Dynamics (VMD)"

Consumer Health Informatics Midwest Conference. Oct 25, 2014, Fort Wayne, IN
Title: "Mobilizing for patient adherence to oral anticancer medications"

EXHIBITION

Association of Medical Illustrators Annual Meeting Student Salon, Jul 2015, Cleveland, OH

Northwestern Public Health Reviews Annual Public Health Matters Seminar gallery exhibition of editorial illustration, Oct 2014, Chicago, IL

Association of Medical Illustrators Annual Meeting Student Salon, Jul 2014, Rochester, MN

Student Association of Medical Artists Art Show, Nov 2014, Chicago, IL

National Museum of Health + Medicine Chicago, "Visible Human Male: Visualization of healthy and diseased organs", Jun 2014, Chicago, IL

Biocommunication Academic Meeting, Salon digital showcase, April 2014, Toronto, ON

PUBLICATIONS

Sinclair, R., **Hsu, G**., Davis, D., Chang, M., Rosquete, M., Iwasa, J. H., & Drakakaki, G. Plant cytokinesis and the construction of new cell wall [published online ahead of print, 2022 Jun 13]. *FEBS Lett.* 2022;10.1002/1873-3468.14426.

Nayak S, Liu H, **Hsu GI**, Iwasa JH. Using 3D Animation to Visualize Hypotheses. T*rends Biochem Sci.* 2020;45(7):633-634.

Crawford SY, Boyd AD, Nayak AK, Venepalli NK, Cuellar S, Wirth SM, **Hsu GI**. Patient-centered design in developing a mobile application for oral anticancer medications. *J Am Pharm Assoc* (2019). Mar-Apr;59(2S):S86-S95.e1

Hsu GIH, Crawford SY, Paolella G, Wirth SM, Cuellar S, Venepalli NK, Wang E, Hughes D, and Boyd AD (2017)."Design of Customized Mobile Application for Patient Adherence to Oral Anticancer Medications Utilizing User-Centered Design." *Journal of Biocommunication*, [S.l.], v. 41, n. 1. ISSN 0094-2499.

Bosques CJ, Collins BE, Meador JW III, Sarvaiya H, Murphy JL, Bulik DA, **Hsu IH**, Washburn N, Sipsey S., Myette JR, Raman R, Shriver Z, Sasisekharan R, and Venkataraman G (2010). "Chinese hamster ovary cells can produce galactose-α-1,3-galactose antigens on proteins." *Nature Biotech.* 28 (11). 1153-1156.

CERTIFICATION

CMI
BOARD OF CERTIFICATION of MEDICAL ILLUSTRATORS