

HyukJae Henry Yoo

Curriculum Vitae
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Full name: Yoo, HyukJae Henry
Nationality: U. S. Citizen living in NYC since 1981
Address: 553 Nordhoff Drive Leonia NJ 07605 USA
Tel: 917-923-9399
Email: HenryYooDesign@Gmail.com
Yoo3@wpunj.edu

Biography

HyukJae Henry Yoo is a designer, an educator, a researcher, and an artist. Prior to joining the faculty at William Paterson University to start the Product & Industrial Design program, He has been a professor of Industrial Design at Pratt Institute in NYC for the last twenty-five years. He has also directed the all-institute [Pratt DAHRC](#)(Digital Arts and Humanities Research Center) for the last five years, which engages in multi-disciplinary research, development, applications, and solutions which seeks to bring about deep empathetic integration of the timeless values with the ever-changing technology. He conducts 70-plus active research efforts through the academic arrangements and his studio ePari LLC. His research and development topics span across humanities, technology, design, arts, music, and entertainment, including categories such as Virtual & Augmented Reality, computational design & digital manufacturing, commerce and education in digital age, and aesthetics of motion and new media. He has played key roles over the last twenty years in bringing to the Pratt community crucial technologies and initiatives, some of which includes 3D CAD, 3D printing, 3D scanning, Motion Capture, Digital Draping, and Virtual/Augmented/Mixed Reality. He lectures, writes, and advises on design, humanity, and technology for museums, cultural organizations, educational institutions and policy makers around the world. Some of his corporate clients and collaborators include BMW, Boeing, Chrysler, PepsiCo, Proctor & Gamble, General Mills, Gucci, Herman Miller, McNeil Associates, MET, New York Historical Society Museum, Philip-Morris, Red Bull, Royal Caribbean Cruise Lines, Samsung, Timex, TEDx, Verizon, Victoria's Secret, Warner Brothers, and YSL.

Academic Teaching | Leadership | Strategic | Policy

William Paterson University Wayne, NJ
Assistant Professor Tenure Track: Department of Art
Courses Taught: Industrial Design | 3D Design | Sculpture

2018-2021

Pratt Institute	Brooklyn, NY	
<i>Professor, Adjunct status: Industrial Design Department</i>		2019-present
<i>Professor, CCE Tenured: Industrial Design Department</i>		2003-2018
<i>Associate Professor: Industrial Design Department</i>		1995-2001
<i>Associate Professor: Digital Arts Department</i>		1996-1998

Courses Taught: Graduate Master's Thesis | Graduate Industrial Design Studio | Digital 3-D Design
Computer-Aided Design | Graduate Level 3D Computer Animation, Character Modeling

Committee Work *Industrial Design Department, Pratt Institute*
 Graduate Curriculum Review Committee
 Graduate Admissions Committee
 Interaction Design Committee / Coordinator
 CAID Curriculum Committee
 2-Dimensional Design Committee
 Search Committee for Full-Time Professor

Committee Work *Institute-Wide, Pratt Institute*
 Technology Advisory Committee / Co-Chair

Weill Cornell Medical College	NYC, NY	
<i>Co-Course Director: BioVisualization</i>		2012-2013
-Curriculum Development and Teaching of Courses for the <i>BioVisualization</i> Initiative		
-Taught Biological visualization principles, methodology, and practice to MD, PhD, and Post-Doc students and researchers		
-Article at http://www.prattdigital.org/pratt-cornell-collaboration-biovisualization/		

Parsons School of Design	NYC, NY	
<i>Adjunct Associate Professor: Design & Technology Department</i>		2002-2003
-Curriculum Development and Teaching: Digital Three-Dimensional Art and Design		

New York University Tisch School of the Arts	NYC, NY	
<i>Adjunct Professor: Maurice Kanbar Institute of Film & Television</i>		1997-1998
-Curriculum Development and Teaching: Three-Dimensional Computer Animation and Graphics		

Research Leadership | Strategic | Talent Development | Creativity Management

Pratt Institute	Brooklyn, NY	
<i>Director: Pratt DAHRC (Digital Arts and Humanities Research Center)</i>		
<i>Pratt Institute</i>		2010-2017
- Strategy Formulation for All-Institute Level Research Center Planning		
- Mentoring of 50+ research fellows		
- Active Research Categories include Virtual Reality, Augmented Reality, Interactive Acoustics, Biosensors, Wearable Computing, Human Computer Interfaces, Gestural Recognition Systems, Aesthetics of 3-D Printing, Fractal Environments & Furniture		

Corporate	EPARI LLC / IPARI, Inc.	NYC, NY	2000-present
	<i>Principal</i>		
	-Design, Product Development, Strategy consulting offering total solution from concept to manufacturing. Interaction Design, User Interface Design, User Experience Design		

	HYrez Studio	NYC, NY	1993-present
	<i>Principal</i>		

-Design and production of 3D digital visualization, animation and interactive content development for virtual environments, scientific conceptualizations, broadcast TV commercials

IPARI and HYrez Studio have realized projects for BMW, Boeing, Chrysler, PepsiCo, Proctor & Gamble, General Mills, Gucci, Herman Miller, McNeil Associates, Philip-Morris, Royal Caribbean Cruise Lines, Samsung, Timex, Victoria's Secret, Warner Brothers, YSL, Zegna amongst others.

Partial List of collaborating design consultancies Include: Henry Dreyfuss Associates, Walter Dorwin Teague Associates, Donald Deskey Associates, and Interbrand

Selected Research Categories and Projects

User Experience Research – Athletes

- Red Bull Sponsored Project for Graduate Industrial Design Studio Course
- Self-Filming and Storytelling Solution for Rock Climbing Sport
- Direct End User Research with World Champion Rock Climbing Athlete [Sasha DiGiulian](#)
- Main Course Director for Research Direction and Design Development

Haptics

- New User Interface and Experience using Wearable Haptic Technology
- Strategic and Advisory role in conception and development of WayBand by WearWorks, recently working with blind marathon runner Simon Wheatcroft to complete the 2017 NYC Marathon without assistance

User Experience Research – Medical Assistive Devices

- Collaborative Research Project with Blythedale Children's Hospital NY
- [Blythedale Children's Hospital](#) Introduction Video
- [Assistive Technology - Unlocking the Future](#)
- Real End Users and Need-Knowers of Medical Assistive Devices
- Device Solution for Assisting Mobility and Living Needs for Paraplegics

Product Innovation & Development Methodology

- Transition of Economy from Tangible to Intangible Goods
- Investigation Development of Emotional Value of Products, Services, and Brands

Design for Social Good: Assistive Technology and Digital Humanitarianism

- Collaboration initiative and projects with global organizations such as [e-NABLE](#) and [TOM](#)(Tikkun Olam Makers) <https://youtu.be/SqYSpyEnVsk>

Virtual Reality | Augmented Reality

- Research on Innovative applications of VR/AR technology
- Application and content development for new user interfaces and immersive sensory experiences
- Category Example – Music + VR <http://www.prattdigital.org/music-vr/>

DIGITAL + SPACE: Space Suits for Citizens

- Research in improved methods of design development and production of space suits for civilian space travels
- <http://www.prattdigital.org/digital-space-final-frontier-and-pratt-dahrc-collaboration-to-explore-spacesuit-design/>
- <http://www.prattdigital.org/digital-fashion-clo-virtual-fashion-collaboration/>

Digital Soft Goods

- Research in improved methods of designing and producing soft goods with textiles and other materials via digital draping and digital patternmaking

Better Music | Music Better

- Inter-disciplinary research on improving music creation performance capabilities through new types of musical instruments, music & performance content creation tools and methods
- Investigation, development, and prototyping of new type of user experience for music & music-related content consumption
- Introductory article at <http://www.prattdigital.org/better-music/>

Health & Athletics

- Deep application of behavioral observation & monitoring for improving public health and performance of athletes via preventative methods

MOTUSTHETICS – Ongoing Research on Aesthetics of Movement

- Capturing, preservation, observation, analysis, and artistic interpretation and expression of well-practiced human body movements such as athletics and dance. The ephemeral and volatile nature of movement

Selected Awards, Exhibitions, Presentations and Papers

Lectures / Exhibits

Eastern and Western Typography Design – MOMA Museum of Modern Art, NYC, NY 2015

-Discussion on How Culture Influence Each Other and How Typography is used in Modern Design

The Master Talk: Mei School's influence on Modern Opera History

Keynote Speech for **120th Anniversary of Beijing Opera Master Mei Lanfang**

With **Jingju Theatre Company & Mei Baojiu at School of Visual Art, NYC 2014**

-Opening Talk on Arts, Culture, Traditions, and Modern Digital Societies

Pratt People Noted – PRATTFOLIO Spring/Summer Issue, 2011

-Article on Recent Research Work, *Cyclamen I*, a Bio-Sensor Project Which Enables Plants to Sing

TEDx Brooklyn – Pratt Institute Art Gallery, Brooklyn, NY 2010

-*Cyclamen I* from “Singing Plants” series Exhibited –Biosensor-Based Interactive Musical Experience with Living Plants Which Sense Living Matters in the Surrounding Environment to Dynamically Produce Music

Design, Technology, and Humanity in 21st Century – Yonsei University, Seoul, Korea 2005

-Lecture given to PhD candidates in Response to Invitation by Cognitive Science and Computer Engineering Department to Speak on Multi-Sensory Perceptions and Interfaces.

Multinational Designers in New York – Sungkok Art Museum, South Korea 2003

-Group of Designers from Multinational Backgrounds Who Work in NYC Were Invited to Exhibit in a Group Show. Designers Invited Were Karim Rashid, Ayse Birsal, Eric Chan, Douglas Lloyd, and HyukJae Henry Yoo. Commissioned and Exhibited Were a Family of Lounge Furniture Designs.

It's Only a Pencil – Article Published on IDSA Industrial Design Society of America 2002

- Article Written About How Technological Tools Influences Design Process, Methods, Thinking, and Business

Selected Awards

Research Grant Award – VERIZON CONNECTED FUTURES RESEARCH

2015-2016

- **Everybody, Everywhere, Everytime** – Development of a toolkit, system and culture for citizen journalism. Easy and accurate capturing and sharing of experiences, made possible through responsible integration of technology and culture.

- Video Sketch: <https://vimeo.com/148760112>

Paper Selection - BLOOMBERG DAGX Data for Good Exchange 2015

Oct. 2015

-Social Enterprise for Climate Improvement Initiative *Fauna & Flora NYC*

-Selected for Presentation at Bloomberg Headquarters, NYC

Presentation - STRATA+HADOOP BIG DATA Conference 2015 **Oct. 2015**
-Social Enterprise for Climate Improvement Initiative [Fauna & Flora NYC](#)
-Selected for Distinguished Presentation at the Big Data Conference 2015

Presentation - NYC Media Lab ANNUAL SUMMIT 2015 **2015**
-Presentation of PRESSMARTS – Smart Products using Pressure Sensors in Meaningful Manner
-Selected for Distinguished Presentation at New York University Skirball Performing Arts Center

Top Award for Interactive Designs - Communication Arts Interactive Design Annual 2001
-Work Featured in the *Communication Arts* Interactive Design CD-ROM and
Communication Arts magazine Winners Issue September/October 2001

Gold Award for B2B Corporate Image CD-ROM - The One Club for Art & Copy 2001
The One Show Interactive Awards Fourth Annual competition
-Work featured in *The 2001 One Show Festival* in NY and the *2001 One Show Book*

Silver Award - I.D. Magazine Interactive Media Design Review 2001
-Interactive Designs from The *International Design* Magazine

Silver Award for New Media 2001 - The Art Directors Club 2001
-The *Art Directors Club 80th Annual Competition* for Excellence in Visual Communications
-Work featured in *The Art Directors Club's 80th Awards* DVD-ROM, the 80th Annual Book, and the 80th
ADC Exhibition and Traveling Exhibits

1st Place Winner - Hunter Douglas Window Covering Competition 1993
-Best Design recognition for an Innovative solution for more efficient and user-friendly design of
Venetian Blind

Certificate of Excellence Award - *Outstanding Merit in Industrial Design Pratt Institute, NYC 1991*

Education	PRATT INSTITUTE MID <i>Master of Industrial Design(Terminal Degree in the Field)</i>	Brooklyn, NY Magna Cum Laude
	UNIVERSITY OF WISCONSIN-MADISON BBA <i>Bachelor of Business Administration</i>	Madison, WI Magna Cum Laude

Committee ***Industrial Design Department, Pratt Institute***

Committees Served on for 10 - 20 years:

- Graduate Curriculum Review Committee
- Graduate Admissions Committee
- Thesis Advisor Curriculum Committee
- Interaction Design Curriculum Committee / Coordinator
- Computer-Aided Industrial Design Curriculum Committee
- 2-Dimensional Design Curriculum Committee
- Search Committee for Full-Time Professor

Institute-Wide, Pratt Institute

- Technology Advisory Committee / Co-Chair
- Search Committee for Academic Computing Director

Advisory	TOM (Tikkun Olam Makers) NYC, NYC	Advisor/Mentor	2017
	<i>MET MedialLab Metropolitan Museum of Arts, NYC</i>	Advisor	2015-2016
	- 3D Virtual Simulation of Garment Patterns 100+ Years Costume Institute Valuts		
	- 3D-Printed Manifestation of Rosary Buds in Candy Using MRI Scan Data of the Artifact		
	<i>New York Historical Society Museum, NYC</i>	Advisor	2015-2016
	- Exhibition Curatorial Advisement for SILICON CITY: Computer History Made in New York		
	<i>Museum of Art & Design, NYC</i>	Advisor	2013
	- Curatorial Advisement on Out of Hand: Materializing the Postdigital		

Skills & Processes

20+ years of practical and teaching experience in visualizing, prototyping, fabricating and storytelling for developing products, services, content, and specifications for production & manufacturing of goods.

Methods and Processes in Industrial and Advanced Manufacturing, Product Development, Prototyping, Physical & Digital Fabrication, Visualization, Communication, 3D Modeling, Animation, Storytelling, Photography, Video, Filmmaking.

Software Applications

Creative, Prototyping and Development Software in the areas of 3D Modeling, Computer-Aided Industrial Design, NURBS Surface Modeling, Animation, Special Effects, Visualization, Interactivity, VR/AR Development, Computational/Procedural/Parametric methods.

An ongoing list of actively used creative software applications include:

<i>Autodesk Maya</i>	<i>Autodesk Alias</i>	<i>Blender</i>
<i>CAD Engineering Solidworks</i>	<i>CAD Fusion 360</i>	<i>CAD OnShape</i>
<i>SideFX Houdini</i>		
<i>Rhino 3D</i>		
<i>Grasshopper</i>		
<i>Pixologic ZBrush</i>		
<i>Pixologic Sculpttris</i>		
<i>MeshLab</i>		
<i>MeshMixer</i>		
<i>Adobe Suite: Photoshop Illustrator Premiere After Effects</i>		
<i>Digital Fashion & Garment Pattern Making, Draping and Design: CLO3D MarvelousDesigner</i>		
<i>Arduino Physical Computing Platform</i>		
<i>Max/MSP</i>		
<i>Unity 3D / Unreal Engine</i>		
<i>Virtual Reality / Augmented Reality Development Platforms</i>		
<i>HTC VIVE Oculus Rift Microsoft HoloLens</i>		
<i>Android App Development Platform</i>		

Computational & Traditional Fabrication Methods, Processes, and Materials

3D Printing	CNC Machining	Robotic Fabrication
Wood	Metal	Polymers