# Iman Sadeghi, Ph.D.

Principal Software & Technology Consultant

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As an award-winning computer scientist and software engineer with a doctorate and master's degree in Computer Science from the University of California, San Diego, my professional journey spans prestigious organizations such as Google, Walt Disney Animation Studios, and Lucasfilm. These valuable experiences have enriched my expertise in a broad range of computer science and software engineering disciplines.

At Quandary Peak Research, I specialize in delivering deposition/trial testimony, declarations, and reports in the fields of computer graphics, 3D rendering, 3D animation, 3D geometry processing, software engineering, system architecture, algorithms, and data structures, as well as source code analysis for software litigation. My focus revolves around patent infringement, trade secret misappropriation, intellectual property violation, copyright piracy, and breach-of-contract matters. Leveraging my expertise, I analyze complex software systems, evaluate software production quality, and elucidate software functionalities. This crucial analysis empowers legal professionals with indispensable insights into the technical aspects of their cases.

## **Education**

#### Ph.D. in Computer Science

University of California, San Diego | La Jolla, CA | 2008–2011 Ph.D. Dissertation: Controlling the Appearance of Specular Microstructures

## M.Sc. in Computer Science

University of California, San Diego | La Jolla, CA | 2006–2008 *M.Sc. Thesis: Photorealistic Rendering of Human Hair Fibers* 

#### **B.Sc. in Computer Engineering**

Sharif University of Technology | Tehran, Iran | 2002–2006 B.Sc. Thesis: Optimal Point Removal in Closed-2PM Labeling

## **Filed Patents**

- Google | 2014-2016
  - Event Grouping Using Time Zones · GP-21579-00-US · US 2016/0027037 A1
  - Cross-Campaign Event Attribution · GP-21577-00-PR
  - Late Conversion Event Attribution · GP-21580-00-US
  - Event Attribution Using Backfill Operation GP-21581-00-US
  - Event Attribution and Frequency Grouping · GP-21578-00-US
- Walt Disney Animation Studios | 2010-2014
  - System and Method for Artist Friendly Controls for Hair Shading · US 8,674,988 B2 · US 2011/0304623 A1

# Select Employment

#### **Quandary Peak Research**

Principal Software & Technology Consultant | Los Angeles, CA | June 2023-Present

- Providing deposition/trial testimony, declarations, and expert reports in the fields of computer graphics, 3D rendering,
   3D animation, 3D geometry processing, software engineering, system architecture, algorithms, and data structures.
- Conducting in-depth source code analysis in software litigation involving patent infringement, trade secret misappropriation, intellectual property violation, copyright piracy, and breach-of-contract matters.
- Empowering legal professionals with indispensable insights into the technical aspects of their cases.

#### Google

Researcher / Software Engineer | Santa Monica, CA & Venice, CA | 2011–2017

- Gained experience with robust software system architectures, reliable scalable distributed systems, and deep convolutional neural networks.
- Machine Learning [2015-2017]
  - Worked on optimizing Artificial Intelligence models and Deep Convolutional Neural Networks used in Google's Face Tracking and Face Recognition.
- Advertisement [2013-2015]
  - Worked on reporting, targeting, and optimizing Reach and Frequency metrics for brand advertisers with a focus on views (CPM) versus clicks (CPC) in Google AdSense.
- Image Processing [2011-2013]
  - Worked on image encoding, editing, and compression as well as auto-enhancement features in Google Photos.

#### **ILM: Industrial Light & Magic**

Research & Development Engineer | San Francisco, CA | 2010

 Worked and conducted research in Lucasfilm's Visual Effects R&D Department on designing and implementing a volumetric approximation for 3D geometry occlusion under image-based lighting.

#### **Walt Disney Animation Studios**

Research & Development Engineer / Consultant | Burbank, CA | 2008 & 2009

 Worked and conducted research in the Look Development Department on designing, implementing, publishing, and patenting "An Artist Friendly Hair Shading System" for the production of the Disney movie "Tangled."

## CISA3: Center of Interdisciplinary Science for Art, Architecture and Archaeology

Graduate Researcher & Developer | La Jolla, CA | 2007–2008

Worked and conducted research in the Visualization Group on 3D rendering and real-time visualization.

# Calit2: California Institute for Telecommunications and Information Technology

Computer Graphics Engineer | La Jolla, CA | 2007

- Worked and conducted research in the Immersive Visualization Lab on 3D rendering and real-time visualization.

#### **Jacobs School of Engineering, University of California San Diego**

Graduate Research Associate | La Jolla, CA | 2007-2011

- Conducted research on computer graphics, photorealistic rendering, and advanced appearance modeling.

## IPM: Institute for Studies in Theoretical Physics and Mathematics

Undergraduate Research Associate | Tehran, Iran | 2005–2006

Conducted research on designing optimal algorithms for map labeling.

#### **Pinscreen**

Vice President of Engineering | Santa Monica, CA | 2017

Worked on the development and rendering of user-generated and personalized 3D virtual avatars.

# **Litigation Consulting**

1. Xsolla (USA), Inc. v. Aghanim Inc., et al. | June 2025-Present

Jurisdiction: US District Court, Central District of California

Case Number: 2:24-cv-02116

Counsel: Orrick Herrington and Sutcliffe LLP

Nature of Suit: Trade Secret

Technology: Game Backend Platforms, Payment Systems, Personalization & Analytics

2. Deltux Software Company Inc. v. Apptivo, Inc., et al. | June 2025-Present

Jurisdiction: Superior Court of California, Orange County

Case Number: 30-2021-01195551

Counsel: Burkhalter Kessler Clement & George LLP

Nature of Suit: Trade Secret

Technology: Mobile Apps, Customer Relationship Management (CRM), Geo-Analytics

#### 3. Wave Sense, LLC v. Samsung Electronics Co. Ltd

and Samsung Electronics America, Inc. | May 2025-Present

Jurisdiction: US District Court for the Eastern District of Texas

Case Number: 2:24-cv-00920 Counsel: Skiermont Derby, LLP

Nature of Suit: Patent

Technology: Digital Signal Processing, Motion Detection, Sensing Technology

4. Krueger v. HTC et al. | May 2025-Present

Jurisdiction: Superior Court of California, Placer County

Case Number: s-cv-0047000 Counsel: Greenbaum Law Firm Nature of Suit: Personal Injury

Technology: Virtual Reality (VR), Immersive Simulation, Motion Tracking

5. Yieldmo, Inc. v. Teads, Inc., Teads SA, Teads S.a.r.l. | May 2025-Present

Jurisdiction: US District Court for the Southern District of New York

Case Number: 1:25-cv-00737 Counsel: Global IP Law Group LLC

Nature of Suit: Patent

Technology: Digital Advertising, Interactive Media, Dynamic Content Delivery

#### 6. Revenue Management Solutions, LLC v. Commerce Bank | Apr 2025-Present

Jurisdiction: US District Court for the Western District of Missouri

Case Number: 4:25-cv-00140
Counsel: Banner Witcoff
Nature of Suit: Trade Secret

Technology: Software as a Service (SaaS), Data Processing, Large Language Models (LLMs)

## 7. Algebraix LLC v. International Business Machines Corporation (IBM) | Mar 2025-Present

Jurisdiction: US District Court for the Eastern District of Texas

Case Number: 2:24-cv-00999

Counsel: Nelson Bumgardner Conroy PC

Nature of Suit: Patent

Technology: Distributed Systems, Cloud Computing, Databases

## 8. International Semiconductor Group Patent Analysis of Wireless Devices

and Components (Plaintiff v. Defendant) | Mar 2025-Present

Jurisdiction: International Trade Commission (ITC)

Case Number: 337-TA-1429

Counsel: Sterne, Kessler, Goldstein & Fox PLLC

Nature of Suit: Patent

Technology: Wireless Communication, Data Transmission, Digital Signal Processing

## 9. Confidential Technology Litigation (Plaintiff v. <u>Defendant</u>) | Feb 2025-Present

Jurisdiction: US District Court for the Eastern District of Texas

Counsel: Dorsey & Whitney LLP

Nature of Suit: Patent

Technology: User Interface, Input Devices, Sensing Technology

## 10. Intrepid Automated, Inc. v. 3D Systems Corporation | Jan 2025-Present

Jurisdiction: US District Court for the Southern District of California

Case Number: 3:24-cv-02262

Counsel: Smith, Gambrell & Russell, LLP

Nature of Suit: Patent

Technology: 3D Printing, Multi Projection, Geometric Correction, Edge Blending

#### 11. **Skillz Platform Inc. v. Voodoo SAS, et al.** | Oct 2024-Present

Jurisdiction: US District Court for the Southern District of New York

Case Number: 1:24-cv-04991

Counsel: Jones Day

Nature of Suit: False Advertising, Unfair Competition

Technology: Online Games, Bot Detection, Asynchronous Matching

#### 12. Geodis Logistics, LLC v. Grenzebach Corporation | Sept 2024-May 2025

Jurisdiction: American Arbitration Association

Case Number: 01-23-0001-1178

Counsel: Bradley Arant Boult Cummings LLP Nature of Suit: Breach-of-Contract, Arbitration

Technology: Software Engineering, Software Reliability, Memory Management

## 13. Convergent Assets, LLC v. Dick's Sporting Goods, Inc. | Aug 2024-Present

Jurisdiction: US District Court for the Eastern District of Texas

Case Number: 4:24-cv-00567 Counsel: Direction IP Law Nature of Suit: Patent

Technology: Digital Advertising, Social Media, Ad Targeting

#### 14. iSpot.tv, Inc. v. Nadya Teyfukova and Entertainment Data Oracle, Inc. | Aug 2024-Present

Jurisdiction: US District Court for the Central District of California

Case Number: 2:21-cv-06815

Counsel: Holwell Shuster & Goldberg LLP Nature of Suit: Trade Secret, Breach of Contract

Technology: Digital Advertising, Databases, Application Programming Interfaces (APIs)

## 15. Universal Music Group Recordings, Inc. v. Frontier Communications Corp. | July 2024-May 2025

Jurisdiction: US District Court for the Southern District of New York

Case Number: 1:21-cv-05050|20-22476

Counsel: Day Pitney, LLP Nature of Suit: Copyright

Technology: Internet Service Providers (ISPs), Internet Protocols, Peer-to-Peer (P2P) Networking

#### 16. **D4D Technologies, LLC v. Medit Corporation** | Apr 2024–Sept 2024

Jurisdiction: US District Court for the Western District of Texas

Case Number: 6:21-cv-01176 Counsel: Scheef & Stone, LLP

Nature of Suit: Patent

Technology: 3D Scanning, 3D Geometry, Medical Imaging

#### 17. InQuisient, Inc. v. ServiceNow, Inc. | Mar 2024-Nov 2024

Jurisdiction: US District Court for the District of Delaware

Case Number: 1:22-cv-00900 Counsel: Fish & Richardson P.C.

Nature of Suit: Patent

Technology: Cloud Solutions, Databases, Enterprise Software

#### 18. Artec Europe S.A.R.L. v. Shenzhen Creality 3D Technology Co., Ltd., et al. | Feb 2024-Present

Jurisdiction: US District Court for the Eastern District of New York

Case Number: 1:22-cv-01676

Counsel: Munck Wilson Mandala, LLP

Nature of Suit: Patent

Technology: 3D Scanning, Structured Light, Epipolar Geometry, User Interface

# 19. Electronic Devices Including Smartphones, Computers, Tablet Computers, and Components Thereof (Plaintiff v. Defendant) | Dec 2023-Present

Jurisdiction: International Trade Commission (ITC)

Case Number: 337-TA-1373 Counsel: Alston & Bird, LLP Nature of Suit: Patent

Technology: Video Codecs, Digital Signal Processing, System on a Chip (SoC)

#### 20. **3D Systems, Inc. v. Ben Wynne, et al.** | Sept 2023-Present

Jurisdiction: US District Court for the Southern District of California

Case Number: 3:21-cv-01141

Counsel: Smith, Gambrell & Russell, LLP

Nature of Suit: Trade Secrets, Breach of Contract

Technology: 3D Printing, Multi Projection, Edge Blending

#### 21. Avelardo Rivera and Yasmine Romero v. Amazon Web Services, Inc. | July 2023-Present

Jurisdiction: US District Court for the Western District of Washington

Case Number: 2:22-cv-00269

Counsel: Edelson P.C. Nature of Suit: Class Action

Technology: Face Recognition, Cloud Computing, Privacy

# **Intellectual Property Consulting**

#### 1. Farjami & Farjami LLP | May 2025-Present

Nature of Consultation: Patent Analysis

Technology: Speech Recognition, Unsupervised Machine Learning

#### 2. Confidential Technology Company | May 2025-Present

Nature of Consultation: Patent Acquisition Analysis

Technology: Real-Time Ray Tracing, Bounding Volume Hierarchies (BVHs)

#### 3. Confidential Technology Company | Feb 2025-Present

Nature of Consultation: Patent Acquisition Analysis Technology: Content Distribution, Navigation Systems

#### 4. Confidential Technology Company | Jan 2025-Present

Nature of Consultation: Patent Portfolio Analysis Technology: Digital Advertising, Machine Learning

#### 5. Confidential Technology Company | Dec 2024-Present

Nature of Consultation: Patent Analysis

Technology: Video Codecs, Signal Processing, Streaming Technology

#### 6. Sullivan & Cromwell, LLP | May 2024-Present

Nature of Consultation: Patent Analysis

Technology: Load Balancing, Virtualization, Cloud Computing, Big Data

#### 7. Security First Innovations, LLC | Sept 2023-Present

Nature of Consultation: Patent Analysis

Technology: Security, Encryption, Cloud Storage, Big Data

# **Technical Due Diligence & Audits**

#### 1. ECRS Software Corporation Technical Audit & Assessment | Sept 2024-Feb 2025

Counsel: Wilson Elser Moskowitz Edelman & Dicker LLP

Nature of Consultation: Software Analysis

Technology: E-Commerce, Synchronization, Software Reliability

## **Select Peer-Reviewed Publications**

• Iman Sadeghi, Oleg Bisker, Joachim De Deken, and Henrik Wann Jensen | 2013

#### A Practical Microcylinder Appearance Model for Cloth Rendering

ACM Transactions on Graphics 32 (2), SIGGRAPH 2013.

• Nima Sadeghi, Iman Sadeghi, and Shahriar Mirabbasi | 2013

## Analysis and Design of Monolithic Resistors with Desired Temperature Coefficient

IET Circuits, Devices & Systems.

 Iman Sadeghi, Adolfo Munoz, Philip Laven, Wojciech Jarosz, Francisco Seron, Diego Gutierrez, and Henrik Wann Jensen | 2012

#### **Physically-Based Simulation of Rainbows**

ACM Transactions on Graphics 31 (1), SIGGRAPH 2012.

· Iman Sadeghi | 2011

#### **Controlling the Appearance of Specular Microstructures**

Ph.D. Dissertation, Jacobs School of Engineering, University of California San Diego.

Wojciech Jarosz, Derek Nowrouzezahrai, Iman Sadeghi, Henrik Wann Jensen | 2011

#### A Comprehensive Theory of Volumetric Radiance Estimation using Points & Beams

ACM Transactions on Graphics 30 (1), SIGGRAPH 2011.

• Iman Sadeghi, Heather Pritchett, Henrik Wann Jensen, Rasmus Tamstorf | 2010

#### An Artist Friendly Hair Shading System

ACM Transactions on Graphics 29 (4), SIGGRAPH 2010.

• Iman Sadeghi, Rasmus Tamstorf | 2010

#### Efficient Implementation of Dual Scattering Model in RenderMan

Disney Technical Reports.

• Iman Sadeghi, Bin Chen, Henrik Wann Jensen | 2009

#### **Coherent Path Tracing**

Journal of Graphics, GPU, & Game Tools 14 (2).

Iman Sadeghi | 2008

#### Photorealistic Rendering of Human Hair Fibers

M.Sc. Thesis, Jacobs School of Engineering, University of California San Diego.

Farshad Rostamabadi, Iman Sadeghi, Mohammad Ghodsi, Ramtin Khosravi | 2008

#### **Optimal Point Removal in Closed-2PM Labeling**

Information Processing Letters, Elsevier, 105 (3).

## **Panels & Posters**

· Panelist and Presenter

#### AI, LLMs, and Data Privacy

University of Illinois Chicago School of Law | 2025

Panel Moderator, Panelist, and Presenter

#### Intellectual Property, Information & Privacy Law Conference

University of Illinois Chicago School of Law | 2024

Poster Presenter

#### A Physically Based Anisotropic Iridescence Model for Rendering Morpho Butterflies

University of California San Diego Research EXPO | 2008

## **Awards & Honors**

• Erdös-Bacon Number 6 | 2010

Erdös Number 4 and Bacon Number 2

- Walt Disney Animation Studios Fellowship | 2009
- · Awarded for hair rendering research on the Disney movie Tangled | Burbank, CA
- Best Social Networking App | 2009

Awarded during the Qualcomm Innovation Challenge | La Jolla, CA

Featured on Magazine Front Cover | 2009

Optics and Photonics News Magazine

· Chancellor's Interdisciplinary Collaboratories Fellowship | 2008

Awarded from CISA3, the Center of Interdisciplinary Science for Art, Architecture & Archaeology | La Jolla, CA

Grand Prize Award | 2007

Winner of the University of California San Diego's Rendering Competition 2007 | La Jolla, CA

• Best Graphics Design | 2007

Winner of The Open Protein Structure Network logo design contest

· CalRA Fellowship | 2006-2007

Awarded from Jacobs School of Engineering, UC San Diego | La Jolla, CA

• Ranked 1st in Cumulative GPA | 2002-2006

Class of 2002, Computer Engineering Department, Sharif University of Technology | Tehran, Iran

• Silver Medal Award | 2002

National Olympiad of Informatics | Iran

· Admitted to The National Organization for Development of Exceptional Talents | 1995 & 1998

Less than the top 1% of students nationwide are admitted to the program | Iran

## **Movie Credits**

• Tangled | 2010

Look Development | Hair Rendering Development Walt Disney Animation Studios

# **Invited Talks**

Beyond Access: Al and the Illusion of Privacy in the Age of LLMs
 University of Illinois Chicago School of Law | 2025

- Into the Unknown: Navigating the Complexities of Litigating Emergent Abilities of AI University of Illinois Chicago School of Law | 2024
- In Pursuit of Pixels: Journey Through Computer Science & Computer Graphics
   University of California San Diego, Computer Science & Engineering Lecture Series | 2017

Appearance Modeling for Digital Humans - In Pursuit of Pixels

University of Southern California, Graduate Course CSCI 621: Digital Geometry Processing | 2017

· Hair Rendering from Theory to Practice

University of California San Diego, Graduate Course CSE 272: Advanced Appearance Modeling | 2010

· State of the Art in Hair Rendering

Walt Disney Animation Studios, Look Development Department | 2008

Photorealistic Rendering of Morpho Butterflies

Arizona State University, Conference "Iridescence: More than Meets the Eye" | 2008

# Invited Judge, Reviewer & Moderator

- Distinguished Judge | University of California San Diego Research Expo 2025
- Moderator | Intellectual Property, Information & Privacy Law Conference 2024
- Judge | University of California San Diego CSE Summer Internship Symposium 2024
- Distinguished Judge | University of California San Diego Research Expo 2024
- Reviewer | Eurographics Conference 2024
- Reviewer | ACM SIGGRAPH Conference 2022
- VIP Judge | University of California San Diego Research Expo 2017
- Reviewer | ACM SIGGRAPH Asia Conference 2011
- Reviewer | Computers & Graphics Journal, Elsevier 2010
- Reviewer | ACM SIGGRAPH Asia Conference 2010
- Judge | University of California San Diego Research Expo 2013
- Judge | University of California San Diego Rendering Competition 2010
- Reviewer | ACM Transactions on Graphics Conference 2009
- Judge | University of California San Diego Rendering Competition 2008

# **Teaching Experience**

- University of California, San Diego | La Jolla, CA | 2007–2011
  - o **Teaching Assistant** | CSE 20: Discrete Mathematics | Spring 2011
  - Senior Teaching Assistant | CSE 21: Mathematics for Algorithms and Systems | Winter 2011
  - o Senior Teaching Assistant | CSE 8A: Introduction to Computer Science: Java | Fall 2010
  - o Teaching Assistant | CSE 167: Computer Graphics | Fall 2010
  - o Teaching Assistant | CSE 20: Discrete Mathematics | Spring 2010
  - Senior Teaching Assistant | CSE 101: Design & Analysis of Algorithms | Winter 2010
  - Senior Teaching Assistant | CSE 100: Advanced Data Structures | Fall 2009
  - o Senior Teaching Assistant | CSE 167: Computer Graphics | Fall 2007
- National Ministry of Education | Tehran, Iran | 2005
  - Teaching Discrete Mathematics for the Olympiad of Informatics to high school students.
- Young Scholars Club | Tehran, Iran | 2004
  - Teaching Combinatorics and Informatics at Farzanegan High School

- Sharif University of Technology | Tehran, Iran I 2003–2006
  - o Senior Teaching Assistant | CE254: Design & Analysis of Algorithms | Fall 2006
  - o Senior Teaching Assistant | CE364: Programming Languages | Fall 2005
  - o Teaching Assistant | CE443: Computer Networks | Spring 2005
  - o Teaching Assistant | CE417: Artificial Intelligence | Fall 2004
  - o Senior Teaching Assistant | CE115: Discrete Mathematics | Fall 2003

## **Technical Skills**

#### Software & Technology

Artificial Intelligence, System Architecture, Distributed Systems, Parallel Processing, Operating Systems, Machine Learning, Databases, Cryptography, Software Testing, Privacy, Search Engine Optimization, and Big Data.

## Computer Graphics

Rendering, Virtual Reality, Augmented Reality, Ray Tracing, Path Tracing, Photon Mapping, Image Processing, Visualization, Rasterization, Geometry Processing, 3D Modeling, Appearance Modeling, and 3D Animation.

#### Algorithms & Complexity

Data Structures, Dynamic Programming, Divide & Conquer, Approximation Algorithms, Computational Geometry, Randomized Algorithms, Time & Space Complexity, Online Algorithms, Greedy Algorithms, and Game Theory.

## Software Programming Languages

C/C++, Java, C#, OpenGL, RSL, Pascal, PHP, HTML, CSS, JavaScript, XML, SQL, and LaTex.

#### Operating Systems

Windows, Linux, Mac OS, and Android.

# **Technical Coursework**

• Graduate Level | University of California, San Diego | 2006-2011

Adv. Appearance Modeling	Α+	3D Geometry Processing	A+	Algorithm Design & Analysis	A+
Rendering Algorithms	Α	Virtual Reality Principles	Α	Software Engineering	Α
Computer Animation	Α+	Cognitive Science Seminar	Α	Operating Systems	Α

#### • Undergraduate Level | Sharif University of Technology | 2002–2006

Advanced Algorithms	A+	Artificial Intelligence	A+	C++ Programming	A+
Computer Graphics	A+	Systems Analysis	A+	Java Programming	A+
Engineering Graphics	A+	Theory of Computation	Α	Programming Languages	Α+
Software Engineering	A+	Adv. Information Retrieval	Α	Discrete Mathematics	A+
Compiler Design	A+	Project Management	Α	Probability & Statistics	Α
Computer Networks	A+	Logic Circuits	A+	Electronic Circuits	Α
Computer Networks Lab.	A+	Logic Circuits Lab.	A+	Electronic Circuits Lab.	A+
Computer Architecture Lab.	A+	Digital Systems Design Lab.	A+	Computer Workshop	A+

# **Professional Associations**

- UCSD: University of California San Diego
- UCSD Alumni Association
- ACM: Association for Computing Machinery
- ACM TOG: ACM's Transactions On Graphics
- ACM SIGGRAPH: ACM's Special Interest Group on Computer Graphics and Interactive Techniques
- UCSD ACM Programming Team in Southern California Regional Programming Contest
- IEEE: Institute of Electrical and Electronics Engineers
- IEEE Computer Society

## **Other Associated Articles**

Included for background disclosure purposes only.

- Avatar digitization from a single image for real-time rendering ACM SIGGRAPH Asia 2017.
- Pinscreen: creating performance-driven avatars in seconds ACM SIGGRAPH 2017 Real Time Live!

## **Passions & Pursuits**

- · Adventure: Traveling, Skydiving, Scuba Diving, Rock Climbing, Paragliding, and Skiing
- · Visual Arts: Photography, Drawing, Painting, Caricaturing, Animation, and Sculpting
- Philosophy: Consciousness, Metaphysics, Epistemology, Ethics, and Faith