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. **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
2. **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-3785
   Counsel: Sterne, Kessler, Goldstein & Fox PLLC
   Nature of Suit: Patent
3. **Confidential Technology Litigation (Plaintiff v. Defendant) |** Feb 2025–Present
   Jurisdiction: US District Court for the Eastern District of Texas
   Counsel: Dorsey & Whitney LLP
   Nature of Suit: Patent
4. **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
5. **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
6. **Geodis Logistics, LLC v. Grenzebach Corporation |** Sept 2024–Present
   Jurisdiction: American Arbitration Association
   Case Number: 01-23-0001-1178
   Counsel: Bradley Arant Boult Cummings LLP
   Nature of Suit: Breach-of-Contract, Arbitration

7. **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
8. **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
9. **Universal Music Group Recordings, Inc. v. Frontier Communications Corp.** | July 2024–Present
   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
10. **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
11. **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
12. **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
13. **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
14. **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
15. **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

Intellectual Property Consulting

1. **Confidential Technology Company** | Feb 2025–Present
   Nature of Consultation: Patent Acquisition Analysis
   Technology: Content Distribution, Navigation Systems
2. **Confidential Technology Company** | Jan 2025–Present
   Nature of Consultation: Patent Portfolio Analysis
   Technology: Digital Advertising
3. **Confidential Technology Company** | Dec 2024–Present
   Nature of Consultation: Patent Analysis
   Technology: Video Codecs, Signal Processing and Streaming Technology
4. **Confidential Technology Company** | Nov 2024–Dec 2024
   Nature of Consultation: Patent Analysis
   Technology: 5G, Wireless, Bluetooth and Operating Systems
5. **Sullivan & Cromwell, LLP |** May 2024–Present
   Nature of Consultation: Patent Analysis
   Technology: Load Balancing, Virtualization, Cloud and Big Data Infrastructure
6. **Security First Innovations, LLC |** Sept 2023–Present
   Nature of Consultation: Patent Analysis
   Technology: Security, Encryption, Storage, Cloud and Big Data Infrastructure

Technical Due Diligence & Audits

1. **Wilson Elser Moskowitz Edelman & Dicker LLP** | Sept 2024–Present
   Nature of Consultation: Software Analysis
   Technology: E-Commerce, Synchronization, Software Reliability

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

- Panel Moderator & Panelist
  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

- ***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

- **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
  - **Teaching Assistant** | CSE 20: Discrete Mathematics | Spring 2011
  - **Senior Teaching Assistant** | CSE 21: Mathematics for Algorithms and Systems | Winter 2011
  - **Senior Teaching Assistant** | CSE 8A: Introduction to Computer Science: Java | Fall 2010
  - **Teaching Assistant** | CSE 167: Computer Graphics | Fall 2010
  - **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
  - **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
  - **Senior Teaching Assistant** | CE254: Design & Analysis of Algorithms | Fall 2006
  - **Senior Teaching Assistant** | CE364: Programming Languages | Fall 2005
  - **Teaching Assistant** | CE443: Computer Networks | Spring 2005
  - **Teaching Assistant** | CE417: Artificial Intelligence | Fall 2004
  - **Senior Teaching Assistant** | CE115: Discrete Mathematics | Fall 2003

Technical Coursework

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

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

- **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	A	Programming Languages	A+
Software Engineering	A+	Adv. Information Retrieval	A	Discrete Mathematics	A+
Compiler Design	A+	Project Management	A	Probability & Statistics	A
Computer Networks	A+	Logic Circuits	A+	Electronic Circuits	A
Computer Networks Lab.	A+	Logic Circuits Lab.	A+	Electronic Circuits Lab.	A+
Computer Architecture Lab.	A+	Digital Systems Design Lab.	A+	Computer Workshop	A+

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.

Professional Associations

- University of California San Diego 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
- University of California San Diego's ACM Team in Southern California Regional Contest | 2007
- IEEE: Institute of Electrical and Electronics Engineers
- IEEE Computer Society

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