JORGE JIMENEZ

GAME DEVELOPER

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BACKGROUND

Jorge Jimenez is a passionate Game Developer with more than 16 years of experience. He received his PhD degree in real-time graphics and photorealism from Universidad de Zaragoza in 2012. He currently is the Studio Head and the Director of Creative Engineering at Striking Distance Studios Spain, where he built a 14-people studio from the ground up while leading the Technical Visuals of The Callisto Protocol. Previously, he was a Technical Director at Activision Blizzard, where he contributed to multiple Call of Duty games. Some of his interests include creative thinking, ideation, creation and innovation. He has a passion for videogames, real-time rendering, photorealism, digital humans, art, visual effects and photography. With a dual academic and industry background, he has cultivated a simultaneously rigorous and pragmatic vision, and developed artistic abilities, judgment and aesthetic sense, which in conjunction with its positive and energetic attitude help him to pursue photorealism. The academic roots in his career served him to develop the abilities to contribute to the entertainment industry in the form of conferences, books, and journals, including SIGGRAPH[1], GDC[1] and Transaction on Graphics[1]. Ultimately, his mission is to explore new mediums of creating emotion in games, by aspiring to break the barriers of current and future media and hardware. He loves challenges and metaphorically speaking, he is always looking for the next mountain to climb.

EXPERIENCE

★ **STRIKING DISTANCE STUDIOS**
General Manager and Director of Creative Engineering, *December 2019 – Now*

★ **ACTIVISION BLIZZARD**
Graphics R&D Technical Director, *March 2012 – December 2019*

EDUCATION

★ **UNIVERSIDAD DE ZARAGOZA**
PhD in Computer Science, Real-Time Graphics, *July 2012*

GAME CREDITS

- ★ The Callisto Protocol
- ★ Call of Duty WW2
- ★ Call of Duty Advanced Warfare
- ★ Call of Duty Modern Warfare
- ★ Call of Duty Infinite Warfare
- ★ Call of Duty Ghosts
- ★ Call of Duty Black Ops 4
- ★ Call of Duty Black Ops 3
- ★ StarCraft 2

CORE ACHIEVEMENTS

- ★ In 2012, he released the culmination of his PhD, the movie Separable Subsurface Scattering, which got 0.8 million views after showing unique *practical real-time* human rendering qualities that combined both technical and art direction skills. This work opened the door to pioneer remote work for AAA videogame development, in a time where it was not the norm.
- ★ In 2013, his work in Activision in digital humans resulted in the GDC talk Next Generation Character Rendering, which received 1.5 million views on YouTube. Five years after, this work influenced the rendering of digital humans of several AAA games and engines.
- ★ Until 2019, he contributed to raise the bar of the Call of Duty visuals, with significant roles in digital humans, post-processing, temporal upsampling and antialiasing, lighting, materials and low level performance – always looking for the next leap on videogame graphics.
- ★ Since then, he built a 14-people studio from the ground up with Striking Distance Studios, and directed the Technical Visuals of The Callisto Protocol in the pursue of photorealism, striving to go beyond the boundaries of what the current generation of consoles (PS5, XSS/X) had shown so far. The work in real-time photorealistic characters got nominated to the Outstanding Animated Character 2023 VES Award.

[1] SIGGRAPH, GDC and Trans. on Graphics are the conferences and journal with the largest impact on graphics and games.

SELECTED PUBLICATIONS

- ★ **SEPARABLE SUBSURFACE SCATTERING**
  Computer Graphics Forum, Eurographics Symposium on Rendering 2015. Project info
- ★ **SMAA: ENHANCED SUBPIXEL MORPHOLOGICAL ANTIALIASING**
  Computer Graphics Forum, EUROGRAPHICS 2012. Project info
- ★ **A PRACTICAL APPEARANCE MODEL FOR DYNAMIC FACIAL COLOR**
  ACM Transactions on Graphics, SIGGRAPH Asia 2010. Project info
- ★ **REAL TIME REALISTIC SKIN TRANSLUCENCY**
  IEEE Computer Graphics & Applications, 2010. Project info
- ★ **SCREEN-SPACE PERCEPTUAL RENDERING OF HUMAN SKIN**
  ACM Transactions on Applied Perception, 2009. Project info
- ★ **GAZE-BASED INTERACTION IN VIRTUAL ENVIRONMENTS**
  The Journal of Universal Computer Science, 2008

COURSES

- ★ **FILTERING APPROACHES FOR REAL-TIME ANTI-ALIASING**
  SIGGRAPH 2011. Project info

BOOK CHAPTERS

- ★ **PRACTICAL MORPHOLOGICAL ANTI-ALIASING**
  GPU Pro 2, 2011. Project info
- ★ **REAL-TIME FACIAL WRINKLES ANIMATION**
  GPU Pro 2, 2011. Project info
- ★ **SCREEN-SPACE SUBSURFACE SCATTERING**
  GPU Pro, 2010. Project info

SELECTED TALKS

- ★ **SIGGRAPH 2023:** The Rendering of “The Callisto Protocol”. *U.S.*
- ★ **GDC 2023:** The Character Rendering Art of “The Callisto Protocol”. *U.S.*
- ★ **CEIG 2018 KEYNOTE:** Towards Photorealism in 16.6ms. *Spain*
- ★ **DIGITAL DRAGONS 2018:** Dynamic Temporal Antialiasing and Upsampling in Call of Duty. *Poland*
- ★ **HIGH PERFORMANCE GRAPHICS 2017:** MLAA from 2009 to 2017. *U.S.*
- ★ **SIGGRAPH 2017:** Dynamic Temporal Antialiasing in Call of Duty: Infinite Warfare. *U.S.*
- ★ **SIGGRAPH 2016:** Filmic SMAA: Sharp Morphological and Temporal Antialiasing. *U.S.*
- ★ **SIGGRAPH 2016:** Practical Realtime Strategies for Accurate Indirect Occlusion. *U.S.*
- ★ **SIGGRAPH 2014:** Next Generation Post Processing in Call of Duty: Advanced Warfare. *Canada*
- ★ **GDC 2013 AND GDC CHINA 2013:** Next Generation Character Rendering. *U.S. and China*
- ★ **SIGGRAPH 2013:** Digital Ira: High-Resolution Facial Performance Playback. *U.S.*
- ★ **SIGGRAPH 2012:** Separable Subsurface Scattering & Photorealistic Eyes Rendering. *U.S.*
- ★ **EUROGRAPHICS 2012:** SMAA: Enhanced Subpixel Morphological Antialiasing. *Italy*
- ★ **FMX 2012:** Real-Time Realistic Skin Rendering. *Germany*
- ★ **SIGGRAPH 2011:** Jimenez's MLAA & SMAA. *Canada*
- ★ **SIGGRAPH ASIA 2010:** A Practical Appearance Model for Dynamic Facial Color. *South Korea*
- ★ **APGV 2009:** Screen-space perceptual rendering of human skin. *Greece*

SKILLS

Passionate for Games | Leadership | Creative | Enterprising | Determined | Thirst for Knowledge

Communicative | Honest | Convincing | Receptive

Eye for Photorealism | Taste for Visuals | Pragmatic & Academic Vision | Rendering

Technical Art | Optimization | 3D Authoring & Modelling | Photography & Editing