

ALAN LITTENEKER

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EDUCATION:

University of California, Los Angeles, Los Angeles, California

- **Ph.D. Computer Science**

October 2016–June 2023

- Major in Graphics and Vision
- Minors in Artificial Intelligence and Programming Languages
- Dissertation: “Towards Intelligent Computational Tools for Virtual Cinematography”
- Advised by Demetri Terzopoulos

- **M.S. Computer Science**

October 2014–June 2016

- Emphasis in Graphics and Vision
- Thesis: “Virtual Cinematography Using Optimization and Temporal Smoothing”
- Advised by Demetri Terzopoulos

Chapman University, Orange, California

- **B.S. Computer Science**

September 2009–June 2013

- **B.F.A. Film Production, Cinematography Emphasis**

September 2009–June 2013

- Cum Laude and Chancellor’s list

EMPLOYMENT HISTORY:

Software Research Consultant

June 2023 - Present

Freelance; Los Angeles, California

- Assisted private clients in developing efficient strategies for implementing novel software capabilities.
- Most work is currently subject to Non-Disclosure Agreements. Some details available upon request.

Teaching Assistant Consultant

October 2018–June 2021

University of California, Los Angeles

- Head Teaching Assistant (TA) for the Computer Science department.
- Supervised training and skill development of ~250 TAs of varying experience levels.
- Organized and led annual term long TA training seminars for new TAs.

Graduate Student Researcher

October 2016–December 2017

University of California, Los Angeles

- Involved in project attempting to visualize human liver injury or surgery for medical training or research, supervised by Demetri Terzopoulos.
- Integrated biomedically based physical simulation model with real-time rendering pipeline.
- Achieved real-time results with anecdotally realistic visualization.

Teaching Assistant

April 2015–June 2018

University of California, Los Angeles

- Helped to teach undergraduate and graduate level computer science courses, including designing assignments, giving lectures, and grading projects. More details can be found on the next page.

Software Developer

October 2013–January 2019

Intellisurvey, Inc.; Ladera Ranch, California

- Designed and implemented new frontend and backend features of web applications for market research data collection, analytics, reporting, and visualization.
- Interfaced with users and testers to improve existing features, as well as to identify and resolve bugs.
- Reviewed code written by, and collaborated with, a team of ~20 other developers.
- Wrote and reviewed documentation for new functionality.

EMPLOYMENT HISTORY Continued:

Cinematographer

2010–2013

Freelance; Los Angeles, California

- Director of Photography on the following short films: **Let's Fall in Love** (2013), **Big Blind** (2013), **The End of Forever** (2012), **Filth** (2012), **Five Years in Paris** (2011), **Last Resort** (2011), **Do Not Disturb** (2011), **I Fear No Evil** (2011), **Cooperation** (2010), **Paul Sancoeur is Dead** (2010).
- Additional on set experience as Gaffer, Key Grip, Camera Operator, Camera Assistant, and production support roles such as Assistant Director, Location Manager, and Production Manager.

Instructor

July–August 2013

Idyllwild Arts Academy; Idyllwild, California

- Instructor of film production for over 30 summer session students. More details can be found on the next page.

Intern Composer

June–August 2011

Flash Film Works; Hollywood, California

- Collaborated on effect shots and compositions on feature films and television shows.
- Consulted with VFX supervisor and editors to verify quality and consistency of effects.
- Effect templates developed used throughout multiple projects.

Summer Intern

July–September 2010

City College of San Francisco Foundation; San Francisco, California

- Directed, Shot, and Edited “Faces of City College” ad campaign.
- Campaign seen by more than 70,000 viewers.
- Videos shown online and on Jumbotron at AT&T Park.

SKILLS:

Natural Languages: Fluent in English, Conversational in Mandarin Chinese

Programming Languages:

- Experience with programming languages C, C++, C#, Java, Python, Matlab, R, PHP, Perl, JavaScript, GO, HTML, Lua, OCaml, Haskell, Datalog, Prolog, Lisp, and GLSL.
- Languages used in conjunction with libraries such as OpenGL, WebGL, Eigen, GLM, jQuery, Node.js, AngularJS, React, ExtJS, Google APIs, QT, PyQt, Java Swing, OpenCV, Keras (Tensorflow), PyTorch, Hadoop, and NumPy.
- Languages used for software development for PC, Mac, Linux (Ubuntu, CentOS), Android, and browsers.

Software: Experience with many software packages, including the following.

- **Programming Tools:** Visual Studio, Xcode, Eclipse, Mac/Win/Linux Terminal.
- **OS Management:** VirtualBox, Docker,
- **Version Control:** Git, Tortoise SVN.
- **Mathematical Computing:** R Studio, Matlab, Octave.
- **Databases:** MySQL, PostgreSQL, SQLite, MongoDB.
- **3D Rendering/Animation:** Pixar's Renderman, Autodesk 3ds Max, Autodesk Maya, Houdini, Blender.
- **Game Engines:** Unity, Unreal Engine 4/5, Ogre.
- **Editing:** Avid Media Composer, Apple Final Cut, Adobe Premiere.
- **Sound:** Avid Protools, Adobe Audition, Audacity.
- **Color:** Autodesk Lustre, DaVinci Resolve, Red Giant Magic Bullet.
- **Compositing:** Adobe After Effects, Blackmagic Fusion, Foundry Nuke.
- **Photography:** Adobe Photoshop, Lightroom, GIMP.
- **Word Processing:** LaTeX, Microsoft Office, Open Office.

PUBLICATIONS:

- Alan Litteneker. **Towards Intelligent Computational Tools for Virtual Cinematography**. 2022. University of California, Los Angeles, PhD dissertation.
- Tomer Weiss, Alan Litteneker, Noah Duncan, Chenfanfu Jiang, Lap-Fai Yu, and Demetri Terzopoulos. "**Fast and scalable position-based layout synthesis**." In *IEEE Transactions on Visualization and Computer Graphics* 25.12 (2018): 3231-3243.
- Tomer Weiss, Alan Litteneker, Chenfanfu Jiang, and Demetri Terzopoulos. "**Position-based real-time simulation of large crowds**." *Computers & Graphics* 78 (2019): 12-22.
- Alan Litteneker, and Demetri Terzopoulos. "**Virtual cinematography using optimization and temporal smoothing**." In *Proceedings of the Tenth International Conference on Motion in Games*, p. 17. ACM, 2017.
- Tomer Weiss, Alan Litteneker, Chenfanfu Jiang, and Demetri Terzopoulos. "**Position-based multi-agent dynamics for real-time crowd simulation**." In *Proceedings of the Tenth International Conference on Motion in Games*, p. 10. ACM, 2017. **MiG'17 Best Paper Award Winner**.
- Alan Litteneker. **Virtual Cinematography Using Optimization and Temporal Smoothing**. 2016. University of California, Los Angeles, Master's Thesis.

TEACHING HISTORY:

Teaching Assistant, UCLA Computer Science Department

- **CS495 TA Training Seminar** **October–December (Fall) 2018, 2019, & 2020**
 - Planned and gave discussions/lectures, collaborated to design syllabus, regularly met with students to prepare for presentations, graded papers; graduate level.
- **CS174A Computer Graphics** **January–June (Winter & Spring) 2019**
 - Led discussions, designed assignments, and graded projects/exams; undergraduate level.
- **CS35L Software Laboratory** **January–June (Winter & Spring) 2018**
 - Planned and gave lectures, supervised student presentations, and graded papers/projects/exams; undergraduate level.
- **CS275 Artificial Life** **April–June (Spring) 2017**
 - Supervised student presentations and helped to grade papers/presentations; graduate level.
- **CS137A/237A Prototyping Programming Languages** **January–March (Winter) 2016**
 - Led discussions and graded student projects; both graduate and undergraduate level.
- **CS130 Software Engineering** **April–June (Spring) 2015**
 - Led discussions, supervised student projects, and graded papers/exams; undergraduate level.

Instructor, Idyllwild Arts Academy; Idyllwild, California **July–August (Summer) 2013**

- Instructor of film production for over 30 summer session students.
- Led daily lectures, workshops, and discussions.
- Coordinated between professional actors and 8 student productions.
- Supervised post-production and data workflows.

LEADERSHIP:

Teaching Assistant Consultant

October 2018–June 2021

Head Teaching Assistant, UCLA Computer Science Department

- Supervised training and skill development of ~250 TAs of varying experience levels.
- Advised on strategies for resolving pedagogical, logistical, and administrative issues arising for TAs.
- Coordinated shared use of department resources, including rooms for office hours.
- Ensured TAs were updated regarding changes in university policies to maintain conformance with regulatory policy, including Title IX and FERPA.

Development Lead

March–May 2013

Senior Software Engineering Project, Chapman University

- Led a team of ~10 students in the development of a software project to help the parents of children with autism communicate with their doctors about both diagnosis and treatment.
- Worked with complete Agile process, including sprints, tickets, versioning, and code review.
- System developed with Android interface for parents and web interface for doctors.
- Both parent and Doctor interfaces connect to a secure backend service with an SQL database.

Eagle Scout

Awarded August 2009

- Served as Senior Patrol Leader, Patrol Leader, Quartermaster, Scribe.
- National Youth Leadership Training.
- Order of the Arrow Lodge Vice Chief.

AWARDS & HONORS:

Outstanding Teaching Assistant Award: UCLA Computer Science Department (2021).

Chancellor's Scholarship: Chapman University (4 Years).

International Film Exchange Student, Seoul Institute of the Arts, Korea (2011, 2012).

Other Activities and Interests

Scuba Diver, Juggler, Magician, Fencer (foil), Violinist, Photographer, Hiker, Cook.