

# ALAN LITTENEKER

alitteneker@cs.ucla.edu

## EDUCATION:

**University of California, Los Angeles, Los Angeles, California**

- **Ph.D. Computer Science** **2016 - Present**
  - Major in Graphics and Vision
  - Minors in Artificial Intelligence and Programming Languages
  - Advised by Demetri Terzopoulos
- **M.S. Computer Science** **2014 - 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** **2009 - 2013**
- **B.F.A. Film Production, Cinematography Emphasis** **2009 - 2013**
- Cum Laude and Chancellor's list

## EMPLOYMENT HISTORY:

**Teaching Assistant Consultant** **October 2018 - Present**

University of California, Los Angeles

- Head Teaching Assistant (TA) for the Computer Science department.
- Organized and led annual term long TA training seminars for new TAs in the department.

**Software Developer** **October 2013 - January 2019**

Intellisurvey, Inc.; Ladera Ranch, California

- Designed and implemented new frontend and backend features of web applications for marketing 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

**Graduate Student Researcher** **October 2016 - December 2017**

University of California, Los Angeles

- Researcher in project to visualize human liver injury or surgery for medical training or research, directly supervised by Demetri Terzopoulos
- Integrated biomedical physical simulation model with real-time rendering pipeline
- Achieved real-time results with anecdotally realistic looking visualization

**Teaching Assistant** **Apr. - Jun. 2015, Jan. - Mar. 2016, Apr. 2017 - Present**

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.

**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.

## EMPLOYMENT HISTORY Continued:

### Instructor

July - August 2013

Idyllwild Arts Academy; Idyllwild, California

- Instructor of film production for over 30 summer session students. More details can be found below.

### 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

## PUBLICATIONS:

- 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.**

## TEACHING HISTORY:

Teaching Assistant, UCLA Computer Science Department

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

**Instructor, Idyllwild Arts Academy; Idyllwild, California**

**July - August 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

## SKILLS

**Natural Languages:** Fluent in English, Conversational in Mandarin Chinese

**Programming Languages:**

- Experience with C, C++, C#, Java, Python, Ruby, Matlab, R, PHP, Perl, Javascript, GO, HTML, Lua, OCaml, Haskell, Datalog, Prolog, Lisp, Objective-C, and GLSL.
- Languages used in conjunction with libraries such as OpenGL, WebGL, Eigen, GLM, jQuery, ExtJS, Google APIs, TkInter, QT, PyQt, Java Swing, OpenCV, Keras (Tensorflow), Torch, and NumPy.
- Languages used for software development for PC, Mac, Linux (Ubuntu, CentOS), and Android.

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

- **Programming Tools:** Visual Studio, Xcode, Eclipse, Mac/Win/Linux Terminal
- **Version Control:** Git, Tortoise SVN
- **Computing:** R Studio, Matlab, Octave
- **Databases:** MySQL, PostgreSQL, SQLite, MongoDB
- **3D Rendering/Animation:** Pixar's Renderman, Autodesk 3ds Max, Autodesk Maya, Blender
- **Game Engines:** Unity, Unreal Engine 4, Ogre
- **Editing & Sound:** Avid Media Composer & Protools, Apple Final Cut, Adobe Premiere
- **Sound:** Avid Protools, Adobe Audition,
- **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

## LEADERSHIP

### Development Lead

**March - May 2013**

Senior Software Engineering Project, Chapman University

- Led a team of more than 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
- Project entitled Autism Management Platform (AMP)
- Worked with complete Agile process, including sprints, tickets, versioning, and code review
- System developed with Android interface for parents and web client interface for doctors
- Both parent and Doctor interfaces connect to a singular remote, secure SQL server
- Development recently resumed with the goal to expand accessibility and functionality

### Eagle Scout

**August 2009**

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

## AWARDS & HONORS

**Chancellor's Scholarship at Chapman University (4 Years)**

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

## Other Activities and Interests

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