

# JASON MALLIOS

San Francisco, CA

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## OBJECTIVE: Game Programmer with Graphics Emphasis

### SUMMARY

Graphics specialist, Brown University Master of Computer Science versed in rendering optimizations / effects, shaders, physics / humanoid simulation, motion synthesis. Grammars: C / C++, C#, Java, Lua, MEL, BVH & ASF / AMC motion capture, X3D, XML, ASP, PHP, JSP, SQL, JavaScript, HTML. SDKs: Cell, Edge, DirectX, OpenGL / SDL, Gamebryo, G3D, Coin3D, Open Dynamics Engine, VXL, GLUT, GTK, GDI, COM. Tools: Max, Maya, Adobe & macromedia suites, Office, SQL Server, MySQL, BDB, Quark Xpress, Perforce, SVN, CVS. Platforms / IDEs: Wii (CodeWarrior), PS3 (ProDG) Windows / 360 (Visual Studio), Linux / UNIX (gnu)

### WORK EXPERIENCE

#### Core Technology Programmer, Page 44, San Francisco, CA (12/08-present)

- Graphics, tools programming for custom engine that shipped *Hannah Montana: Rock Out the Show* for PSP, *Disney Channel All Star Party* for Wii, *Pictionary* for the uDraw tablet on Wii, *Madden 2010* for iPhone, and PS3 / 360 pitch projects
- Architect of HDR and image-based lighting pipeline from Maya materials to per-platform custom exporters to PS3 and Wii run-times
- Worked with second graphics engineer and technical artist to design, implement cross-platform global and local lighting equations, crowd simulation, PS3 edge integration, shadow solutions, 2D multi-textured drawing effects

#### Graphics Programmer, Vivaty, San Francisco, CA (12/07-11/08)

- DirectX custom engine programming, rendering optimizations and resource management including shader support for a multi-user, multi-threaded, asynchronously loading, browser-embedded virtual world running on low-end Windows PC targets
- Programmable shader pipeline integration, including flexible vertex array, constant table, singular material and shader instancing and D3DX-ectomy
- Multivariable batching keying on texture, renderstate, material, shader in priority of computational expense to reduce redundancy
- DX8 to DX9 conversion, card-specific issue resolution, fault tolerance and fallbacks

#### Graphics Programmer, BreakAway Games LTD, Corpus Christi, TX (9/05-11/07)

- 3D graphics programming and effects creation for patient simulator funded by the Office of Naval Research at Texas A&M Corpus Christi
- HLSL shaders for objects, skin (BSSRDF, perspiration, discoloration, and deformation), and eyes (reflection, glossiness, and dilation of the pupil)
- Custom IK solutions for multiple DOF and bones for bipeds, animation blending and motion synthesis

#### Graphics Programmer, Brown University Laboratory for Engineering

##### Man/Machine Systems, Providence, RI (6/05-9/05)

- Visualization and volume rendering of voxels from a scalar field using VXL, Coin3D and SIM Voleon.

#### Freelance Web Programmer Providence, RI (6/03-2/05)

- Designed, developed and implemented commercial, secure Web-based transactions using a variety of platforms, databases and scripts.  
[www.montegonet.com](http://www.montegonet.com), [www.theqлимпse.com](http://www.theqлимпse.com), Brown University CareerWeek

#### Web Designer, The University of Texas System Administration-Employee Group Insurance (EGI) Austin, TX (2/00-6/03; reclassified from Graphic Designer 9/02)

- Designed, scripted group insurance site, [www.utsystem.edu/egi](http://www.utsystem.edu/egi), used by 80,000 subscribers, and dependents at 15 campuses statewide, receiving 4,000 to 30,000 unique visitors a month. Implemented with classic ASP, Access, and DreamWeaver.
- Chief architect of Web-based SSL publication-ordering and reporting system
- Laid out, edited, prepared for press, and arranged delivery of 4-color publications to campus HR offices and members. Successfully managed a \$120,000 to \$170,000 annual printing budget.

References Available Upon Request

### EDUCATION

#### Master of Science

Computer Science, Brown University (May 2006)

#### Certificate of College Credit in Computer Science

St. Edward's University (2000-02)

#### Bachelor of Arts,

in Liberal Arts specializing in English and philosophy, St. Edward's (1995-97)

#### Archaeology Study Abroad,

Universidad Autónoma de Querétaro, Querétaro, México (Summer 1995)

### HONORS

#### John S. Trout Scholar

St. Edward's University School of Natural Sciences, \$5,000 award (Fall 2001, Spring 2002)

#### Dean's List

St. Edward's

#### Alpha Chi National College Honor Scholarship Society

St. Edward's Chapter

#### Professional Scholarship

St. Edward's, \$1,000 award for student paper layout & design (Spring 1997)

### RESEARCH

"Modular Dynamic Response from Motion Databases," SIGGRAPH 2005 poster. A method for using a modularized motion capture database for fast searches and transitions from simulation to animation, Brown University.

### PUBLICATION

Mallios, Jason. "Jason Mallios on the Importance of Immersion." [Game Development Essentials: Game Simulation Development](#). By William Muehl and Jeannie Novak. Belmont: Cengage Delmar Learning, 2007. 30-30.