

PARAS KAUL – Curriculum Vitae

Mason Hall, George Mason Univ., 4400 University Drive, MS 2F7, Fairfax, VA. 22030
E-mail: jkaul@gmu.edu, Phone: 703-993-8819, Mobile: 703-864-9697
URL: <http://brainwavechick.com>

Education

- * **MFA** Digital Graphics & Animation/Video, School of the Art Institute of Chicago, 1983
- * **MA** Course Requirements Completed for Photography, California State University, Sacramento, CA, 1980
- * **BA** Art/Photography, California State University, Sacramento, CA, 1978
- * **BA** English, James Madison University, VA, 1969
- * Phi Kappa Phi, National Honor Society Award, 1978

Research Direction

Beginning as an effort to understand early life experiences with hypnosis, my research has continued to focus on the use of technology to analyze brainwave states. In 1992 I discovered a brainwave interface and began working with the primary developer of this hardware and software system. Since that time my interest has been the development of neurological learning environments that provide new methodologies for teaching and learning. Using EEG in the system's software, I input neural data to the computer where it is used to power a biofeedback multimedia control system.

In 1997 I began developing prototypes for neurological games intended to train persons to maintain their brainwave frequencies in lower frequency ranges, thus supporting my research with brainwave states. I propose that in the lower frequency ranges noise factors are eliminated from neural signaling, which allows for an increase in subtle perceptual awareness. Extended time in the lower frequency ranges of alpha and theta enable one to function with greater clarity. My research suggests that continued practice with a brainwave game enables one to train the brain and potentially awaken the ability for nonverbal communication.

I have produced exhibits for high visibility professional venues, which have been used to provide hundreds of conference attendees the opportunity to see brainwaves used as controllers for audio and visual multimedia events, thus illustrating the power of the trained mind. To call attention to brain matters, I have performed onstage using neural multimedia at prestigious venues, as the Kennedy Center, the Los Angeles and Orlando Convention Centers, the Walker Art Center, the Corcoran Gallery of Art, and the Dana Centre Museum of Science in London.

My research also involves high bandwidth Internet communication, which I have pursued in order to advance collaborative learning with research-based visualization using immersive technology and grid communities. I feel that collaborative learning via high-speed Internet and Lambda Rail networks enables the globalization of technology and research in science, the humanities, and in society. Additionally, advancements in these technologies have the potential to revolutionize the entertainment industry.

Research Record and Presentations

For a more detailed history, please see: <http://www.brainwavechick.com/pages/exhibitions.html>

Hollywood, CA., "Caller ID." My brainwave research has been incorporated into a film directed by an independent filmmaker in Hollywood, CA. I am a brainwave consultant for the film and have composed a brainwave music score for one of the scenes in this sci-fi thriller feature about mind control, to be previewed in film festivals in 2010.

"Brain Wave Games and E-Learning," Online conference presentation for the International Joint Conferences on Computer, Information, and Systems Science and Engineering, "CIS2E 07," Engineering Education, Instructional Technology, Assessment, and E-learning Online Conference, Dec. 9, 2007.

Boston, Mass., "Neurological Gaming Environments," presentation for the 2006 Educators Program, of the Special Interest Group for Computer Graphics and Interactive Techniques Conference, August 2, 2006. Presentation includes demonstration of a prototype for a brainwave interactive game about the first Crop Circle that appeared near Stonehenge in England in 1996.

London, England, Dana Centre Museum of Science, Creative Cyborgs event, live presentation of "Crossings," a prototype of a brainwave interactive game," May 16, 2006.

Oahu, Hawaii, Hawaii International Arts and Humanities Conference, presentation: "Neurological Learning and Healing: Where Art and Neuroscience Converge to Actualize the Future," Jan. 12, 2006.

"Brainwave Interactive Learning: Where Multimedia and Neuroscience Converge," online conference presentation for the International Joint Conferences on Computer, Information, and Systems Science and Engineering, "CISSE 05," Engineering Education, Instructional Technology, Assessment, and E- learning online conference presentation Dec. 11, 2005.

George Mason University, brainwave research acknowledged in "A Celebration of Achievements 2004", from the Office of the Provost.

Los Angeles, CA, SIGGRAPH '97, "*Mind Garden Exhibit*", prototype for a brainwave game presented in **The Electric Garden Exhibition**, Los Angeles Convention Center, International Conference, August 1997.

Los Angeles, CA, SIGGRAPH '95, "*Space Colonies: A Three Dimensional Computer Graphic Simulation and Research Project*," presented in the Interactive Communities Exhibition, International Conference, August 1995.

Orlando, Florida, SIGGRAPH '94, "*Human Dolphin Virtual Reality Environment*," presented at the EDGE Exhibition, Orlando Convention Center, International Conference, summer 1994.

Ausgraph '90, Melbourne, Australia . A retrospective of computer graphic work was shown on 3/4" video in large screen projection along with presentation of a technical paper, "*Motion Moves Sound*," Spring 1990.

Nice, France. SEMAINE INTERNATIONALE DE L'IMAGE ELECTRONIQUE, "*T'ai Chi Ch'uan, A Computer Simulation of the Motion*". I presented a paper and a 90 second 35mm film with an original digital sound track. Summer 1985

Teaching Record

Adjunct Assistant Professor, Art and Visual Technology. George Mason University, 2001 - ongoing availability. In this capacity I teach undergraduate students web development with an emphasis on art, including HTML, and CSS, as well as new media using Dreamweaver, Flash, Photoshop, and iMovie.

Assistant Professor, Graduate Program in Electronic Visualization, Art Department, Mississippi State University, Jan. 1997 – 2000. In this capacity, I worked with two other faculty members to create a multimedia curriculum for a new graduate program at the university. I taught digital multimedia, animation, and digital video editing on a Media 100 system. I also taught website development, and brainwave multimedia while being an advisor for graduate thesis papers and projects. In this capacity, I also managed a multimedia server with graduate projects that were later featured at Internet2 Conferences at the University of Washington and the University of Michigan.

Lecturer/Adjunct, Art Studio Dept, Univ. of California/Santa Barbara, Fall 1996. I lectured one semester at UC Santa Barbara, teaching computer graphic design for the web to undergraduate students.

Lecturer, High School for the Arts, Cal State/LA, Jan. - Nov. 1996. High School for the Arts, Cal State/LA, Jan - Nov 1996. While lecturing at UC Santa Barbara, I taught in a team teaching program with another faculty member. We taught computer animation to a high school class consisting of bright students who were accepted into an honors program of study for the arts at the university

Lecturer/Adjunct, Fine Art Department, California State University, LA, 1988 - 1994. As a contracted lecturer, I taught 2D and 3D computer graphics and animation using "C" programming to undergraduate students using custom software created for the program by Jim Blinn from Cal Tech and the Jet Propulsion Lab.

Visiting Artist, Summer School for the Arts, Summer 1990, Humboldt State Univ. (Sponsored by the California State School System and the National Endowment for the Arts) Assisted in teaching computer graphics and animation on the Macintosh. Letters of appreciation and recognition were received from the program directors.

Lecturer/Adjunct, West Coast University, Computer Lab, Jan. 1989 - May 1990, Computer Programming in "C" for 2-D and 3-D Computer Graphics (Beginning and Intermediate).

Lecturer/Adjunct, Design Department, Univ. of California/LA. (UCLA). Spring 1986. I lectured on topics of design with a general intro to computer graphics using IBM PCs and Cubicomp Systems.

Director, Experimental College Program, CSUS, Sacramento, CA, 1976-78. Managed, marketed, and taught several non-academic courses.

Professional Experience

Associate Director, Creative Services, George Mason University, October 2009 – present. Recently, I was promoted to Creative Services which is a division that oversees the print, photography, editorial, and web divisions within University Relations. In addition to the responsibilities of the director position listed below, I also manage a project management system that includes coordinated efforts between these divisions in University Relations.

Director, Web Communications, George Mason University, October 2004 - September 2009. During this time, I supervised a small web staff and directed the university's online presence, including Mason's homepage, departmental websites, and Mason's online newspaper, as well as the university's Facebook page, and communicative blogs. Additionally I directed the design of university publications, and served on committees making decisions in regard to the future direction of technology at the university. Experience with protocols and procedures: Telnet, Fetch,

WS_FTP and HTML and "C" programming. Multi-platform experience with Unix, Linux, OS X, and Windows. Familiar with MySQL, PHP, CSS and 508 web accessibility. *Web applications: Dreamweaver, Flash, Photoshop, Quicktime Pro, Final Cut Pro, also Facebook and Word Press for blogs.*

Coordinator, Electronic Publications, George Mason University, June 2000 - September 2004. During this time, I developed a web division within University Relations. Within the division, I coordinated the production of the university catalog, the alumni magazine, the online newsletter, and other online publications, as well as departmental websites. Additionally, I served on university committees.

Website Production & Server Management, produced and managed an independent server: the Neural Audio Imaging VR Network (NAIVR) at Mississippi State University. The server was on a SGI O2 computer and hosted a multimedia server project, produced with graduate students in the Electronic Visualization Program. This project was exhibited at Internet2 Conferences at the University of Michigan and the University of Washington, Seattle.

Animator Trainer, Vertigo Systems International, Vancouver, B.C. April 1988 - September 1988. Demonstrated Vertigo's 3-D modeling and animation software and trained clients to use this software on SGI and Sun Computer systems they purchased.

Artist-in-Residence, Omnibus, Paramount Studios/LA, August 1985 - March 1988. I conducted research in motion design for a dolphin animation. Used Prisms, the Omnibus custom 3-D Software on a Vax Computer 11/780 for modeling. Used Wavefront software for animation .

Production Assistant and Artist-in-Residence, Digital Effects, Inc., N.Y. September 1983 – July 1985. I did system backups and archives and wrote documentation for the operating system. I transferred data to 1600 BPI magnetic tape and 35mm film using a Dicommed Film Recorder. *Independent research:* Designed a character animation for the movement of Tai Chi Chuan using APL software with a Harris 800. I was invited to Nice, France to give a technical talk on this work, and the animation was shown at a Eurographics Conference in England.

Apprentice Artist, Real Time Design, Inc., Chicago, 1982 - 83. Programmed animations for School of the Art Institute using a UV-1 Datamax microcomputer. Used ZGRASS graphic software and output the animation to 3/4" videotape.

Video Research Consultant, School of the Art Institute of Chicago, 1982 - 83. A/V staff member for two ACM SIGGRAPH annual conferences.

Present Affiliations

Member, Mason' President's Quality of Work Life Task Force
Member, George Mason University, Information Technology Council
Member, George Mason University Web Team
Member, Steering Committee, Mason iTunes University
Member, Security Review Panel (SRP)
Member, Executive Committee for Sustainability at Mason
Member, Accessibility Technology Initiative Committee
Member, Madison Executive and Professional Registry
Member, Computational Models of Creativity in the Arts Committee, UK

Past Affiliations

Advisor, Mason's Student Chapter of SIGGRAPH

Member, George Mason Advisory Board to the Mason Media Lab

Vice President, Mac Users Group, George Mason University

Member, DC Chapter of American Composer's Forum

Co-Chair, DC SIGGRAPH (Special Interest Group for Computer Graphics and Interactive Techniques)

Educational Coordinator, LA SIGGRAPH, Boot Camp, February 1998

Committee Member, SIGGRAPH Pathfinders Committee, 1999

Committee Member, LA SIGGRAPH Executive Council, 1997

Committee Member, LA SIGGRAPH Outreach Committee,

Founded, OK SIGGRAPH, a Professional Chapter of SIGGRAPH in Mississippi, 1998

Volunteer, Human Performance Institute, Loma Linda University Rehabilitation Center. In 1993 and 1994, I participated in research using interactive technologies, brainwave software, and virtual reality concepts for rehabilitation of children with injuries to the spine. (Worked with Neuroscientist, M.D., Dr. Dave Warner)

Featured on the Following Web Sites

http://www.gamasutra.com/php-bin/news_index.php?story=10935

<http://www.studio360.org/yore/show032903.html>

<http://www.siggraph.org/artdesign/gallery/S03/2d/0077.html>

<http://www.cressidastransformations.com/fastpage/fpengine.php/link/1/templateid/10/tempidx/29/menuid/1>

<http://www.contemporarymusic.org/Program%20Notes.htm>

<http://www.adventuresinmusic.biz/Archives/Roundtable/RoundtableNo2Jun03.htm>

http://www.kennedy-center.org/programs/millennium/artist_detail.cfm?artist_id=SONICCUR02

<http://wired.com/news/culture/0,1284,52940,00.html>

<http://www.markapplebaum.com/eieio.html>

http://www.corante.com/brainwaves/archives/cat_neuroesthetics.html

<http://englishmatters.gmu.edu/>

http://www.kennedy-center.org/programs/millennium/artist_detail.cfm?artist_id=SONICCIRCU

<http://www.siggraph.org/artdesign/gallery/S01/82.html>

<http://www.gmu.edu/news/gazette/0001/brainwave.html>

http://www.isdale.com/jerry/VR/AlternativeIO_Links.htm

<http://www.eztvmedia.com/digilantes/>

<http://www.eztvmedia.com/CyberSpace%20Gallery/cyberhis.html>

Artist Presentations and Performances

Washington, DC, District of Columbia Art Center, multimedia performance by members of the Flarflist Poetry Collective - joined the Flarflist Orchestra with brainwave music accompaniment, February 18, 2007.

Washington, DC, Brainwave Presentation at Provisions Library, 611 Connecticut Ave. NW, Dorkbot-DC, December 2006. "Washington Post Article" available.
http://techartblog.blogspot.com/2006_12_01_archive.html

Los Angeles, California, SIGGRAPH Poster Session 2004. Presented a collaborative research project, "The Internet2 Performance Module," Aug, 2004. I brought two students from George Mason University to assist with the Poster Session.

International SIGGRAPH Traveling Art Show, 2003-2005. "Alien Encounter" a 3-D digital image was on tour with the SIGGRAPH Traveling Art Show.

Washington, DC, Sonic Circuits 2003, The Warehouse Next Door, performed "Virtual Passion", a brain wave music and animation in real time. (collaborative performance with visual artist, Michael Gallelli), Sept. 27, 2003.

Baltimore, Maryland, Sonic Circuits 2003 at the University of Maryland, performed "Virtual Passion", a brain wave music and animation in real time. (collaborative performance with visual artist, Michael Gallelli), Sept. 13, 2003.

San Diego, California, SIGGRAPH 2003 Art Gallery, San Diego Convention Center, exhibited "Alien Encounter", digital image, International Conference

Washington, DC, Corcoran Gallery of Art, Amand Hammer Auditorium, "Plugged-In Concert", presented "Peace Streams on DVD, March 17, 2003.

Washington, D.C., Kennedy Center, Millennium Stage, multimedia presentation of the "Peace Streams" (search August 2002, sonic circuits) DVD with original digital animation and music composition. August 2, 2002.

Washington, D.C., Kennedy Center, Millennium Stage, multimedia performance of "Streaming Consciousness" (search august 2001, sonic circuits) with original digital animation and music composition. Live drumming by percussionist, Alison Krayer, August 13, 2001.

Los Angeles, CA, N-Space Art Gallery, Brain Wave Chick V, a performance for **SIGGRAPH 2001 International Conference** at Los Angeles Convention Center, August 12-17, 2001.

San Jose, CA, McEnergy Convention Center, "*Neural Audio Imaging Exhibit*" for the Art Exhibition at ACM1: Beyond Cyberspace Conference, March 10-14, 2001.

Seattle, WA, University of Washington, Internet2 Conference, demonstrated an independent art server application for Internet2, October 12, 1999.

Hollywood, CA, American Film Institute, Celebrating Digital Cinema Exhibition, presented Neural Audio Imaging, September 18, 1999.

Michigan, University of Michigan, Technology Summit Conference, demonstrated an independent art server application for Internet2, September 13 - 14, 1999.

Minneapolis, MN, Walker Art Museum, "*Neural Audio Imaging*", a live multimedia performance using a brain wave interface to the computer, sponsored by American Composers Forum, November 7, 1998.

Pomona, CA, "*Bodies in Motion*", at Cal Poly, presented an interactive brain wave exhibit, whereby attendees could control a digital computer body with their brain wave activity, November 1997.

Los Angeles, CA, Digital Site: Digital Art/Computer Interface, SITE gallery. Digilante Artists in a Group Show, summer 1995.

Los Angeles/CA, Sam Francis Gallery. Digital LA. Group show of cyber artists, presented Brain Wave Portraits. Summer 1994.

Chico/CA, Chico State University Art Gallery. "*Digital Artifacts*," Group show, presented Brain Wave Portraits.

San Francisco/CA, Be-In, MacWorld 1994. In conjunction with Psychic Labs Inc., an exhibit was presented whereby viewers could create patterns of light by controlling light bulbs with their brainwave activity. Jan. 1994.

Santa Monica/CA, Brain Mind Symposium. Brainwave analysis of interested attendees (research for brainwave portraits). Spring 1993.

Los Angeles/CA, Cyberspace Gallery. "Digital Salon Des Independents," Group show of digilantes, LA. Cyber artists. 1993.

Santa Monica/CA, Phoenix Art Gallery. Group show of Phoenix artists. Presented B&W photographs and computer graphic prints. Dec, 1992.

Pasadena/CA, CyberArts Conference. "*Portrait Virus*." This was a computer network performance art piece. A link was established between the Pasadena Convention Center and Paras Productions, Washington, D.C. Digital Portraits were created in real time across the computer network and projected back to the Convention Center through 16 video monitors. November 7 - 9, 1992.

England, EUROGRAPHICS '85, "*T'ai Chi Ch'uan, A Computer Simulation of the Motion*". I presented the 90 second 35mm digital film with an original digital sound track. September 1985.

San Francisco /CA, Animation Screening Room. T'ai Chi Animation Studies, were presented on Digital Effects, Inc. 3/4" videotape demo reel for SIGGRAPH 1985, Minneapolis, Minnesota. Film and Video Show. T'ai Chi Animation Studies were presented on the Digital Effects, Inc. 3/4" videotape demo reel for SIGGRAPH 1984.

New York, NY, New York Institute of Technology, Group Multi-Media Computer Graphic Show, (computer generated photograph and computer sound track). March 1984.

Boston, Mass.: University of Boston, Film/Video Foundation, Inc. A 3 1/2 minute microcomputer animation with live action performance titled "*Rites of Initiation*" was presented on 3/4" videotape as part of a New Technology Series, 1983. Chicago, Illinois. Seven minute microcomputer animation, Night Emerges Day presented on 3/4" videotape during the lunch hour at SIGGRAPH '82.

Sacramento /CA, Chicago Photography Plus 1. I curated this exhibition of Chicago artists' work at the White Gallery. Experimental Color Photography from Chicago was presented in this show and an original black and white series of photographs titled F lower for Josephson was presented, 1982.

Sacramento/CA, Crocker Art Museum. A group show based on work completed in the fall of 1982 by artists who traveled about the country and reunited in California in the Spring for the Museum's show (organized by Tom Witt). Photographs in black and white and color were shown.

Sacramento/CA, Open Ring and Le Sahuc Galleries, Anopheles Seventh. Group show: a photographic series was presented in black and white, 1982. Sacramento/ CA, Pava's Coffeehouse. One person show of color photographs, 1981.

Chicago, Illinois. Paul Waggoner Galleries, *Alternative '81 Exhibit*. Photographs shown in a group show. 1981.

Chicago, Illinois, Name Gallery, Hubbard Street. *Fluid Measure Invitational*. A solo performance was presented as part of a series of evening performances. 1981.

Chicago, Illinois, McCormick Place. International Photography Show, Group Show, 1980.

Sacramento/CA, ASL Gallery, California State University. Photographs were presented in a group show. 1980.

Sacramento/CA, Robert Else Gallery, *Annual Kingsley/Witt Scholarship Show*. A Scholarship was received for an Untitled Photograph from an original script, Princess With the Magic Fingers, 1980.

Sacramento/CA, White Gallery. Photographic Show of Sacramento Photographers, 1980.

Sacramento/CA, California State Fair, Cal Expo, Annual Art Show. A Third Place Award was received for an Untitled Photograph from the script, Princess With the Magic Fingers, 1980.

Sacramento/CA, Open Ring Galleries. **Kingsley Competition and Group Show**. An Honorable Mention was received for an Untitled Photograph. 1979.

Sacramento/CA, Open Ring Galleries, 1979. "*Light Images*". A one-person show of photographs was presented.

Sacramento/CA, California State Fair, Cal Expo, Annual Art Show. Exhibited a photograph in a group show 1979.

Sacramento/CA, Anopheles Exhibition. First participation in an art exhibition included a photographic series exhibited in a yearly retrospective of Sacramento, CA artists, 1976.

Peer Reviewed Publications

"Brain Wave Games and E-Learning," paper published in a book released in 2008 by the International Joint Conferences on Computer, Information, and Systems Science and Engineering, "CIS2E 07," Engineering Education, Instructional Technology, Assessment, and E-learning.

"Neurological Gaming Environments," Educator's Program of the Conference Proceedings for SIGGRAPH 2006, to be held in Boston, Mass., Aug. 2006.

London, England, "Brain Wave Gaming" presented at the Computational Models of Creativity in the Arts workshop, a partnership between Goldsmiths and Birkbeck Colleges and the University of Sussex at Goldsmiths College, University of London, May 16 and 17, 2006.

"Brain Wave Interactive Learning: Where Multimedia and Neuroscience Converge," Published online by the International Joint Conferences on Computer, Information, and Systems Science and Engineering, "CISSE 05," Engineering Education, Instructional Technology, Assessment, and E-learning online conference, Dec. 11, 2005.

"Neurological Learning and Healing: Where Art and Neuroscience Converge to Actualize the Future," published on CD by the Hawaii International Arts and Humanities Conference. January 2006.

"Alien Encounter," *Electronic Art and Animation Catalog*, Computer Graphics Annual Conference Series, 2003, A publication of ACM SIGGRAPH.

"Mind Garden," VISUAL PROCEEDINGS, SIGGRAPH 97, Computer Graphics, "The Art and Interdisciplinary Programs of Computer Graphics Annual Series '97."

"Space Colonies: A 3D Computer Graphic Simulation and Research Project" VISUAL PROCEEDINGS, SIGGRAPH 95, Computer Graphics, "The Art and Interdisciplinary Programs of Computer Graphics Annual Series '95."

"Human/Dolphin Virtual Reality World Concept," VISUAL PROCEEDINGS, Computer Graphics, "The Art and Interdisciplinary Programs of SIGGRAPH 94, Annual Series '94."

"Motion Moves Sound," CONFERENCE PROCEEDINGS, AUSGRAPH '90, Australia, September 1990.

"A Computer Simulation of the Movement of Tai Chi Chuan," CONFERENCE PROCEEDINGS, ACM/SIGGRAPH, France and CESTA, spring 1988.

Included in the Following Publications

Who's Who, Madison Executive and Professional Registry, 2009.

<http://www.madisonwhoswho.com>

"Chronicle of Higher Education," online blogpost, March 31, 2009.

<http://chronicle.com/blogPost/BrainWave-Chick-Digitally/4602>

"The Washington Post," Newspaper Online, March 19, 2003 (Currently archived)

IEEE 2,000 Special Issue

Computer Graphics in the Millennium, March 2000. Featured as an artist who bridges technology with art and a brainwave interface to the computer.

A Survey of Artists and Researchers Working at the Intersection of Art, Science and Technology, Stephen Wilson, Professor, Conceptual/Information Arts, San Francisco State University, MIT Press, 2001.