| JEFF WEBER |

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| RESEARCH INTERESTS |

The electro-mechanical, aesthetic, and character development of humanoid robotics, interactive robots, and kinetic systems.

| EDUCATION |

San Francisco State University
Bachelor of Arts | Film: Cinematography | minor in Industrial Design | May 1994

| EXPERIENCE |

Research Engineer | Cambridge, MA | June 2001 - Present
Massachusetts Institute of Technology, Computer Science and Artificial Intelligence Laboratory
Humanoid Robotics Group, led by Rodney A. Brooks

- Designing, Prototyping, Fabricating, Testing, and Maintaining mechanical systems for multiple research humanoid robotic platforms with up to 32 degrees of freedom [DOF]. Including: force sensing actuation, differential joints, cable drive systems, active vision systems, emotive facial features, and sensor and electronics integration.
- Designing, Prototyping, and Fabricating aesthetic systems for humanoid robotic platforms. Including: Face and body shell design, concept renderings.
- Designing, Fabricating, and Assembling of motor driver/control systems with up to 35 DOF.
- Researching and Selecting motors, drive systems, mechanical components, prototyping machines and tools, raw materials, and finishing processes for robotics.
- Managing of design team and outside contractors. Including: training of fabrication techniques and prototyping machines.

Founder and Designer | San Francisco, CA | 1999 - Present
Machine Works, Mechanical Design and Fabrication

- Providing services of design, consultation, mechanical prototyping, machining, and fabrication on a variety of robotic and architectural projects including retail envrionments, facades, and private residences.

Mechanical Exhibit Designer and Fabricator | San Francisco, CA | 1999
San Francisco Exploratorium

- Designing, Fabricating, and retrofitting of science exhibits for display and use in a hands on science museum.

Designer and Fabricator | San Francisco, CA | 1996 - 1999
Architectural Metals

- Leading a team of 4 in the design and fabrication of full scale architectural projects where responsibilities included design and metal working of all components.

Robotics Engineer, Art Co-Director, Development Lab Co-Founder| San Francisco, CA | 1995 - 1998
Omnicircus

- Directing, designing, building, and programming many robotic sculptures with upt to 35 DOF for use in mutimedia performances using microprocessors, MIDI controlled DC Motors and pneumatic actuators.

Film Equipment Technician | San Francisco, CA | 1990 - 1994
San Francisco State University, Film Production Department

- Creating, maintaining, and retrofitting electromechanical film production equipment for the film department and student body including 16mm cameras and rigs, audio recording, and lighting equipment.

| SKILLS |

skill type	skill	experience	proficiency
software and design	Solid Works	6 years	expert
	CamWorks CNC Machining Software	4 years	expert
	Rhino	1 year	intermediate
	Dreamweaver	1 year	intermediate
	Adobe Suite	2 years	intermediate
	Corel	3 years	intermediate
mechanical design	Robotics Systems	9 years	expert
	Force Control Linear/Rotary Actuation	4 years	advanced
	Electromechanical Integration	8 years	expert
	Active Vision Systems	2 years	advanced
	Fabrication, Assemby, Testing.	10 years	expert
physical fabrication	3-Axis CNC Milling	4 years	advanced
	Manual Milling	16 years	expert
	Manual Lathe	16 years	expert
	Laser Cutting	4 years	expert
	3D-Printing	2 years	intermediate
	Mig and Tig Welding	8 years	advanced
	Other Metal Fabrication Techniques	16 years	expert
	Woodworking	12 years	advanced
electronics skill	Wiring and Circuit Board Population	10 years	advanced
	Motor Systems	10 years	intermediate
components and materials	Motors	4 years	advanced
	Motor Drive Components	10 years	advanced
	Raw Materials	10 years	advanced

| SELECTED SHOWS AND EXHIBITS |

Party Wall, with nArchitects and Parul Vora
Party Wall | Artists Space | New York, NY | 2005

Release1: The McDonald's Project
Complete Meat | The Berwick Research Institute | Roxbury, MA | 2003

SuperCollision
Burlap Squat #2 | MIT Museum | Cambridge, MA | 2002

Collision
Maquinas Absurdas | MIT Student Center | Cambridge, MA | 2002

Scabaret
Multimedia Theater Performance | Omnicircus | San Francisco, CA | 2001 - 2002

Chaotic Art Circus
Soundscape and Robotic Performance | Gallery Luscombe | San Francisco, CA | 2000

Art and Technology Series
Lecture and Robotic Performance | Cell Space | San Francisco, CA | 1999

Sermon on the Mound
Multimedia Play | Omnicircus | San Francisco, CA | 2000

San Francisco Fringe Festival
Multimedia Robotic Performance | DTC Dance Studio | San Francisco, CA | 2000
Robotic Street Performance | Various Locations | San Francisco, CA | 1997

California Arts Council Grant Conference
Asilomar Grant Recipient Conference, in association with The Omnicircus
Multimedia Robotic Performance | Monterey, CA | 1998

Rustlust
Multimedia Robotic Performance | Omnicircus | San Francisco, CA | 1997

Social Surrealist Painting and Sculpture Show
Paintings and Robotic Sculpture | 111 Minna Street Gallery | San Francisco, CA | 1997

| PUBLICATIONS AND CONFERENCES |

Edsinger, A.G. and J.A. Weber. "DOMO: A Force Sensing Humanoid Robot for Manipulation Research," Proceedings of the IEEE/RSJ International Conference on Humanoid Robotics, 2004. [PDF]

Aryananda, Lijin and Jeff Weber. "MERTZ: A Quest for Robust and Scalable Active Vision Head Robot," Proceedings of the IEEE/RSJ International Conference of Humanoid Robotics, 2004. [PDF]

Brooks, R., L. Aryananda, A. Edsinger, P. Fitzpatrick, C. Kemp, U. O'Reilly, E. Torres-Jara, P. Varshavskaya, and J. Weber. "Sensing and Manipulating Built-for-Human Environments," International Journal of Humanoid Robotics, Vol 1, No. 1, 2004. [PDF]

| REFERENCES |

Available upon request.