

GIDEON P. STEIN

RESUME

Work Address: MIT AI Lab, Rm. NE43-741, Cambridge, MA 02139

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Date of Birth: June 23, 1962

Nationality: Israel and USA

Languages: English and Hebrew as native languages

Current Research Interests:

- Computer Vision: motion vision, geometry in computer vision, geometry of multiple cameras, motion based segmentation.
- Computer Vision Hardware: Computer vision systems using DSP chips and application specific hardware.

Education and Degrees:

- 1998 PhD in Electrical Engineering and Computer Science, Massachusetts Institute of Technology, Cambridge, MA. Thesis Title '*Geometric and Photometric Constraints: Motion and Structure from Three Views*'.
- 1993 M.Sc. in Electrical Engineering and Computer Science, Massachusetts Institute of Technology, Cambridge, MA. Thesis Title '*Internal Camera Calibration using Rotation and Geometric Shapes*'.
- 1990 B.Sc. in Electrical Engineering, Technion - Israel Institute of Technology, Haifa, Israel. (Summa Cum Laude).

Honors, Awards and Fellowships:

- Technion President's Award: 1986, 1988, 1989
- National Science Foundation Fellowship (started fall 1991)

Work Experience:

- Feb 1998 - present: Post Doctoral Fellow at the MIT AI-lab: Work includes geometry of multiple cameras for surveillance.

- 1990-1998: Research Assistant at the MIT AI-lab: Work included: Digital hardware designs for vision systems and object tracking, Software development of Computer Vision and Machine Learning routines.
- 1995-1997: Consulting for GenTech Corporation, Japan. Applications of computer vision for 3D reconstruction.
- 1984 - 1990 (Summers): Programmer - Columbia University Comprehensive Cancer Center Computing Facility. Job included: Microcomputer based image processing of digital video microscopy images, Lotus 123 and Database applications, and user support for VAX/VMS systems, UNIX systems and IBM compatible microcomputers.

Military Service:

- 1980-1984 Compulsory military service in the IDF (Israel Defense Force). Honorable discharge - November 1984 as Lieutenant Corps of Engineers

Publications:

3D reconstruction:

- Gideon P. Stein and Amnon Shashua, “Direct Estimation of Motion and Extended Scene Structure from a Moving Stereo Rig” published as AIM-1621 (Dec 1997) and also in CVPR98.
- Gideon P. Stein and Amnon Shashua, “On Degeneracy of Linear Reconstruction from Three Views: Linear Line Complex and Applications” published as AIM-1620 (Dec 1997) and also in ECCV 98.
- Gideon P. Stein and Amnon Shashua, “Model-based Brightness Constraints: on Direct Estimation of Structure and Motion” published in CVPR 97 (June 1997).
- Gideon P. Stein and Amnon Shashua, “Direct methods for estimation of structure and motion from three views” published as AIM-1594 (Nov 1996) also in IU Workshop 1997.

Visual Surveillance and Monitoring (VSAM):

- Gideon P. Stein, “Tracking from Multiple View Points: Self-calibration of Space and Time” to be published in Image Understanding Workshop, Nov 1998.

Camera Calibration:

- Gideon P. Stein, “Lens Distortion Calibration Using Point Correspondences” published CVPR 97 (June 1997) and also as AIM-1595 (Nov 1996) .

- Gideon P. Stein, “Accurate Internal Camera Calibration using Rotation, with Analysis of Sources of Error” Published in ICCV95.
- Gideon P. Stein, “Internal Camera Calibration using Rotation and Geometric Shapes” AITR-1426, Master’s Thesis, Massachusetts Institute of Technology, Artificial Intelligence Laboratory (1993).