

Leila Hasan

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- Objective** Diversely skilled engineer experienced in instrumentation and automation seeks innovative work in a creative, high-tech environment.
- Education** **Massachusetts Institute of Technology** (June 2001) Cambridge, MA
MEng and BS in Electrical Engineering. GPA Undergrad 4.4/5.0 Grad 4.5/5.0
Selected Coursework: Embodied Intelligence, Probablistic System Analysis, Digital Systems Laboratory, Signals and Systems, Microprocessors, Mechatronics, Feedback Control, Discrete Time Signal Processing, Precision Machine Design, Legged Locomotion.
- Experience** **Biotrove, Inc** (2001 – 2005) Woburn, MA
Engineered automation and instrumentation for ‘the Living Chip’, a low volume, high throughput screening system for genomics and drug discovery. Lead engineer for the NT Cyclor, a real-time imaging thermal cyclor. Worked with manufacturing company and consultants to bring prototype to product. Designed and implemented novel methods for manipulation of nanovolume fluids. Projects involve a diverse mix of mechanical and electrical engineering, as well as chemistry, biology, and optics.
- Responsive Environments: M.I.T. Media Laboratory** (1999-2001) Cambridge, MA
Designed, constructed, and programmed the Termenova, a hybrid gestural controller for musical applications. Instrument consisted of an auto-positioning laser array coupled to a digital capacitance sensor and provided multiple axes of continuous free-gesture control.
- M.I.T. Edgerton Center** (1998-1999) Cambridge, MA
Teaching Assistant for MIT undergraduate course, ‘‘Strobe Lab’’. Taught stroboscopy, techniques for scientific imaging, and high speed video.
- Physics and Media Group: M.I.T. Media Laboratory** (1998-1999) Cambridge, MA
Teaching Assistant for Media Lab graduate course, ‘‘How to Make Almost Anything’’. Taught machining (manual and CNC) and manufacturing methods.
- Micromedia: M.I.T. Media Laboratory** (1995-1999) Cambridge, MA
Constructed the Digital Portrait, a 4’x3’ wall mounted thermal printer for use with thermochromic reusable paper. Work performed included machining (manual and CNC), motion control system design and construction, and computer interface construction. Also worked on fabric displays, Electronic Ink, printable MIM diodes, and laser displays.
- Skills** Sensors, automation, microcontrollers, digital imaging, lighting, optics, motor control (step, servo, dc), PCB design and layout (Protel), CAD layout (Solidworks). Programming in assembly, C, Matlab. Physical fabrication skills including lasercutting, welding, brazing, casting, waterjet cutting, and precision machining.. Extensive experience working on cross functional teams including scientists, engineers, programmers, marketing, and musicians.
- Honors** Co-author on several published patent applications.
Grant recipient from LEF, for work on a midi controlled robot orchestra.
Captain of first all-female team on the television show ‘‘Junkyard Wars’’.
First place robot, ‘‘dog’’, in MIT’s 6.270 Autonomous Lego Robot Competition, 1998.
First place team for the AUVSI International Autonomous Underwater Vehicle Competition, 1998.
Member of US team at Eurobot 2000, an international autonomous robotics contest.
Past President of alumni corporation for pika, an MIT living cooperative.
- Publications** Hasan, L., Yu, N., Paradiso, J. (2002) ‘‘The Termenova: A Hybrid Free-Gesture Interface’’ In the proceedings of New Instruments for Musical Expression (NIME-02), Dublin, Ireland.
- Website** <http://lbot.org>