

Electrical Engineering Building,
Purdue University,
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West Lafayette, IN 47907-2035
USA

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**Personal
Information**

First Name: Ali
Last Name: Jalali
Birth Date: July, 1982
Gender: Male

Education

Electrical and Computer Engineering Department, Purdue University *PhD in Electrical Engineering, Major in Communication Systems*
West Lafayette, IN **2008-Present**
Thesis: Distributed Source Coding in Wireless Communication Networks
Supervisor: Dr. D. J. Love

Computer Engineering Department, Sharif University of Technology *Master of Science in IT/Data Communication, Major in Information Theory*
Tehran, Iran **2005-2007**
Thesis: Information Theoretic Approach to Distributed Video Coding
Supervised by Dr. H. R. Rabiee

Electrical Engineering Department, Sharif University of Technology *Bachelor of Science in Electrical Engineering, Major in Adaptive Control*
Tehran, Iran **1999-2004**
Thesis: Designing and developing an adaptive interharmony meter for power line
Supervised by Dr. H. Mokhtari

**Research
Interests**

- Communication Systems
- Information Theory
- Wireless Communication
- Distributed Source/Video coding
- MIMO Communication
- OFDM/OFDMA/CDMA Schemes
- Network Information Theory

**Research
Experience**

Advanced Communication Systems Lab. **Research Assistant**
EE. 169, Electrical Engineering building, Spring 2008 - Present
Purdue University
Research on multi-way information theory problems and its related applications.

Digital Media Lab. **Research Assistant**
No. 408, Khodro building, Fall 2004 - Fall 2007
Sharif University of Technology
Research on distributed source coding schemes. Applying such a scheme to the video as an special signal. Designing a distributed coding scheme for video coding based on H.264.

Advanced Telecommunication Lab. **Research Assistant**
Electrical Engineering Department, Fall 2001 - Fall 2002
Sharif University of Technology
Designing and implementing an OFDM modem with capacity of 1024 carriers for fault tolerant data communication on power lines.

Professional Experience

Iran Telecommunication Research Center
3rd Fl, N.Kargar St, Amir-Abad, Tehran, Iran
Researcher of Center of Excellence of Information Technology

ICT Research Organizer
Fall 2005 - Fall 2006

Hamyan Fan Co.
No. 10, Sayeh Ln, Vali-Asr(AJ) St, Tehran, Iran
Member of Research and Development Group

Power Line Smart Relays
Fall 2002 - Summer 2005

Graduate Courses

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- CMOS Analog IC Design
 - Measure Theory
 - Performance Analysis of Networks
 - Estimation Theory
 - Lumped System Theory
 - Random Variables and Signals
 - Advanced Digital Signal Processing
 - Real Analysis
 - Statistical Pattern Recognition
 - Advanced Computer Data Networks
 - Data Compression
 - Speech Processing
 - Interconnection Networks
 - Stochastic Processes
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Publications

- Ali Jalali and David Love, “N-Way communication with a fidelity criterion,” In preparation, 2008.
 - Ali Jalali, David Love and Bertrand Hotchwald, “On third-party Slepian-Wolf coding,” In preparation, 2008.
 - Ali Jalali and David Love, “Closed-Form Expression for Optimal Two-User MIMO Unitary Precoding,” Submitted to IEEE Communications Letters, 2008.
 - Hossein Ravanbod and Ali Jalali, “Configurable ultrasonic flaw classification of oil pipelines,” Part II: Feature extraction, Classification and Error verification, Nondestructive Testing and Evaluation, Vol. 23, pp. 77-88, June 2008.
 - Hossein Ravanbod and Ali Jalali, “Configurable ultrasonic flaw classification of oil pipelines,” Part I: image acquisition, pre-processing and flaw area and volume estimation, Nondestructive Testing and Evaluation, Vol. 23, pp. 43-55, March 2008.
 - Hossein Ravanbod, Freidou Behnia and Ali Jalali, “Determining the required information in scanning of the oil pipelines,” Sharif Scientific Journal: Electrical and Computer Engineering, Vol. 38, pp. 52-61, 2007. (In Persian)
 - Ali Jalali and Hamid Sarbazi-Azad, “The Edge Product of Networks,” Eighth International Conference on Parallel and Distributed Computing, Applications and Technologies (PDCAT’07), pp. 371-375, 2007.
 - Ali Jalali, Seyyed Morteza Mousavi, Hossein Sameti and Hamid Reza Rabiee, “A New Generalized Side-lobe Canceler Based Algorithm for Speech Enhancement”, In proceeding of the 15th Iranian Conference in Electrical Engineering (ICEE), Tehran, Iran, 2006. (In Persian)
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Teaching Experience

Stochastic Processes Teaching Assistant
Computer Engineering Department Fall 2006
Sharif University of Technology, Tehran, Iran

Probability & Statistics Teaching Assistant
Electrical Engineering Department Fall 2004
Sharif University of Technology, Tehran, Iran

Elementary Differential Equations Teaching Assistant
Mathematical Sciences Department Spring 2001, Fall 2001,
Sharif University of Technology, Tehran, Iran Spring 2002, Fall 2002,
Spring 2003

Awards and Honors

- Ranked 16st among more than 100,000 graduate applicants in the Graduate Iranian Nationwide University Entrance Exams (Arshad Konkoor), 2005
 - Ranked 39st among more than 600,000 undergraduate applicants in the Undergraduate Iranian Nationwide University Entrance Exams (Sarasari Konkoor), 1999
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Accomplished Academic Projects	<ul style="list-style-type: none"> • Developing An Algorithm for Packet Classification over IP <i>(Advanced Network course, Spring 2006)</i> • Developing A Generalized Sidelobe Canceler for A Microphone Array <i>(Speech Processing course, Spring 2006)</i> • Design and Developing An Interharmony Meter for Power Line <i>(B. Sc. Project, Fall 2004)</i>
Professional Skills	<hr/> <ul style="list-style-type: none"> • Programming Languages : C, C++, Delphi, Pascal and Assembly • Mathematical Analysis and Simulation using MATLAB®and Simulink® • Designing and Simulation of Digital Systems using MAX-PLUS and Quartus
Languages	<hr/> <p>Persian: Native English</p>
References	<hr/> <p>Available upon request</p>