



## **Curriculum Vitae**

### **Sajad Jahanbakht**

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### **Education:**

- Ph.D. degree in Electrical Engineering (Microwave and optical communications), Sharif University of Technology, Tehran, Iran. 2011.
- M.Sc. degree in Electrical Engineering (Microwave and optical communications), Sharif University of Technology, Tehran, Iran. 2004.
- B.Sc. degree in Electrical Engineering, Isfahan University of Technology, Isfahan, Iran. 2002.

### **Honors:**

- Ranked third in Department of Electrical & Computer Engineering at Isfahan University of Technology among 170 Students entered at 1998. (2001)
- First rank in entrance examination of PhD of Microwave Engineering at Sharif University of Technology (2002).

### **Publications:**

#### **Journal papers:**

1- S. Jahanbakht, S.E. Hosseini, A. Karimi, "Frequency domain signal and noise analysis of optoelectronic oscillators under the effects of modulator frequency chirping and fiber dispersion," *Journal of the Optical Society of America B* (JOSA B). vol. 36, no. 10, pp. 2678-87, Oct. 2019.

2- S.Najari, B. Jazi, S. Jahanbakht, "The mode generation due to the wave transmission phenomena from a loss free isotropic cylindrical metallic waveguide

to the semi-bounded plasma waveguide," *Waves in Random and Complex Media*, 2019 Aug 31:1-6.

3- S. Jahanbakht, S. F. Mousavi-Bideli, "Frequency domain computation and stability analysis of oscillation modes of wideband optoelectronic oscillators," (in Persian), Accepted for publication at *Tabriz Journal of Electrical Engineering*, Date of acceptance: May 2018.

4- Z. Chamani, S. Jahanbakht, "Improved performance of double T monopole antenna for 2.4/5.6 dual band WLAN operation using artificial magnetic conductors," *Progress in Electromagnetics Research-M*, vol. 61, pp. 205-213, 2017.

5- S.E. Hosseini, A. Karimi, S. Jahanbakht, " Q-factor of optical delay-line based cavities and oscillators," *Optics Communication (Elsevier)*, vol. 407, pp. 349-354, 15 January 2018. (doi: [10.1016/j.optcom.2017.09.077](https://doi.org/10.1016/j.optcom.2017.09.077))

6- S. Golharani, B. Jazi, S. Jahanbakht, A.M. Nashalji, "Modeling of a bimetallic eccentric cylindrical plasma waveguide based on a transmission line for TEM-mode," *Waves in Random and Complex Media (Taylor and Francis)*, Published online 25 August 2017, (doi: [10.1080/17455030.2017.1367436](https://doi.org/10.1080/17455030.2017.1367436))

7- S. Jahanbakht, "Frequency domain approach to the steady state and stability analysis of dual injection-locked optoelectronic oscillators," *Applied Optics (Optical Society of America)*, vol. 56, no. 20, pp. 5705-5715, July 2017.

8- S. Jahanbakht, "Frequency domain computation of steady state modes of optoelectronic oscillators with stability analysis," *Applied Optics (Optical Society of America)*, vol. 56, no. 4, pp. 975-984, February 2017.

9- Z. Hajijamali-Arani, B. Jazi, and S. Jahanbakht, "Theoretical modeling of average force acted on nano plasma spheres in presence of radiation of long wavelength point source", Accepted for publication in *Plasmonics (Springer)*, 11 september 2016, doi: [10.1007/s11468-016-0382-3](https://doi.org/10.1007/s11468-016-0382-3)

10- S. Jahanbakht, "Frequency domain phase noise analysis of dual injection-locked optoelectronic oscillators," *Applied Optics (Optical Society of America)*, vol. 55, no. 28, pp. 7900-7910, October 2016, doi: [10.1364/AO.55.007900](https://doi.org/10.1364/AO.55.007900)

11- S. Safari, B. Jazi, and S. Jahanbakht, "Different roles of electron beam in two stream instability phenomena in an elliptical waveguide for generation and amplification of THz electromagnetic waves", *Physics of plasma*, Accepted 21 July 2016, Published online 08 August 2016

12- S. Jahanbakht and S.E. Hoseini, "Frequency domain noise analysis of optoelectronic oscillators considering the nonlinearity of the RF amplifier," *Journal of the Optical Society of America B*, vol. 33, no. 4, pp. 548-557, 2016.

13- S. Jahanbakht, "Characterization of the noise spectrum of optoelectronic oscillators in the presence of the laser frequency noise," *Applied Optics (Optical Society of America)*, vol. 55, no. 8, pp. 1854-1862, 2016

14- S. Jahanbakht, F. Farzaneh, "Phase Noise Characterization of Oscillators through Ito calculus", *International Journal of Circuit Theory and Applications*, Published online in Wiley Online Library (wileyonlinelibrary.com). DOI: 10.1002/cta.2025, 2014

15- S. Jahanbakht, S.E. Hoseini and A. Banai, "Prediction of the noise spectrum in optoelectronic oscillators: an analytical conversion matrix approach," *Journal of the Optical Society of America B*, vol. 31, no. 8, pp. 1915-1925, August 2014.

16- S. Jahanbakht, F. Farzaneh, "Computing all the Floquet eigenfunctions of oscillators using harmonic balance Jacobian matrices", *IET Circuits Devices Syst.*, vol. 5, no. 4, pp. 257-266, July 2011.

17- S. Jahanbakht, F. Farzaneh, "Computation of the phase and amplitude noise in microwave oscillators and a simplified calculation method for far enough from the carrier offsets", *IET Microw. Antennas Propag.*, vol. 4, no. 12, pp. 2031-2041, November 2010.

#### **Conference papers:**

- 1- S.Jahanbakht and F.Farzaneh, "*Nonlinear Analysis of Microwave Active Mixers by Spectral Balance Methods*", (in Persian), in Iranian National Conference on Electrical & Computer Engineering, May 2005.
- 2- Z. Chamani, S. Jahanbakht, " A novel T- shaped slot artificial magnetic conductor structure for gain enhancement of microstrip antennas," the 6<sup>th</sup> Iranian conference on engineering electromagnetics. June 20, 2018. (31/3/1397)

#### **Research Interests**

- Signal and noise analysis of conventional and optoelectronic oscillators
- Antenna analysis and optimization using numerical methods
- Passive and active microwave circuit design
- Nonlinear analysis of active microwave circuits
- RFIC and MMIC design

#### **Teaching Experience:**

Teaching the following courses at university of Kashan:

- 1- Communication circuits
- 2- Analog electronics
- 3- High frequency circuits design
- 4- Active microwave circuits design
- 5- Advanced Engineering Electromagnetics
- 6- Advanced Antenna design
- 7- Advanced Engineering Mathematics

**Programing and Software Skills:**

I have worked and done several projects with the following software media:  
ADS, AWR-Microwave office, CST, MATLAB