

# CV- Dr.Sinan AL-JALALI

**Name :** Sinan AL-JALALI  
**Date of birth:** 10/1/1974  
**Nationality :** Syrian  
**Place of birth:** Damascus, Syria  
**Sex :** Male  
**Work Position:** Assistant professor



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**Language:** Arabic (native) – English  
**Computer skills:** ICDL, Matlab &, Labview Programming  
**E-mail:** aljlali@scs-net.org / sinanj33@gmail.com.  
**Workplace & Address :** Higher Institute for Laser Research and Applications  
Damascus university - Damascus , Syria

## ❖ EDUCATION.

<i>University or equivalent</i>	<i>Year</i>	<i>Major fields of study</i>
➤ <i>PhD. Higher Institute for Laser Research and its Applications - Damascus University</i>	2017	<i>Laser spectroscopy</i>
➤ <i>Master of science. Faculty of Science - Damascus university</i>	2007	<i>Laser Technology</i>
➤ <i>Diploma of Higher Studies. Faculty of Science - Damascus university</i>	2001	<i>Modern Physics</i>
➤ <i>BC.S Physics department. Faculty of Science - Damascus University</i>	1998	<i>Physics</i>

## ❖ Administration and Scientific employment and Responsibility.

<i>Research-institution or university</i>	<i>Academic responsibilities</i>	<i>Year</i>
➤ <i>Center of Laser Researchs. Damascus University</i>	<i>Physicist</i>	2000 – 2002
➤ <i>Physics department laboratories. Faculty of science -Damascus University</i>	<i>Teaching Assistant</i>	2002 – 2006
➤ <i>Examination department. Faculty of science -Damascus University</i>	<i>Head of the department</i>	2002 – 2006
➤ <i>Physics department laboratories. Kalamoon Private University</i>	<i>Teaching Assistant</i>	2007 – 2013
➤ <i>Physics department laboratories. Arab International Private University</i>	<i>Teaching Assistant</i>	2010 – 2011

- *Higher Institute for Laser Research and its Applications- Damascus University*      *Scientific staff*      *2006 – Now*
- *Lab of Laser Spectroscopy.*
- Higher Institute for Laser Research and its Applications- Damascus University*      *Scientific Supervisor*      *2010 – Now*

❖ ***Courses taught.***

<b><i>Courses</i></b>	<b><i>Students</i></b>
1 <i>Laser fundamentals.</i>	<i>Academic postgraduate masters.</i>
2 <i>Laser applications.</i>	<i>Academic postgraduate masters.</i>
3 <i>Laser technology.</i>	<i>Academic postgraduate masters.</i>
4 <i>Laser fundamentals.</i>	<i>Professional Master in Laser applications in Medicine.</i>
5 <i>Laser fundamentals.</i>	<i>Professional Master in Laser applications in engineering and Industry.</i>
6 <i>Laser- Matter interaction.</i>	<i>Professional Master in Laser applications in engineering and Industry.</i>

❖ ***Interests of Scientific Research.***

- *Laser spectroscopy in general.*
- *Development of HITRAN database.*
- *Laser Induced Breakdown Spectroscopy (LIBS).*
- *Environmental applications of laser spectroscopy.*
- *Human exhalation analysis to early diagnose diseases by laser spectroscopy methods.*
- *Laser Medical applications of laser spectroscopy.*
- *Quantitative & qualitative analysis of material by laser spectroscopy methods.*

❖ ***Academic Master’s Thesis supervised.***

- 1 *laser spectroscopy to detect absorption lines of CO<sub>2</sub> molecule at wavelength of 1064 nm.*
- 2 *Laser spectroscopy to detect absorption lines of some gases molecules CO<sub>2</sub> – H<sub>2</sub>O.*
- 3 *NIR Laser Detection of Methane CH<sub>4</sub> absorption lines by Wavelength Modulation Spectroscopy.*
- 4 *Design control circuit for gases detection system.*
- 5 *Saturated absorption spectroscopy to measure magnetic field.*
- 6 *Pressure effect on carbon dioxide absorption Line at specific wavelength.*
- 7 *Laser spectroscopy for early detection of some diseases by exhalation analysis.*

❖ ***Graduation project Supervised for Profesional Master.***

- 1 *Building a laser spectroscopy system to detect CO<sub>2</sub> and determine its concentration in the human exhaled air.*
- 2 *Laser effects on Herniated disc.*
- 3 *Weak light signals Detection.*
- 4 *Speed measurement of textile spinning ring using a laser.*

- 5 *Study and implement laser information transmission system.*
- 6 *Laser spectroscopy to analyze cars exhaust gases.*

❖ **Seminars, Summer Schools, Conferences.**

<i>Name</i>	<i>Year</i>	<i>Place</i>
<i>Course in LabView programming</i>	<i>2017</i>	<i>Research and Scientific Studies Center Damascus. SYRIA</i>
<i>Course Thin Film Preparation and Characterization</i>	<i>2016</i>	<i>Atomic Energy Commission Damascus. SYRIA</i>
<i>Seminar of Laser Technology and its Applications</i>	<i>2010</i>	<i>Damascus. SYRIA</i>
<i>Seminar of Laser Technology and its Applications</i>	<i>2008</i>	<i>Damascus. SYRIA</i>
<i>Seminar of Laser Technology and its Applications</i>	<i>2006</i>	<i>Damascus. SYRIA</i>
<i>Administrative Skills Development Course</i>	<i>2002</i>	<i>Higher Institute for Administrative Development Damascus. SYRIA</i>
<i>Summer School Student Practice at NIS University</i>	<i>1997</i>	<i>NIS –Yugoslavia Physics department</i>

❖ **Scientific Publications.**

- 1 *Detection of multi absorption lines for CH<sub>4</sub> using broadband laser beam modulation.  
(2017) Journal of Optics ISSN 0972-8821 J Opt DOI 10.1007/s12596-017-0442-x*
- 2 *A set up to detect the absorption lines of Atmospheric gas molecules.  
(2016) Journal of Optics ISSN 0972-8821 J Opt DOI 10.1007/s12596-016-0329-2*
- 3 *Using pulsed Optical Parametric Oscillator to detect the absorption lines of CO<sub>2</sub> molecules.  
International Journal of ChemTech Research, Vol.8, No.4, pp 1957-1964,2015*
- 4 *Free Mode Hop Tunable Diode Lasers  
Aleppo University Journal of Basic Sciences Series - Issue 101, 2015.*
- 5 *Photoacoustic Spectroscopy and Applications in Laser Spectroscopy to Study and detect Gases.  
Aleppo University Journal of Basic Sciences Series - Issue 91 of 2013.*

*Signature*  
**Dr.Sinan AL-JALALI**