



JOB INFORMATION

Job Code:	167406
Job Title:	VLSI Research Engineer
FLSA Status:	Exempt
Supervisory:	May oversee student and/or temporary workers.
Job Family:	Computer Research
Job Family Group:	Information Technology
Management Level:	7 Individual Contributor

JOB SUMMARY

Uses design methodologies to investigate research principles in complex micro-electronic circuits utilized in advance Very Large Systems Integration (VLSI).

JOB QUALIFICATIONS:

Education

Req	Pref	Degree	Field of Study
X		Master's degree	
	X	Doctorate	

Additional Education

Check here if experience may substitute for some of the above education.

Combined experience/education as substitute for minimum education

Work Experience

Req	Pref	Work Experience	Experience Level
X		5 years	
	X	7 years	

Additional Work Experience

Check here if education may substitute for some of the above work experience.

Combined experience/education as substitute for minimum work experience

Knowledge, Skills and Abilities

Req	Pref	Functional Skills
X		Thorough knowledge of VLSI electrical and computer engineering principles at the chip level
X		Experience with CAE/CAD tools, modern design methodologies and development of solutions for specific design tasks using VLSI engineering principles.

Other Job Factors

- May require periodic weekend or evening work.

JOB ACCOUNTABILITIES

	<i>% Time</i>	<i>Essential</i>	<i>Marginal</i>	<i>N/A</i>
Applies electrical and computer engineering VLSI principles and concepts in the design of micro-electronic circuits.				
Plans, coordinates and executes research and development activities to advance VLSI. Executes research on next generation VLSI circuits including digital, analog, and mixed-mode signals as well as wireless RF in the domain of embedded systems. Contributes to state-of-the-art in VLSI and micro-circuits technology.				
Solves a wide variety of engineering problems centered on VLSI and micro-circuits analysis and design concepts. Selects methods and techniques for obtaining solutions.				
Interacts with peers. Makes presentations at conferences; participates in workshops and collaborates in specific areas of research.				
Writes technical reports and publishes technical papers and articles.				

Other Requirements

<i>Essential:</i>	<i>Emergency Response/Recovery</i>	<i>Essential:</i>	<i>Mandated Reporter</i>
	In the event of an emergency, the employee holding this position is required to “report to duty” in accordance with the university’s Emergency Operations Plan and/or the employee’s department’s emergency response and/or recovery plans. Familiarity with those plans and regular training to implement those plans is required. During or immediately following an emergency, the employee will be notified to assist in the emergency response efforts, and mobilize other staff members if needed.		A mandated reporter who in his or her professional capacity has knowledge of, or reasonably suspects a person who is under the age of 18 years, elderly, or a dependent adult has been the victim of abuse or neglect must report the suspected incident. The reporter must contact a designated agency immediately or as soon as practically possible by telephone or in writing within 36 hours. By virtue of the associated job duties, this position qualifies as a mandated reporter as required by state law and USC’s policy at: https://policy.usc.edu/mandated-reporters/
<i>Campus Security Authority (CSA)</i>			<i>Essential:</i>
By virtue of the associated job duties, this position qualifies as a Campus Security Authority as required by law and USC’s policy at: https://dps.usc.edu/alerts/clery/			No

ACKNOWLEDGMENTS

The above statements reflect the essential and non-essential functions as necessary to describe the principle contents of the job. They are not intended to be a complete statement of all work requirements or duties that may be required of the position. I understand that I may be asked to perform other duties as assigned. USC reserves the right to add or change duties at any time.

The University of Southern California is an Equal Opportunity Employer. USC prohibits discrimination on any basis protected under federal, state, or local law, regulation, or ordinance or university policies. All employment decisions are based on individual qualifications and business need.

I acknowledge receipt of this job description and its associated physical requirements. I have read and understand the job description and job requirements and agree to abide by their contents. I realize that duties may be requested of me that are not specifically stated herein. I understand that I will be expected to adjust to potential fluctuations in work volume. I understand that, if I have any questions about the essential functions or expectations of my position, my supervisor and/or HR partner are available to discuss them with me.

Print Employee Name

Signature

Date

Print Manager Name

Signature

Date

This job description describes the general nature and level of work required by the position. It is not intended to be an all-inclusive list of qualifications, skills, duties, responsibilities or working conditions of the job. The job description is subject to change with or without notice, and Management reserves the right to add, modify or remove any qualification or duty. Nothing in this job description changes the

existing at-will employment relationship between the university and the employee occupying the position.