Over 60+ research staff, plus students and postdocs perform ground-breaking photonics research. We provide innovative solutions for national security applications such as optical communications, energy harvesting, infrared imaging, RF, quantum, LIDAR, photovoltaics, & diode lasers.

Learn more:
National Security Photonics Center

sandia.gov/careers
Keyword search “photonics”
Sandia’s National Security Photonics Center

Sandia’s National Security Photonics Center serves the nation by developing and delivering leading-edge integrated photonics solutions for our customers and partners in the national security sector. Sandia performs ground-breaking research as well as product delivery and qualification with a focus on technology innovation and high-performance pathfinder solutions. We leverage the broad capabilities within Sandia’s Microsystems Engineering, Science, and Applications (MESA) Complex, including our co-located silicon and compound semiconductor fabs, deep R&D expertise, and low-volume manufacturing infrastructure to solve truly difficult problems. Sandia partners with government agencies, private companies, and universities to collaborate on new technologies, provide expertise, deliver low volume solutions, and transfer technology.

Sandia’s National Security Photonics Center is composed of >60 photonics experts skilled in device design, modeling, simulation, epitaxy, device fabrication, integration, assembly, and test, in addition to many postdocs and students. Sandia jointly hosts the Center for Integrated Nanotechnologies (CINT), a national user facility devoted to nanotechnologies including nanophotonics and optical nanomaterials.

**Compound III-V Photonics** The InGaAsP/InP PIC program at Sandia resides within the MESA facility and is presently used for customer-specific photonic R&D, such as optical data sampling and RF-analog signal processing in the optical domain.

**Silicon Photonics** Sandia’s silicon photonics process is an electro-optical silicon photonic integrated circuit platform built on silicon on insulator (SOI) wafer technology with fully integrated Ge detectors.

**Heterogeneous Integration** Sandia has unique capabilities in hybrid integration of custom photonic devices and advanced electronic circuits, enabling prototyping of high-performance optoelectronic systems and microsensors.

**Biological & Chemical Sensors** Sandia’s Microsystems effort develops sensors and sensor arrays for biological and chemical detection.

**Advanced Packaging** Sandia experts have decades of experience with the microsystems packaging process, a key step in successful development of integrated systems.

**Failure Analysis, Test, and Reliability Support** Sandia experts invent, develop and utilize different tools and techniques for root cause failure analysis. Sandia supports its customers throughout the product life cycle.

**Applications** Sandia’s mission in national security has fostered capabilities and technologies including Optical Interconnect, Photovoltaics, Focal Plane Arrays, Quantum Microsystems, Advanced Sensors, Plasmonics, Metamaterials, and Optical MEMS.

Sandia’s National Security Photonics Center (NSPC): 
www.sandia.gov/mesa/nspc

The Center for Integrated Nanotechnologies: cint.lanl.gov

Career opportunities for student interns, post-docs and staff: 
www.sandia.gov/careers with keyword: photonics
Current Open Photonics Job Postings* (February 2022)

<table>
<thead>
<tr>
<th>Job ID</th>
<th>Job Title</th>
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<tbody>
<tr>
<td>681008</td>
<td>Integrated Photonics Postdoctoral Appointee</td>
</tr>
<tr>
<td>680903</td>
<td>Intern - Photonic &amp; Phononic Microsystems - R&amp;D Graduate Summer (Integrated Photonics)</td>
</tr>
<tr>
<td>680904</td>
<td>Intern - Photonics &amp; Phononics Microsystems - R&amp;D Undergraduate Summer (Integrated Photonics)</td>
</tr>
<tr>
<td>680906</td>
<td>Intern - Photonics &amp; Phononics Microsystems - R&amp;D Graduate Summer (Mechanical)</td>
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<tr>
<td>680909</td>
<td>Intern – Photonics &amp; Phononics Microsystems – R&amp;D Graduate Summer (Mechanical/Electromagnetic Simulation)</td>
</tr>
<tr>
<td>680910</td>
<td>Intern - Photonics &amp; Phononics Microsystems – R&amp;D Undergraduate Summer (Electrical Engineering)</td>
</tr>
<tr>
<td>680955</td>
<td>Intern - Photonics &amp; Phononics Microsystems - R&amp;D Undergraduate Summer (Mechanical Engineering)</td>
</tr>
</tbody>
</table>

*New postings are created regularly as older postings expire. To see the latest postings, please go to sandia.gov/careers and search for keywords such as "photonics" or words found in older postings. Summer Intern positions will be filled by early March 2022.
**Job Title:** Integrated Photonics Postdoctoral Appointee

**Location:** Albuquerque, NM

**Full-Time - Temporary**

**COVID-19 Vaccination Mandate**

Sandia demonstrates its commitment to public safety in the national interest by requiring that all new hires attest to their vaccination status before commencing employment. The requirement also applies to those who are telecommuting and working virtually.

Any concerns about the ability to meet this requirement should be directed to HR Solutions at (505) 284-4700.

**What Your Job Will Be Like**

We are seeking a motivated postdoctoral appointee to advance silicon photonic and other integrated photonic technologies for quantum, RF, and cryogenic applications with heterogeneous integration, innovative designs, and novel physics phenomena. The postdoc will have opportunities to collaborate with 60+ researchers in Sandia’s National Photonics Center, using Sandia’s unique Microsystems and Engineering Sciences Applications (MESA) Fabrication Facility. On any given day, you may be called on to:

- Perform ground-breaking scientific research in silicon photonic and other integrated platforms through simulation, design, and characterization of novel devices for both classical and quantum applications.
- Implement new concepts in device design, measurement, fabrication, and packaging.
- Build world-first application demonstrations with photonic devices.
- Report research results in top-tier journals and conferences.
- Generate new intellectual property through patent filing as applicable.

**Qualifications We Require**

- Ph.D. degree in Physics, Electrical Engineering, Optical Engineering, Optical Science, or other related STEM technical areas, conferred within five years prior to employment.
- Experience performing original research, demonstrated through a record of invention, original publications in top-tier journals, and conference papers and presentations.
- Demonstrated expertise in integrated photonics device design and testing (passive or active devices).
- Experience in using software for device performance simulations using, for example, COMSOL, Matlab/Simulink, FDTD codes etc.
- Familiarity with basic knowledge of semiconductor physics, optical materials, and nonlinear optics.
- Ability to obtain a DOE L Security Clearance.
Qualifications We Desire

- Background in integrated photonics applications such as quantum sensing, networking and computing, LIDAR, imaging, RF photonics, or optical communications.
- Experience in the design and test of photonics microsystems: integrated optical circuit with passive and active devices.
- Expertise in fabrication, characterization, and usage of various optical materials.
- Experience with small-scale optical packaging of silicon photonics devices, including co-packaged with electronic chips.
- Strong theoretical background in optical communication, RF communication, quantum optics and/or quantum computing.
- Experience in high-speed characterization of devices, testing automation, electrical probe stations, operation of high speed and high frequency test equipment, such as bit error rate test equipment, network analyzers, spectrum analyzers, and high-speed oscilloscopes.
- Experience interfacing electrical components to optical microsystems; examples are modulator drivers, transimpedance amplifiers, and electronic control circuits.
- Background in radio frequency circuits and systems.
- Background with cryogenic testing equipment and methods.
- Ability and desire to work in a team environment and flexibility to work on multiple projects concurrently.

About Our Team

The Photonic and Phononic Microsystems Department develops and matures state of the art photonic and phononic technologies for a variety of national security purposes. Our team of interdisciplinary researchers innovates, develops, and applies novel technologies including silicon photonics, nanophotonics, optomechanics, metamaterials, plasmonics, optical detectors, guided wave optics, phononic and thermoelectric technologies, spanning fundamental research and path-finding engineering solutions. In the last ten years, the Photonic and Phononic Microsystems Department has generated numerous world-firsts, high-impact publications/journal covers and received 70+ patents, multiple R&D 100 awards, and significant DARPA/DOD/DOE funding awards.

Check out Sandia’s National Photonics Center

About Sandia

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- Challenging work with amazing impact that contributes to security, peace, and freedom worldwide
- Extraordinary co-workers
- Some of the best tools, equipment, and research facilities in the world
- Career advancement and enrichment opportunities
- Flexible work arrangements for many positions include 9/80 (work 80 hours every two weeks, with every other Friday off) and 4/10 (work 4 ten-hour days each week) compressed workweeks, part-time work, and telecommuting (a mix of onsite work and working from home).
- Generous vacations, strong medical and other benefits, competitive 401k, learning opportunities, relocation assistance and amenities aimed at creating a solid work/life balance.*


*These benefits vary by job classification.
Security Clearance

Sandia is required by DOE to conduct a pre-employment drug test and background review that includes checks of personal references, credit, law enforcement records, and employment/education verifications. Applicants for employment need to be able to maintain a DOE L-level security clearance, which requires U.S. citizenship. If you hold more than one citizenship (i.e., of the U.S. and another country), your ability to obtain a security clearance may be impacted.

Applicants offered employment with Sandia are subject to a federal background investigation to meet the requirements for access to classified information or matter if the duties of the position require a DOE security clearance. Substance abuse or illegal drug use, falsification of information, criminal activity, serious misconduct or other indicators of untrustworthiness can cause a clearance to be denied or terminated by DOE, resulting in the inability to perform the duties assigned and subsequent termination of employment.

EEO

All qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, age, disability, or veteran status and any other protected class under state or federal law.

Position Information

This postdoctoral position is a temporary position for up to one year, which may be renewed at Sandia’s discretion for up to five additional years. The PhD must have been conferred within five years prior to employment.

Individuals in postdoctoral positions may bid on regular Sandia positions a internal candidates, and in some cases may be converted to regular career positions during their term if warranted by ongoing operational needs, continuing availability of funds, and satisfactory job performance.
Job Title: Intern – Photonic & Phononic Microsystems – R&D Graduate Summer

Location: Albuquerque, NM
Part-Time - Temporary

COVID-19 Vaccination Mandate

Sandia demonstrates its commitment to public safety in the national interest by requiring that all new hires be fully vaccinated or have an approved medical or religious accommodation before commencing employment. The requirement also applies to those who are telecommuting and working virtually.

Any concerns about the ability to meet this requirement should be directed to HR Solutions at (505) 284-4700.

What Your Job Will Be Like

We are seeking a Summer - R&D Graduate Intern to join our dynamic team!

On any given day, you may be called on to:

• Support research staff in developing novel optical devices (ex. modulators, gratings, filters, detectors, lasers) for integrated silicon photonics for various applications such as optical communication, quantum computing, sensing, and communication, RF, and LIDARs.
• Perform simulation and modeling of devices and develop advanced modeling techniques.
• Develop innovative device designs and improve designs to meet mission goals.
• Characterize prototype devices, analyze research data, and report results in top-tier journals and conferences.
• Generate new intellectual property through patent filing.

Qualifications We Require

You bring the confidence and skills to be eligible for the job by meeting these minimum requirements:

• Earned bachelor’s degree.
• Currently attending and enrolled full time (or scheduled to graduate in the spring) in an accredited science, engineering, or math graduate program
• Minimum cumulative GPA of 3.0/4.0.
• Ability to work up to 40 hours per week during the summer.
• U.S. citizenship.

Note: If you have not yet started your graduate program, please apply to an undergraduate intern position.

Qualifications We Desire

• Earned bachelor’s degree in Electrical Engineering, Optical Engineering/Science, Physics, or other relevant areas. Currently enrolled in master’s or PhD’s degree program in the same areas.
• Practical laboratory skills and experience with basic laser systems, optical measurement techniques, and data collection systems.
• Good understanding of principles related to physics and optics.
• Knowledge of programming languages.
• Experience with simulations software such as Matlab, Mathcad, COMSOL, FDTD simulation tools, etc.
• Background in quantum systems, communication systems, optical sensing, RF systems, heterogeneous integration, and/or cryogenic system.
About Our Team
The Photonic and Phononic Microsystems Department develops and matures state of the art photonic and phononic technologies for a variety of national security purposes. Our team of interdisciplinary researchers innovates, develops, and applies novel technologies including silicon photonics, nanophotonics, optomechanics, optical metamaterials, plasmonics, optical detectors, guided wave optics, phononic and thermoelectric technologies, spanning fundamental research and path-finding engineering solutions.


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- Career advancement and enrichment opportunities
- Flexible work arrangements for many positions include 9/80 (work 80 hours every two weeks, with every other Friday off) and 4/10 (work 4 ten-hour days each week) compressed workweeks, part-time work, and telecommuting (a mix of onsite work and working from home).
- Generous vacations, strong medical and other benefits, competitive 401k, learning opportunities, relocation assistance and amenities aimed at creating a solid work/life balance.*


- *These benefits vary by job classification.

Security Clearance
This position does not currently require a Department of Energy (DOE) security clearance.

Sandia will conduct a pre-employment drug test and background review that includes checks of personal references, credit, law enforcement records, and employment/education verifications. Furthermore, employees in New Mexico need to pass a U.S. Air Force background screen for access to Kirtland Air Force Base. Substance abuse or illegal drug use, falsification of information, criminal activity, serious misconduct or other indicators of untrustworthiness can cause access to be denied or terminated, resulting in the inability to perform the duties assigned and subsequent termination of employment.

If hired without a clearance and it subsequently becomes necessary to obtain and maintain one for the position, or you bid on positions that require a clearance, a pre-processing background review may be conducted prior to a required federal background investigation. Applicants for a DOE security clearance need to be U.S. citizens. If you hold more than one citizenship (i.e., of the U.S. and another country), your ability to obtain a security clearance may be impacted.

Members of the workforce (MOWs) hired at Sandia who require uncleared access for greater than 179 days during their employment, are required to go through the Uncleared Personal Identity Verification (UPIV) process. Access includes physical and/or cyber (logical) access, as well as remote access to any NNSA information technology (IT) systems. UPIV requirements are not applicable to individuals who require a DOE personnel security clearance for the performance of their SNL employment or to foreign nationals. The UPIV process will include the completion of a USAccess Enrollment, SF-85 (Questionnaire for Non-Sensitive Positions) and OF-306 (Declaration of for Federal Employment). An unfavorable UPIV determination will result in immediate retrieval of the SNL issued badge, removal of cyber (logical) access and/or removal from SNL subcontract. All MOWs may appeal the unfavorable UPIV determination to DOE/NNSA immediately. If the appeal is unsuccessful, the MOW may try to go through the UPIV process one year after the decision date.

EEO
All qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, age, disability, or veteran status and any other protected class under state or federal law.
Job Title: Intern – Photonic & Phononic Microsystems – R&D Undergraduate Summer

Location: Albuquerque, NM
Part-Time - Temporary

COVID-19 Vaccination Mandate

Sandia demonstrates its commitment to public safety in the national interest by requiring that all new hires be fully vaccinated or have an approved medical or religious accommodation before commencing employment. The requirement also applies to those who are telecommuting and working virtually.

Any concerns about the ability to meet this requirement should be directed to HR Solutions at (505) 284-4700.

What Your Job Will Be Like

We are seeking a Summer - R&D Undergraduate to join our dynamic team!

On any given day, you may be called on to:

• Support our research staff in developing novel optical devices (ex. modulators, gratings, filters, detectors, lasers) for integrated silicon photonics for various applications such as optical communication, quantum computing, sensing, and communication, RF, and LIDARs.
• Perform simulation and modeling of devices and develop innovative device designs to meet mission goals.
• Characterize prototype devices, analyze research data, and report results in top-tier journals and conferences.
• Generate new intellectual property through patent filing.

Qualifications We Require

You bring the confidence and skills to be eligible for the job by meeting these minimum requirements:

• Currently attending and enrolled full time (or scheduled to graduate in the spring) in an accredited undergraduate program
• Pursuing a science, engineering, or math major
• Minimum cumulative GPA of 3.0/4.0
• Ability to work up to 40 hours per week during the summer
• U.S. citizenship

Note: If you have not yet started your undergraduate program, please apply to a high school intern position.

Qualifications We Desire

• Currently enrolled in undergraduate degree program in Electrical Engineering, Optical Engineering/Science, Physics, or other relevant areas.
• Good understanding of principles related to physics and optics.
• Knowledge of programming languages.
• Practical laboratory skills and experience.
• Experience with simulations software such as Matlab, Mathcad, COMSOL, FDTD simulation tools, etc.
• Experience with basic laser systems, optical measurement techniques, and data collection systems.
• Background in quantum systems, communication systems, optical sensing, RF systems, heterogeneous integration, and/or cryogenic system.
About Our Team

The Photonic and Phononic Microsystems Department develops and matures state of the art photonic and phononic technologies for a variety of national security purposes. Our team of interdisciplinary researchers innovates, develops, and applies novel technologies including silicon photonics, nanophotonics, optomechanics, metamaterials, plasmonics, optical detectors, guidedwave optics, phononic and thermoelectric technologies, spanning fundamental research and path-finding engineering solutions.

Check out Sandia’s National Security Photonics Center at sandia.gov/mesa/nspc

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- Challenging work with amazing impact that contributes to security, peace, and freedom worldwide
- Extraordinary co-workers
- Some of the best tools, equipment, and research facilities in the world
- Career advancement and enrichment opportunities
- Flexible work arrangements for many positions include 9/80 (work 80 hours every two weeks, with every other Friday off) and 4/10 (work 4 ten-hour days each week) compressed workweeks, part-time work, and telecommuting (a mix of onsitework and working from home).
- Generous vacations, strong medical and other benefits, competitive 401k, learning opportunities, relocation assistance and amenities aimed at creating a solid work/life balance.*


*These benefits vary by job classification.

Security Clearance

This position does not currently require a Department of Energy (DOE) security clearance.

Sandia will conduct a pre-employment drug test and background review that includes checks of personal references, credit, law enforcement records, and employment/education verifications. Furthermore, employees in New Mexico need to pass a U.S. Air Force background screen for access to Kirtland Air Force Base. Substance abuse or illegal drug use, falsification of information, criminal activity, serious misconduct or other indicators of untrustworthiness can cause access to be denied or terminated, resulting in the inability to perform the duties assigned and subsequent termination of employment.

If hired without a clearance and it subsequently becomes necessary to obtain and maintain one for the position, or you bid on positions that require a clearance, a pre-processing background review may be conducted prior to a required federal background investigation. Applicants for a DOE security clearance need to be U.S. citizens. If you hold more than one citizenship (i.e., of the U.S. and another country), your ability to obtain a security clearance may be impacted.

Members of the workforce (MOWs) hired at Sandia who require uncleared access for greater than 179 days during their employment, are required to go through the Uncleared Personal Identity Verification (UPIV) process. Access includes physical and/or cyber (logical) access, as well as remote access to any NNSA information technology (IT) systems. UPIV requirements are not applicable to individuals who require a DOE personnel security clearance for the performance of their SNL employment or to foreign nationals. The UPIV process will include the completion of a USAccess Enrollment, SF-85 (Questionnaire for Non-Sensitive Positions) and OF-306 (Declaration of for Federal Employment). An unfavorable UPIV determination will result in immediate retrieval of the SNL issued badge, removal of cyber (logical) access and/or removal from SNL subcontract. All MOWs may appeal the unfavorable UPIV determination to DOE/NNSA immediately. If the appeal is unsuccessful, the MOW may try to go through the UPIV process one year after the decision date.

EEO

All qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, age, disability, or veteran status and any other protected class under state or federal law.
Job Title: Intern – Photonic & Phononic Microsytems – R&D Graduate Summer

Location: Albuquerque, NM
Part-Time - Temporary

COVID-19 Vaccination Mandate

Sandia demonstrates its commitment to public safety in the national interest by requiring that all new hires be fully vaccinated or have an approved medical or religious accommodation before commencing employment. The requirement also applies to those who are telecommuting and working virtually.

Any concerns about the ability to meet this requirement should be directed to HR Solutions at (505) 284-4700.

What Your Job Will Be Like

We are seeking a Summer - R&D Mechanical Graduate Intern to join our dynamic team!

On any given day, you may be called to:

• Support research staff to develop novel thermal electric, actuation, and communication devices.
• Perform research related to piezoelectric and magnetostrictive material properties and modeling of mechanical wave propagation.
• Become familiar with selected novel devices and develop practical laboratory skills.
• Characterize devices and systems.
• Analyze and document results (in reports or papers).

Qualifications We Require

You bring the confidence and skills to be eligible for the job by meeting these minimum requirements:

• Earned bachelor’s degree.
• Currently attending and enrolled full time (or scheduled to graduate in the spring) in an accredited science, engineering, or math graduate program.
• Minimum cumulative GPA of 3.0/4.0.
• Ability to work up to 40 hours per week during the summer.
• U.S. citizenship

Note: If you have not yet started your graduate program, please apply to an undergraduate intern position

Qualifications We Desire

• Earned bachelor’s degree in Mechanical Engineering, Physics, or other relevant areas. Currently enrolled in graduate-level coursework and/or research in similar areas.
• Knowledge in basic mechanical engineering design and principles.
• Experience in advanced numerical simulation and modeling and in mechanical design.
• Experience operating in a research laboratory environment with basic knowledge of laboratory safety and test equipment operation.
• Experience working with general laboratory test equipment and data acquisition systems.
• Ability to work in a team environment and independently to solve challenging problems.
• Strong writing and communication skills (for reporting technical results in meetings).
About Our Team
The Photonic and Phononic Microsystems Department develops and matures state of the art photonic and phononic technologies for a variety of national security purposes. Our team of interdisciplinary researchers innovates, develops, and applies novel technologies including silicon photonics, nanophotonics, optomechanics, metamaterials, plasmonics, photonic and phononic crystals, thermoelectric, phononic and mechanical transduction technologies, spanning fundamental research and path-finding engineering solutions.

About Sandia
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- Challenging work with amazing impact that contributes to security, peace, and freedom worldwide
- Extraordinary co-workers
- Some of the best tools, equipment, and research facilities in the world
- Career advancement and enrichment opportunities
- Flexible work arrangements for many positions include 9/80 (work 80 hours every two weeks, with every other Friday off) and 4/10 (work 4 ten-hour days each week) compressed workweeks, part-time work, and telecommuting (a mix of onsite work and working from home).
- Generous vacations, strong medical and other benefits, competitive 401k, learning opportunities, relocation assistance and amenities aimed at creating a solid work/life balance.*
- *These benefits vary by job classification.

Security Clearance
This position does not currently require a Department of Energy (DOE) security clearance.

Sandia will conduct a pre-employment drug test and background review that includes checks of personal references, credit, law enforcement records, and employment/education verifications. Furthermore, employees in New Mexico need to pass a U.S. Air Force background screen for access to Kirtland Air Force Base. Substance abuse or illegal drug use, falsification of information, criminal activity, serious misconduct or other indicators of untrustworthiness can cause access to be denied or terminated, resulting in the inability to perform the duties assigned and subsequent termination of employment.

If hired without a clearance and it subsequently becomes necessary to obtain and maintain one for the position, or you bid on positions that require a clearance, a pre-processing background review may be conducted prior to a required federal background investigation. Applicants for a DOE security clearance need to be U.S. citizens. If you hold more than one citizenship (i.e., of the U.S. and another country), your ability to obtain a security clearance may be impacted.

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EEO
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Job Title: Intern – Photonic & Phononic Microsystems – R&D Graduate Summer
Location: Albuquerque, NM
Part-Time - Temporary

COVID-19 Vaccination Mandate
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What Your Job Will Be Like
We are seeking a Summer - R&D Graduate Intern to join our dynamic team for support in Mechanical and Electromagnetic Simulation.

On any given day, you may be called on to:
• Support research staff in developing novel optical devices or mechanical devices.
• Perform simulation and modeling of devices and develop advanced modeling techniques.
• Develop innovative device designs and improve designs to meet mission goals.
• Analyze research results and report results in top-tier journals and conferences.
• Generate new intellectual property through patent filing.

Qualifications We Require
You bring the confidence and skills to be eligible for the job by meeting these minimum requirements:
• Earned bachelor’s degree.
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• Minimum cumulative GPA of 3.0/4.0.
• Ability to work up to 40 hours per week during the summer.
• U.S. citizenship.

Note: If you have not yet started your graduate program, please apply to an undergraduate intern position.

Qualifications We Desire
• Earned bachelor's degree in Electrical Engineering, Optical Engineering/Science, Physics, or other relevant areas.
• Possess strong theoretical background in physics and electromagnetics.
• Expertise in computational methods such as finite-difference time-domain, finite-difference frequency-domain, etc.
• Experience in developing or using advanced simulation or finite element method tools, such as COMSOL, Matlab/Simulink, etc.
• Experience in design and simulation of optical components, optical metamaterials, photonic or phononic crystals.
• Experience in performing original research.
• Self-motivated, with strong communications and problem solving skills and the ability to work both independently and in a team environment.
About Our Team

The Photonic and Phononic Microsystems Department develops and matures state of the art photonic and phononic technologies for a variety of national security purposes. Our team of interdisciplinary researchers innovates, develops, and applies novel technologies including silicon photonics, nanophotonics, optomechanics, metamaterials, plasmonics, optical detectors, guided wave optics, phononic and thermoelectric technologies, spanning fundamental research and path-finding engineering solutions.

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EEO

All qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, age, disability, or veteran status and any other protected class under state or federal law.
Job Title: Intern – Photonic & Phononic Microsytems – R&D Undergraduate Summer
Location: Albuquerque, NM
Part-Time - Temporary

COVID-19 Vaccination Mandate
Sandia demonstrates its commitment to public safety in the national interest by requiring that all new hires be fully vaccinated or have an approved medical or religious accommodation before commencing employment. The requirement also applies to those who are telecommuting and working virtually.

Any concerns about the ability to meet this requirement should be directed to HR Solutions at (505) 284-4700.

What Your Job Will Be Like
We are seeking a R&D Undergraduate Summer Intern in Electrical Engineering to join our dynamic team!
On any given day, you may be called on to:

- Support research staff to develop novel thermal electric, actuation, and communication devices.
- Design and build electrical circuits and experiments to characterize piezoelectric and magnetostrictive actuators and to demonstrate novel mechanical based communication links.
- Become familiar with selected novel devices and develop practical laboratory skills.
- Characterize prototype devices and systems.
- Analyze and document results (in reports or papers).

Qualifications We Require
You bring the confidence and skills to be eligible for the job by meeting these minimum requirements:

- Currently attending and enrolled full time (or scheduled to graduate in the spring) in an accredited undergraduate program
- Pursuing a science, engineering, or math major
- Minimum cumulative GPA of 3.0/4.0
- Ability to work up to 40 hours per week during the summer
- U.S. citizenship

Note: If you have not yet started your undergraduate program, please apply to a high school intern position.

Qualifications We Desire

- Currently enrolled in or previously completed undergraduate-level coursework in electrical engineering, physics or a related engineering/science field.
- Experience in basic electrical circuits and measurement tools and circuit simulation tools.
- Basic knowledge in communication protocols and signal processing.
- Knowledge in basic electrical or mechanical principles and CAD design.
- Experience operating in a research laboratory environment with basic knowledge of laboratory safety and test equipment operation.
- Ability to work in a team environment and independently to solve challenging problems.
- Strong writing and communication skills (for reporting technical results in meetings).
**About Our Team**

The Photonic and Phononic Microsystems Department develops and matures state of the art photonic and phononic technologies for a variety of national security purposes. Our team of interdisciplinary researchers innovates, develops, and applies novel technologies including silicon photonics, nanophotonics, optomechanics, metamaterials, plasmonics, photonic and phononic crystals, thermoelectric, phononic and mechanical transduction technologies, spanning fundamental research and path-finding engineering solutions.

**About Sandia**

Sandia National Laboratories is the nation's premier science and engineering lab for national security and technology innovation, with teams of specialists focused on cutting-edge work in a broad array of areas. Some of the main reasons we love our jobs:

- **Challenging work with amazing impact that contributes to security, peace, and freedom worldwide**
- **Extraordinary co-workers**
- **Some of the best tools, equipment, and research facilities in the world**
- **Career advancement and enrichment opportunities**
- **Flexible work arrangements for many positions include 9/80 (work 80 hours every two weeks, with every other Friday off) and 4/10 (work 4 ten-hour days each week) compressed workweeks, part-time work, and telecommuting (a mix of onsite work and working from home).**
- **Generous vacations, strong medical and other benefits, competitive 401k, learning opportunities, relocation assistance and amenities aimed at creating a solid work/life balance.***
  

**Security Clearance**

This position does not currently require a Department of Energy (DOE) security clearance.

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Job Title: Intern – Photonic & Phononic Microsystems – R&D Undergraduate Summer

Location: Albuquerque, NM
Part-Time - Temporary

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What Your Job Will Be Like
We are seeking a R&D Undergraduate Summer Intern in Mechanical Engineering to join our dynamic team!

On any given day, you may be called on to:
• Support research staff to develop novel thermal electric, actuation, and communication devices.
• Perform research related to piezoelectric and magnetostrictive material properties and modeling of mechanical wave propagation.
• Become familiar with selected novel devices and develop practical laboratory skills.
• Characterize devices and systems.
• Analyze and document results (in reports or papers).

Qualifications We Require
You bring the confidence and skills to be eligible for the job by meeting these minimum requirements:
• Currently attending and enrolled full time (or scheduled to graduate in the spring) in an accredited undergraduate program
• Pursuing a science, engineering, or math major
• Minimum cumulative GPA of 3.0/4.0
• Ability to work up to 40 hours per week during the summer
• U.S. citizenship

Note: If you have not yet started your undergraduate program, please apply to a high school intern position.

Qualifications We Desire
• Currently enrolled in or previously completed undergraduate-level coursework in mechanical engineering, physics or a related engineering/science field.
• Familiar with basic mechanical engineering design and principles.
• Experience in software programming, numerical simulation and modeling, and 3D CAD tools.
• Experience in basic electrical circuits and measurement tools and circuit simulation tools.
• Experience operating in a research laboratory environment with basic knowledge of laboratory safety and test equipment operation.
• Ability to work in a team environment and independently to solve challenging problems.
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*These benefits vary by job classification.

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