Georgia Tech Institute for Matter and Systems

RESEARCH FACULTY PRE-HIRE CHECKLIST
Submit completed forms to IMS HR.

Today's Date	
Hiring Manager	

General Position Information

IMS HR can assist with navigating this information. You can advertise for a specific position (ex., Research Scientist II) or Open Rank (ex., Research Scientist/Engineer I/II/Senior/Principal). If advertising Open Rank, keep in mind the job description and salary. A I is very different than a Principal. Be strategic with the rank selections. Applied rank is based on GT Faculty Handbook requirements.

Position Title(s) (check all that apply)	☐ Research Scientist ☐ Research Engineer ☐ Research Technologist. ☐ Research Associate ☐ Extension Professional
Position Rank (s) (check all that apply)	☐ I ☐ II ☐ Senior ☐ Principal
Will there be a working title? If so, list title. Ex: Analysis Lead; External Outreach Manager	
Will you offer relocation assistance? (IMPORTANT: relocation must be included at time of offer; legally cannot offer it later). [GT will fund relocation. Funded amount is based on rank].	
Posting duration (minimum requirement is one week)	
Posted internally to GT, externally, or both?	
Expected salary range *Note: IMS HR will review against other IMS research faculty for equity.*	

Job Duties and Description

The job duties are posted as-is, per the official job description. We can, however, add Additional/Preferred Duties and Qualifications in addition to the official description.

In a separate document, please provide: • Department description (can use IMS standard) • Job Summary • Responsibilities • Preferred Qualifications See example job posting for more information.	
Should the candidate include reference letters with their application? Yes / No	
Should the candidate include a cover letter with their application? Yes / No	

Position Details

Onsite, hybrid, or remote?	
Supervisory position? Yes/No	
Is driving required? Yes/No	
Is a PCard needed? Yes/No	
Will the position travel? Yes/No	
If Yes, what % of time?	
Is this a Position of Trust [position with master access to facilities or finances] Yes/No	

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Position Advertising	
If you'd like to advertise through one of these sites, provide a brief job-specific writeup for us to use. Options with an asterisk* may incur advertising fees.	
☐ IMS Webpage	☐ NNCI Webpage
☐ IMS Staff List	☐ NNCI Email List
☐ IMS External Newsletter	☐ LinkedIn*
☐ SUMS Users	☐ Technical Communities (ex., IEEE, ACS)*

Hiring Manager Responsibilities
Check all that apply. Information may be shared with GTHR before offer can be extended to candidate.
☐ I have completed Interviewing @ Tech training.
☐ I will assemble a search committee to review, interview, and rank candidates.
☐ I will inform IMS HR of the names of those interviewed, dates of interviews, and ratings.
☐ I will assemble an interview matrix to rank candidates and send IMS HR a copy of the completed matrix.
☐ I understand that the offer process for research faculty can take 6 – 8 weeks to issue the offer letter.
☐ I understand that turnaround times for foreign nationals are longer than the above-mentioned 6 – 8 weeks, and will likely be measured in months if a visa is a required.
_____ Hiring Manager Signature

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EXAMPLE JOB POSTING
Hiring Managers: please provide information for sections highlighted in yellow.

Title: Open-rank Research Engineer in Cleanroom Management

About Us [this section cannot be changed, except for the "About IMS" sub-section, which can be changed]
Overview
Georgia Tech prides itself on its technological resources, collaborations, high-quality student body, and its commitment to building an outstanding and diverse community of learning, discovery, and creation. We strongly encourage applicants whose values align with our institutional values, as outlined in our Strategic Plan. These values include academic excellence, diversity of thought and experience, inquiry and innovation, collaboration and community, and ethical behavior and stewardship. Georgia Tech has policies to promote a healthy work-life balance and is aware that attracting faculty may require meeting the needs of two careers.

About Georgia Tech
Georgia Tech is a top-ranked public research university situated in the heart of Atlanta, a diverse and vibrant city with numerous economic and cultural strengths. The Institute serves more than 45,000 students through top-ranked undergraduate, graduate, and executive programs in engineering, computing, science, business, design, and liberal arts. Georgia Tech's faculty attracted more than $1.4 billion in research awards this past year in fields ranging from biomedical technology to artificial intelligence, energy, sustainability, semiconductors, neuroscience, and national security. Georgia Tech ranks among the nation's top 20 universities for research and development spending and No. 1 among institutions without a medical school.

Georgia Tech's Mission and Vision
Georgia Tech's mission is to develop leaders who advance technology and improve the human condition. The Institute has nine key values that are foundational to everything we do:

1. Students are our top priority.
2. We strive for excellence.
3. We thrive on diversity.
4. We celebrate collaboration.
5. We champion innovation.
6. We safeguard freedom of inquiry and expression.
7. We nurture the wellbeing of our community.
8. We act ethically.
9. We are responsible stewards.

Over the next decade, Georgia Tech will become an example of inclusive innovation, a leading technological research university of unmatched scale, relentlessly committed to serving the public good; breaking new ground in addressing the biggest local, national, and global challenges and opportunities of our time; making technology broadly accessible; and developing exceptional, principled leaders from all backgrounds ready to produce novel ideas and create solutions with real human impact.

About the Institute for Matter and Systems at the Georgia Institute of Technology
The Institute for Matter and Systems (IMS) is one of Georgia Tech's Interdisciplinary Research Institutes. Matter and systems refer to the transformational technological and societal systems that arise from the convergence of innovative materials, devices, and processes. IMS leverages Georgia Tech's researchers, state-of-the-art cleanroom and characterization facilities, and world class education and workforce development programs to facilitate the creation of the systems of tomorrow and their enabling components. IMS enables interdisciplinary research in areas such as microelectronics, the built environment, and human-centric technologies.

Location: Atlanta, GA

Job Summary

The job summary should be unique to IMS and to this specific position. It should include a detailed narrative of the specific role.

This position is responsible for supporting IMS cleanroom user's research activity at all IMS cleanrooms and labs. The candidate needs to be familiar with the cleanroom protocols, operation of various cleanroom equipment and different processes, is capable of independently perform a wide range of tasks such as providing trainings, running fabrication process, assisting troubleshoots, etc. The candidate needs to have broad knowledge and deep understand of the technologies offered by IMS cleanroom, so they can provide the needed support for cleanroom users in fabrication, optimization, consultation, analysis and proposal preparation. The candidate needs to interact with users from different disciplines, they should have excellent communication skills, willing to collaborate and learn new knowledge. Lastly, the candidate should have the capability of conducting or leading research independently, preparing research proposals and interacting with sponsors. They must exhibit creativity, foresight and mature judgement in conducting routine tasks and projects.

Responsibilities

Typically a bulleted list outlining the position's responsibilities / job description.

The responsibilities include but are not limited to the list below:

- Collaborating with internal and external research groups on the state-of-art research by providing processing consultation, remote fabrication service, data analysis, proposal preparation, etc.
- Developing new processes for critical research needs at IEN cleanroom such as Aluminum reactive sputtering, LPCVD Silicon Carbide thin film, Metallic Cobalt ALD thin film, 2D semiconductor material growth, patterning and etch, etc.
- Performing independent research, bring external research fund to Georgia Tech.
- Following up the latest development in nanotechnology and searching for opportunities to bring the new technologies to IMS.
- Providing processing support for cleanroom users in process flow evaluation, on-site process training, troubleshooting, etc.
- Perform routine equipment baseline tests to ensure the performance of cleanroom equipment.
- Providing education in nanotechnology to internal and external researchers in various formats including workshop, short course, seminar, webinar, etc.
- Coordinating with IEN staff team, research users on equipment upgrade, testing.

Required Qualifications

These are the required qualifications per the GT faculty handbook for the given rank being advertised. For open-rank positions, all advertised ranks are listed.

This position vacancy is an open rank announcement. Final job offer will be dependent on candidate qualifications in alignment with Research Faculty ranks as outlined in section 3.2.1 of the Georgia Tech Faculty Handbook (https://www.policylibrary.gatech.edu/faculty-handbook/3.2.1-research-faculty-hiring-and-promotion-guidelines)

For Rank of Research Engineer I

- Bachelor's Degree in engineering/science or related field.

For Rank of Research Engineer II

- A Master's degree in science, engineering or related area, and three (3) years of relevant full-time experience after completion of that degree, or

- A Master's degree in science, engineering or related area, and five (5) years of relevant full-time experience after completion of a Bachelor's degree, or
- A Doctoral degree

For Rank of Senior Research Engineer
- A Master's degree and seven (7) years of relevant full-time experience after completion of that degree, or
- A Master's degree and nine (9) years of relevant full-time experience after completion of a Bachelor's degree, or
- A Doctoral degree and four (4) years of relevant full-time experience after completion of a Bachelor's degree

For Rank of Principal Research Engineer

- A Master's degree and eleven (11) years' relevant full-time experience; or
- A Doctoral degree and seven (7) years' relevant full-time experience.

Preferred Qualifications [optional]
Additional qualifications / characteristics of your ideal candidate.

- A Master or higher degree in Engineering/Science (or related field), and 5 years of professional laboratory/cleanroom experience.
- Extensive experience in various microelectronics fabrication processes including photolithography, thin film deposition, etching, metrology, packaging, etc.
- Extensive experience in various semiconductor materials and processes including Si and III-V compounds, organic semiconductors, 2D materials, etc.
- Familiar with chemical/biological sample analysis, including SEM, TEM, XRD, XPS, Raman, FTIR, UV-Vis, DSC/TGA, MS, etc.
- Excellent communication skill in both oral and written English.

Contact Information: For additional information about this job opening, please contact Cecelia Jones, cecelia.jones@gatech.edu

Background Check
The candidate of choice will be required to pass a pre-employment background screening.