CIRES Career Track Promotion Information and Guidance

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UNIVERSITY OF COLORADO **BOULDER** and **NOAA**
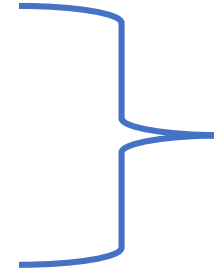
Career Tracks

- Research Scientist I, II, III, and Senior
  - Science
  - Engineering and Applications
  - Management

Sub-Tracks: Chose two in application

- Associate Scientist I, II, III, and Senior
  - Science
  - Engineering and Applications
  - Computer Science
  - Management

Sub-Tracks: Chose two in application

An individual's progress through the career track acknowledges increased productivity, leadership, independence, and responsibility in chosen scientific, engineering, management, and/or support activities.

Timeline

January 7, 2022: Complete promotion packages submitted online (must click "Verify and Submit" to complete the package).

January 28, 2022: Final date of receipt of requested letters of reference.

February 04, 2022: HR to review submitted application packages are complete and meet eligibility requirements.

February 07, 2022: Completed packages with reference letters forwarded to the Career Track Committee or CIRES Division Directors (depending on promotion type)**

Mid to Late March 2022: Promotion recommendations forwarded from Career Track Committee and CIRES Division Directors to CIRES Director.

Early May 2022: Candidates notified of promotion decisions.

May 01, 2022: Salary increases effective for approved promotions.

**Package review:
- RS1 → RS2; AS1 → AS2; AS2 → AS3: Reviewed by Division Director
- RS2 → RS3; RS3 → Senior RS; AS3 → Senior AS: Reviewed by Committee

General

- This is a serious process

- Start early – and spend appropriate time

- Make sure you are eligible (and meet the time criteria)

- Confirm support of supervisor (and science advisor if applicable)

- Follow the directions
  - https://insidecires.colorado.edu/hr/tracks/
  - Note: Text has been updated this year!

CV

- Neat, easy to read
- Highlight the criteria that will be used to evaluate the promotion package
- Within the CV, include specifically (in easy-to-read/identify format):
  - Total number of career publications, h-index
  - Since last promotion, the number of:
    - Publications
    - First Author Publications
    - Grants awarded including year, amount, and source.
    - Invited talks
    - Conference presentations
    - Conference posters
    - Service activities (national, international)
    - Awards
    - Research to Operation activities (explain the impact in Professional summary)
    - Projects led or contributed to (explain your role in Professional Summary)

Professional Summary

- Follow page limits

- Get someone to proofread your materials.

- Don't rehash your CV, which is more statistical

- Remember that the committee is made up of people with various backgrounds. Write your narratives for a general scientific audience (not experts in *your field*).
    - Spell out acronyms.

- Highlight specifically information that speaks to the criteria listed in the Career Track guidance.
    - Speak to the sub-tracks and the criteria

Professional Summary

- Summarize why you should be promoted
- What is your research focus? Has it changed and if so why?
- What are your primary accomplishments, particularly since your last promotion?
- How has your work impacted your field?
- If at NOAA, how has your work contributed to the mission of your unit?
- How have you demonstrated independence?
- How have you demonstrated leadership?
- What are your career goals?
- Are there gaps in your CV? Explain why.

Position Description

- Follow template (from HR)
  - Link is embedded in guidance
- Promotion should mean more responsibility
  - HR has copy of current PD for your position
- Get input from CIRES Supervisor (and Science advisor if applicable)

Reference Letters

- Requirements for letter writers are dependent upon the position and promotion. If you are unable to meet the requirements, please contact HR and/or AD for Science prior to creating the package. Exceptions may be made, but have to be justified.
- Reach out to letter writers ahead of time
  - Give them enough time to put together a good letter
  - Ensure that they will be submitting a letter- and that it will be a good one.
    - You can provide them with input to the letter, and remind them of your amazing accomplishments
- You are responsible for making sure that these get submitted.
  - Follow up with them before the deadline to ensure that they submit the letter.
  - Receiving an insufficient number of letters disqualifies the candidate.
  - if 5 letters were committed and only 3 were received it makes not the best impression.
- Remind the letter writers that these letters are IMPORTANT!!!
  - For promotions in the RS track, ask the writers to speak to LEADERSHIP, INDEPENDENCE.
  - How has this person grown?
  - How has this impacted the field and the group?
  - How has this person shown leadership?
- For any promotion, the letter should be commensurate with the step in career track. We get too many letters that say "promising young scientist" when they should be talking about achievements and leadership.

Productivity Examples
required for some applications

- Include a brief description of the example selected, why it is important and how it supports your application package.
- Examples of productivity may include:
  - Publications
  - Final technical documentation or reports
  - Developed training materials
  - Examples and descriptions of R2O activities
  - Examples of successful proposal or PI activities
  - Description of instrument developed or applied
  - Description and example of model developed
  - Description of field campaign activities
- *Do not submit*
  - *Examples without explanation*
  - *Computer Code*

Research Scientist Criteria

For <mark>Research Scientists</mark> <mark>– Science Sub-track</mark>:

- Peer-reviewed publications in scientific and technical journals.

- Non-peer-reviewed contributions (e.g., assessments, technical reports, and presentations at national or international conferences)

- Grants and contracts awarded

- Scientific and technical supervision of group projects

- Explanation and promotion of CIRES research activities to others within CIRES or NOAA, the federal or state governments, or the private sector

- Design, construction, documentation, maintenance, calibration, operation, and improvement of experimental equipment for the laboratory or field

- Design, development, documentation, and maintenance of computer software or

- Development and improvement of numerical models

- Participation in field deployments and field measurement activities

- Participation in lab-based instrument system testing, calibration, maintenance, and operations

- Professional recognition both inside and outside the CIRES and the University (e.g., recommendations and awards)

- Evidence for capacity for future achievements

- Leading or participating in the transition of research activities to operational activities in the government or private sectors (e.g., technology transfer; improvements to forecasting models or methods; application of research to resource management, energy management, or air-quality procedures or regulations)

- Supporting science research by writing, editing, managing web content, engaging with users, and supporting social media and email communications (communications-focused positions that do not fall into the other sub-tracks can be classified as Science sub-track)

- Public service and consultation

- Patent awards

- Awards and other Recognition

- Database management

For Research Scientists – <mark>Engineering and Applications Sub-track</mark> :

- Design, construction, documentation, maintenance, calibration, operation, and improvement of experimental equipment or instrumentation

- Development and improvement to numerical models

- Successful transition of research activities to operations in the government or private sectors (e.g., technology transfer; improvements to forecasting models or methods; application of research to resource management, energy management, or air-quality procedures or regulations)

- Participation in field deployments and field measurement activities

- Participation in lab-based instrument system testing, calibration, maintenance, and operations

- Datasets managed, including the design of data ingest and dissemination systems, quality assurance/quality control of datasets, expanding datasets, improvements to datasets over time, and promoting FAIR (Findable, Accessible, Interoperable, Reusable) standards. (Note dataset management differs from database management.)

- Software development

- Hardware installation and configuration; Hardware system development

- Number and amount of grants and contracts awarded (optional, applies mostly to RS track)

- Non-peer-reviewed publications (e.g., assessments, technical reports, and presentations, user's manuals, training materials)

- Peer-reviewed publications in scientific and technical journals (optional, applies mostly to RS track)

- Operational systems tickets resolved

- Scientific visualizations

- Supervision and management
  - Size of projects managed
  - Level of scientific or technical supervision required in group projects managed
  - Students/faculty/others mentored or advised
  - People or groups managed

Research Scientist Criteria

For Research Scientists <mark>– Management Sub-track</mark>:

- Management of facilities
- Management of people and or groups
- Preparing and oversight of budgets
- Scientific and technical supervision of projects or programs
- Management of project or program activities
- Management and analysis of databases
- Coordinating, overseeing, and leading stakeholder and community engagement efforts
- Non-peer-reviewed work (e.g., assessments, technical reports, progress reports and presentations)
- Peer-reviewed publications in scientific and technical journals.
- Development of user and training materials
- Writing, editing, and providing graphics for publications and websites
- Presenting research at conferences and workshops
- Development of proposals and execution of funded work
- Patents
- Design and maintenance of websites
- Design, development, documentation, and maintenance of computer software or hardware systems
- Upgrading and integrating of computers and networks
- Design and execution of educational projects
- Development of education courses
- Organizing, describing, and promoting outreach, education, and service activities
- Participation in classroom instruction
- Training and mentoring of teachers and scientists
- Serving on PhD and MS thesis committees
- Advising and mentoring of students
- Mentoring other CIRES scientists

For Research Scientists – <mark>All Sub-tracks</mark> :

- Contributions to organizational excellence
- Diversity and inclusion efforts
- Community service
- Awards and recognition
- Training, advising and mentoring of teachers, students, and scientists
- Participating in public media outreach activities
- Other types of outreach
- Membership on CIRES and other University committees and other administrative service
- Membership on professional committees (state, national, and international levels)
- Development and leadership of professional workshops and conferences
- Advising policy makers
- Participation in classroom instruction
- Scientific service (Editor, reviewer, etc.)
- Invited speaking engagements
- Serving on PhD and MS thesis committees
- Advising and mentoring of students
- Explanation and promotion of CIRES research activities to others within CIRES or NOAA, the federal or state governments, or the private sector
- Organizing, describing, and promoting outreach, education, and service activities within CIRES or NOAA
- Professional recognition both inside and outside the CIRES and the University (e.g., recommendations and awards)

Supervision and management

- Size of projects managed
- Level of scientific or technical supervision required in group projects managed
- Students/faculty/others mentored or advised
- People or groups managed

Associate Scientist Criteria

Promotion criteria for Associate Scientists: <mark>Science Sub-track</mark>

- Authorship or co-authorship on peer-reviewed publications in scientific and technical journals
- Non-peer-reviewed contributions (e.g., assessments, technical reports, and presentations)
- Grants and contracts awarded
- Presentations at conferences
- Recommendations and awards
- Communications projects--supporting science research by writing, editing, managing web content, engaging with users, and supporting social media and email communications (communications-focused positions that do not fall into the other sub-tracks can be classified as Science sub-track)
- Evidence of capacity for future achievements
- Membership on professional committees
- Science service (e.g. editorship of a journal)
- Leadership and organization of professional workshops or conferences

Promotion criteria for Associate Scientists: <mark>Engineering and Applications Sub-track</mark>

- Design, construction, documentation, maintenance, calibration, or use of experimental equipment or instrumentation
- Development and improvement to numerical models
- Successful transition of research activities to operations in the government or private sectors (e.g., technology transfer; improvements to forecasting models or methods; application of research to resource management, energy management, or air-quality procedures or regulations)
- Participation in field deployments and field measurement activities
- Participation in lab-based instrument system testing, calibration, maintenance, and operations
- Datasets managed, including the design of data ingest and dissemination systems, quality assurance/quality control of datasets, expanding datasets, improvements to datasets over time. (Note dataset management differs from database management)

Promotion criteria for Associate Scientists: Computer Science Sub-track

Software

- Requirements analyses
- Designs
- Code delivered
- Code leveraged
- Degree of proficiency in computer language(s)
- Expertise in software engineering best practices
- Software repositories maintained
- Degree of proficiency in software issue tracking systems
- Level of expertise in Agile development practices
- Technical reports or publications
- Websites maintained
- Content management systems (CMS) maintained, e.g., configuring and administering Drupal feeds.
- Artificial intelligence / Machine learning
- Cloud computing
- API investigation/integration

Hardware and networking

- Server and network management
- IT systems installed and managed
- Procurement
- Level of independence in choosing and implementing solutions
- High-performance computing

Other

- Desktop support/customer service
- Database management (relational and NoSQL)
- DevOps (transitioning development system to operations, upgrading operational/production systems to meet new requirements)

Associate Scientist Criteria

Promotion criteria for Associate Scientists: <mark>Management Sub-track</mark>

- Projects managed

- Programs managed

- Teams managed

- Facilities managed

- People or groups managed

- Budgets developed

- Community or stakeholder engagement

Promotion Criteria common <mark>to all Associate Scientist Sub-tracks</mark>

- Contributions to organizational excellence

- Diversity and inclusion efforts

- Community service

- Awards and recognition

- Training, advising and mentoring of teachers, students, and scientists

- Participating in public media outreach activities

- Other types of outreach

- Membership on CIRES and other University committees and other administrative service

- Membership on professional committees (state, national, and international levels)

- Development and leadership of professional workshops and conferences

- Advising policy makers

- Participation in classroom instruction

- Scientific service (Editor, reviewer, etc.)

- Invited speaking engagements

- Serving on PhD and MS thesis committees

- Advising and mentoring of students

- Explanation and promotion of CIRES research activities to others within CIRES or NOAA, the federal or state governments, or the private sector

- Organizing, describing, and promoting outreach, education, and service activities within CIRES or NOAA

- Professional recognition both inside and outside the CIRES and the University (e.g., recommendations and awards)

Supervision and management

- Size of projects managed

- Level of scientific or technical supervision required in group projects managed

- Students/faculty/others mentored or advised

- People or groups managed

Research Activity Examples

- Publications
- Conference papers
- Journal articles
- Book chapters
- Books
- Technical reports
- Commissioned reports and other publications
- Research grants & external research income (emphasis on competitive, international and peer-reviewed)
- Patent disclosures submitted, patent filing
- Operational activities (or R2O)
- Instrument development and deployment

Examples of **Metrics for Research Activities**

- Publication standing (peer reviewed, national, international, sole/lead author
- H-index (as appropriate to discipline)
- Invitations to review
- Invited keynotes, seminars (international, national)
- Patents issues
- Awards and prizes for research and/or technology transfer (international, national)
- Translation and adoption of research
- Development of valued-added practices and approaches in communities, industries and
- engaged research projects
- Influential leadership of major cross-disciplinary research projects with external partners,
- leadership of research teams, mentoring of less experienced researchers

Examples of **LEADERSHIP ACTIVITIES**

- Active engagement with leadership and coordination roles within Group, Lab, Unit, Institute
- Membership/leadership of committees (At CU, NOAA, Community)
- Expert panel and committee recommendations, reports, and submissions
- Continuing professional development activities (internally, externally)
- Leadership in development of national and international institutional partnerships and networks
- Formal senior leadership roles (for example, Group Lead)
- Membership of committees of enquiry and expert panels
- Leadership in development and maintenance of community, industry and cultural partnerships
- Major submissions to government enquiries
- Membership of company boards or equivalent
- Leading workshop or conference session