

# Unique Considerations for Evaluating Computing Researchers

## Authors

- |                                                         |                                        |
|---------------------------------------------------------|----------------------------------------|
| - Nancy Amato (University of Illinois Urbana-Champaign) | - Kate Larson (University of Waterloo) |
| - Ovidiu Daescu (University of Texas at Dallas)         | - Wei Li (Texas Southern University)   |
| - Maria Gini (University of Minnesota)                  | - Ming Lin (University of Maryland)    |
| - Gillian Hayes (University of California, Irvine)      | - Dan Lopresti (Lehigh University)     |
|                                                         | - Katie Siek (Indiana University)      |
|                                                         | - Gene Spafford (Purdue University)    |
|                                                         | - Ben Zorn (Microsoft)                 |
- 

Computing research continues to advance rapidly, and booming enrollments in computing, coupled with moderate increases in computing faculty sizes, have resulted in increased competition for limited research dollars, coupled with increasing teaching load. Institutions must adopt evaluation practices that recognize the breadth of computing research contributions and the ecosystem in which they occur.

The Computing Research Association (CRA) recommends the following best practices for recognizing scholarly contributions in computing research, given the unique nature of our discipline, our research paradigms, contributions to interdisciplinary collaborations, and shifts in computing education and funding.

## Contributions and impact in computing research should be broadly considered

- Rigorously peer-reviewed conferences are the primary publication venue for computing research. Conference publication is prestigious, generally very competitive (e.g., acceptance rates less than 20%), and on par with or preferred to journals.
- Other high-impact mechanisms for reporting and sharing research include books, open-source software, datasets, benchmarks, early dissemination, patents, and interdisciplinary artifacts (e.g., law briefs, museum exhibits).
- As interdisciplinary collaborations grow in computing, it is essential to recognize computing researchers as integral, equal partners who bring serious scholarly contributions to the project and are not just technical implementers.

## Computing is not a monolith

Research practices and resources vary widely by subdiscipline within computing, and comparisons between computing researchers should consider these differences. Appointment, tenure, and promotion materials should openly describe the standards of the subdiscipline.

- **Authorship order practices:** While many subdisciplines list authors in order of contribution, some, like theory, list all authors alphabetically, and others have the main senior author (e.g., group/project leader) last.
- **Publication rate and citation metrics:** In some areas, an entire PhD results in 2-3 papers, whereas in others, a PhD student may publish multiple papers a year; this also impacts citation metrics similarly.
- **Research group size and resources:** Successful researchers may have very different research groups, varying from 1-2 students to more than 10, with associated funding needs. Additionally, funding availability varies by area, with some being national priorities with few researchers and others having many researchers competing for resources.

## Industry, government, and academia often work together in the computing research ecosystem

While individual faculty can produce top research as individuals or within small groups in a single institution, quality scholarship is often produced by large and uniquely resourced multi-institutional research groups, with many students and faculty spending time in industry and government labs.

- Lab researchers may be uniquely qualified reviewers for faculty evaluations.
- Grants/gifts from industry to academia can provide validation and research support.
- Faculty may have dual appointments with outside organizations to facilitate important research and contribute to the teaching and outreach missions of their universities.
- Supervision of students and faculty collaborations should be rewarded in organizations outside of universities.

### Suggested Citation

Amato, N., Daescu, O., Gini, M., Hayes, G., Larson, K., Li, W., Lin, M., Lopresti, D., Siek, K., Spafford, G., Zorn, B. (2025). *Unique Considerations for Evaluating Computing Researchers*. Washington, D.C.: Computing Research Association (CRA).  
<http://cra.org/cra/wp-content/uploads/2025/07/Unique-Considerations-for-Evaluating-Computing-Researchers.pdf>