



COUNCIL ON UNDERGRADUATE RESEARCH

## 2024-2025 Elections Biology Division: Councilor Candidates

**Position Purpose:** The CUR Council is a multidisciplinary body providing advisory input to the Board, so they have a broader perspective when making resource investment decisions. The Council serves in a communication capacity, surfacing key items arising from the Divisions, bridging the insight of the Division to the work of CUR as a whole, and serving as one means of information and resource dissemination from the central organization to the Divisions and members.

### Needed Qualifications:

- Communication: Professional and effective communicators, experienced in difficult conversations and able to hear and disseminate community needs
- Foresight: Individuals able to look to the best interests of CUR into the future when discussing various issues impacting CUR members and higher education
- Creativity: Thoughtful supporters of change, able to think outside the box to find new initiatives
- Collaborative Spirit: Team players making space for all voices to be heard, furthering the collective understanding of the group, and cultivating outcomes to best serve CUR and its membership

*There is 1 individual running.*

*You may vote for the candidate presented to be elected as a councilor for this division.*

Candidate information is presented on the following pages. Click on each candidate name below to be taken to their Information In the document.

- [Joyce Fernandes](#)

# Joyce Fernandes, Miami University, Ohio

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## *Biology Division Nominee*

### **NOMINEE STATEMENTS**

#### **Describe your leadership experience both within CUR and extramural.**

As a lead PI of an NSF award to improve retention in the Biological sciences (2008-2012), I worked with faculty across four departments to manage the recruitment, placement and professional development of cohorts of undergraduate students [8-10/year]. I helped to institutionalize two components of the award activities: (1) creation of the FYRE program [First Year Research Experience] to provide an early pathway into research. (2) collaboration with graduate students to develop a course that taught study skills to navigate introductory biology courses. A paper was published in CBE-Life Science Education [Hoskins et al 2017] resulting from this work.

As director for undergraduate research at my institution since 2017, I have (i) developed programming that provides early access to undergraduate research through first year experiences; offered these experiences for institutional programs aimed at academic success and retention (ii) provided support for faculty, graduate students and staff to enhance their impact on undergraduate researchers (iii) facilitated the documentation of enrollments in independent study and research based courses (iv) established partnerships with institutional offices to showcase undergraduate research involvement.

My involvement on the CUR-wide Advocacy committee (since 2014) and within the Biology division (since 2011) focusses on enabling councilors to be advocates for undergraduate research and to train our undergraduates to do the same. Since 2014, I have collaborated with colleagues across divisions to develop and offer professional development workshops on the topic of integrating research into the curriculum, through pre-conference workshops and institutes. I have been a voice for the engagement of graduate students and postdocs in the mission of CUR.

I served as a rotating program officer at the National Science Foundation from 2012-2014, managing programs with a portfolio that totalled \$30M. These programs were cross-cutting across multiple directorates, allowing me to participate in collaborative decisions and setting priorities.

#### **How will your skills help the Council successfully uphold its charge?**

Advisory input on resource investment decisions: Through my roles as faculty leader of my research group, director of undergraduate research, principal investigator on funded grants, and NSF program officer, I have had fiscal oversight and resource allocation oversight in multiple arenas, and at multiple levels.

Communication capacity: Through my role as director of undergraduate research and managing a small office of 1.5, I have engaged in partnerships with offices across the institution to raise the visibility of undergraduate research. This requires an alignment of vision, highlighting shared missions, and collaboration as a collective. At the 2024 showcase of undergraduate research at my institution, these collaborations and collective communication were displayed as posters highlighting faculty-student partnerships from each of the 6 colleges at my institution that were generated and publicized by University Communications and Marketing. Through my work at CUR to organize professional development workshops for early career faculty, graduate students and postdocs, I have demonstrated my commitment to communication across divisions, that benefits

not only the divisions at CUR, but impacts stakeholders who are new to CUR as they engage in individual and institutional level programs to participate in and grow undergraduate research programs.

Recommendations to the Board on Division creation, merging, and sunseting.” My administrative roles at the institution and the National Science Foundation, as well as in the capacity of lead PI on grants and leading my own research lab, has provided me with opportunities to create yearly reports, reflect on the efficiencies of processes, projects and personnel and make decisions on focussing energies and resources on new projects, re-tooling current projects, or closing down others that are not productive. This experience will be useful to provide input to the CUR Board on creation, merging, and sunseting divisions.

### **NOMINEE ABBREVIATED CV**

An abbreviated CV highlighting the candidate’s accomplishments with respect to undergraduate research is available on the next page.

## Joyce J Fernandes

Professor, Department of Biology, Miami University Oxford, OH  
45056 e-mail: [fernanjj@miamioh.edu](mailto:fernanjj@miamioh.edu); Tel: 513-529-7211

### APPOINTMENTS [partial listing]

2011-present *Professor*, Miami University, Department of Biology.  
2017-present *Director*, Office of Research for Undergraduates, Miami University  
2012- 14 *Rotating Program Officer*, Div. of Biological Infrastructure, National Science Foundation  
2014- 2017 *Co-Chair* Advocacy Committee, Council on Undergraduate Research  
2017-2021 *Chair* Advocacy Committee, Council on Undergraduate Research  
2021-present *Member* Advocacy and partnerships Committee, Council on Undergraduate Research  
2011-present *Councilor*, *Division of Biology*. Council on Undergraduate Research  
2006- 2011 *Associate Professor*, Department of Zoology, Miami University, Oxford, OH  
2006- 2012 *Faculty Teaching Associate*, Center for Enhancement of Learning and Teaching. Miami University, Oxford, OH  
2005-06 *Associate Director*, *Science Education*. Graduate Teaching Center. Yale University. CT  
1999-06 *Assistant Professor*, Department of Zoology, Miami University, Oxford, OH  
1993-99 *Associate Research Scientist and Postdoctoral Research Associate*. Department of Molecular, Cellular and Developmental Biology, Yale University. New Haven, CT

### AWARDS

2022-23: Scholars transforming research [STR] Council on Undergraduate Research  
2023-24: FASEB Howard Garrison Advocacy Fellowship

### EDUCATION

Ph.D. (1994) Tata Institute for Fundamental Research. India. (Developmental Biology)  
MS (1988) MS University, Baroda. India. (Microbiology)  
B.S (1986) University of Bombay, India. (Microbiology, Chemistry)

### GRANTS

#### External Research Funding [partial listing; total \$1,212,551]

2012-2017: R15: National Institutes of Child Health and Human Development. "Glial remodeling in *Drosophila*: proliferation, membrane outgrowth and nerve ensheathment" \$355,000.00. PI: Joyce J Fernandes.  
2022: Under Represented Student First Year Research Experience, \$9375. *Proctor and Gamble Higher Education Fund* PI: Joyce Fernandes, co-PI Carolyn Craig  
2011 (continued support) "URM: ASSURE – Achieving Success in Science through Undergraduate Research Experiences." \$90,945.00 National Science Foundation; *Division of Biological Infrastructure*. PI: Joyce J Fernandes.; co-PI: Phyllis Callahan. *Duration*: 2007- 2012.

### PROFESSIONAL AFFILIATIONS

Society for Neuroscience	American Society for Cell Biology
Genetics Society of America	American Association of Colleges and Universities
Sigma-Xi Scientific Research Society	
Council on Undergraduate Research	

### SERVICE

#### University-level [partial listing]

2022- present *Chair*, Senate Undergraduate Research Committee  
2020-present *Member*, *Equity Diversity and Inclusion Committee [EDIC-College of Arts and Science]*  
2016-present *Member*, Advisory Board for the NSF funded Louis Stokes Alliance for Minority Participation

## Scientific community

### Review Panels:

2022 *Committee of Visitors*, National Science Foundation

2005-2012 *National Institutes of Health NIH- FO3A*

Pre- and post-doctoral applications; Molecular, Cellular and Developmental Neuroscience

2012-present *National Science Foundation*

### Professional Development Workshops Conducted:

2023: Lead organizer, CUR Beginning a Research Program in an Experimental Science Discipline at a Primarily Undergraduate Institution (PUI). *Council on Undergraduate Research*

2021: Lead Organizer, "Tuesdays in July"- A 4-part series on Beginning a Research program at a Primarily Undergraduate Institution. *Council on Undergraduate Research*

2020 Lead Organizer, *Planning and developing a successful research program at a Primarily Undergraduate institution*, Workshop for the Council on Undergraduate Research, June 28<sup>th</sup> 2020

2019 Lead Organizer, *"Integrating Research and Teaching at Primarily Undergraduate Institutions"*, Workshop for the Society for Neuroscience

## RELEVANT PUBLICATIONS (of 25)

\* Graduate Student, \*\* Undergraduate Student

1. Integrating Research into the Undergraduate Curriculum: 1. Early Research Experiences and Training Buffalari D<sup>#</sup>, Fernandes JJ<sup>#</sup>, Chase L, Lom B, McMurray MS, Morrison ME, Stavnezer AJ. <sup># equal first authorship.</sup> *Journal of Undergraduate Neuroscience Education*. 2020 VOLUME 19: ISSUE 1
2. Integrating Research into the Undergraduate Curriculum: 2. Scaffolding Research Skills and Transitioning toward Independent Research Morrison ME, Lom B, Buffalari D, Chase L, Fernandes JJ, McMurray MS, Stavnezer AJ. *Journal of Undergraduate Neuroscience Education*. 2020 VOLUME 19: ISSUE 1
3. Integrating Research into the Undergraduate Curriculum: Research Training in the Upper-level Neuroscience Curriculum. Chase L, McMurray M, Stavnezer AJ, Buffalari D, Fernandes JJ, Lom B, Morrison ME. *Journal of Undergraduate Neuroscience Education* 2020 VOLUME 19: ISSUE 1

## RECENT PRESENTATIONS [Undergraduate Research, CUR 2024 Conference]

**Incorporating Undergraduates Into Your Research Program.** *Online presentation, 06/21/2024.* Joyce Fernandes, Lance Barton, Joe Reczek.

**Advocating for Undergraduate Research - Leveraging Your Association with CUR (virtual).** *Online presentation, 06/21/2024.* Joyce Fernandes, Lance Barton, Joe Reczek

**A Holistic Approach to Advocacy: Federal, State, Local, and Institutional Efforts to Promote the Visibility and Sustainability of Undergraduate Research.** Maria Iacullo-Bird, Della Cronin, Joyce Fernandes, Lisa Theo. *In-person workshop, 6/25/2024*

## CURRICULUM DEVELOPMENT

**UNV 171/UNV 172:** First Year Research Experience 1-3 credit hours. I have developed the curriculum for this set of two courses, that is being used across multiple disciplines

## OTHER

In the capacity of the Director of Undergraduate research [50% administrative role] at my institution, I have responsibility for four strategic goals of my office

- (1) Introduce students to undergraduate research **earlier in their careers**, with an emphasis on inclusion of students from **underrepresented groups**.
- (2) Position the Office to **support undergraduate research efforts** across the institution.
- (3) Obtain **comprehensive documentation across divisions** about participation of undergraduates, graduate students, and faculty, in undergraduate research.
- (4) Increase **visibility of UGR on campus and off campus**.