COUNCIL ON UNDERGRADUATE RESEARCH

2023-2024 Elections
Chemistry Division: Councilor Slate

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. The CUR Council is a newly developed body of volunteer leaders for this election cycle.

Needed Qualifications:

- Strong communication skills
- Previously served as a Division Councilor is a plus, but not required
- Membership with CUR
- Can not be serving concurrently as a Division Representative

There are 2 individuals running.
You may vote for both candidates presented to be elected as councilors 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.

Kraig Wheeler, Whitworth University

Chemistry Division Nominee

NOMINEE STATEMENTS

Describe your leadership experience both within CUR and extramural.

My extensive involvement with national organizations and committees has spanned my three decades of service as a Chemistry Professor at primarily undergraduate institutions. Providing quality education and programming accessible to all has been a consistent theme of my professional activities. I am a dedicated, boots-on-the-ground faculty member who has mentored 118 students in chemical research. Whether helping a broad range of students gain valuable laboratory experience, advocating for institutional diversity and inclusivity, or ensuring relevant, innovative programming for early career development, I have consistently served as an advocate for our undergraduate research community. My efforts in these areas have partnered with CUR, the American Chemical Society, the American Crystallographic Association, and the American Institute of Physics, where I have supported the mission of these organizations from various roles. A few highlights include serving as the division chair of CUR Chemistry, chairing committees [Education (ACA, AIP, USNC/Cr), Nominations (CUR), National Meeting Program Co-Chair (ACA), and Small Molecule Special Interest Group (ACA)] and convening an extensive set of conference sessions (CUR, ACS, ACA) directed at undergraduate research initiatives.

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

The CUR councilor position is vital to the organization by advancing the institutional mission and resources and acting as a liaison to The Council and Division. My leadership experience within CUR and other organizations will offer a unique perspective benefiting CUR Chemistry. Because I am a dedicated Chemist with roots in the CUR organization and Division, these experiences and enthusiasm will guide my approach to this role. Beyond channeling information and providing advisory contributions that undergird the operation and well-being of CUR, I also see the councilor's position as an advocate who widely broadcasts and champions the Division's work and successes. This role is not new to me, as my efforts in developing programs and initiatives with several extramural organizations (ACS, ACA, AIP and USNC/Cr), including my campus here at Whitworth, have required clear and consistent communication with an eye for detail. This focus and a sense of urgency will ensure that the Division is well-represented and that communication between the central CUR organization and the divisional members is transparent and effective. I am deeply honored to be considered for the Councilor position, where this opportunity would combine my passion for CUR Chemistry and CUR's role in supporting and promoting broad participation from the greater undergraduate research community.

NOMINEE ABBREVIATED CV

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

Kraig A. Wheeler

Whitworth University
Department of Chemistry
Spokane, WA 99251

EDUCATION

Ph.D., 1992, Organic Chemistry, Brandeis University, Waltham, MA
B.A., 1987, Chemistry, University of Minnesota, Minneapolis, MN

ORGANIZATIONAL SERVICE AND LEADERSHIP

CUR Chemistry Division	2008-2021 (Chair 15-17)
CUR Nominations Committee	2019-21 (Chair 20-21)
CUR Silvia Ronco Innovative Mentor Award, committee member	2022-present
Program co-chair, American Crystallographic Association National Meeting, Philadelphia, PA	2015
Education Committee, American Crystallographic Association	2013-16)
Education Committee, U.S. National Committee on Crystallography	2014-15 (Chair 13-16)
Chair, Small Molecule Special Interested Group, American Crystallographic Association	2007
Chair, American Crystallographic Association Representative to the Liaison Education Committee on Physics Education	2014-19 (Chair 19)

Organizing Committee and Instructor | Workshops

Pacific Northwest Summer Crystallographic Institute, Whitworth University	2021-present
CUR Broadening Participation Institute, Whitworth University	2019
Spokane Intercollegiate Research Conference, Spokane, WA	2017-22
Macromolecular Crystallography, Whitworth University	2019
Cambridge Crystallographic Data Centre Workshop, Whitworth University	2018
Midwest Organic Solid-State Chemistry Symposium, Eastern Illinois University	2011
American Chemical Society PRF Crystallography Summer Workshop for Organic Chemists, University of California at San Diego	2004, 05, 07

Organizing Committee and Convener, Conference Sessions

American Chemical Society	2017-present
American Crystallographic Association	2007, 12-14, 16, 20-22
Council on Undergraduate Research	2010, 12, and 16

PROFESSIONAL | TEACHING EXPERIENCE

Whitworth University, Department of Chemistry, Spokane, WA	2017-present
Hugh Johnston Professor of Chemistry	
Eastern Illinois University, Department of Chemistry, Charleston, Illinois	
Professor	2010-2017
Associate Professor	2005-2010
Delaware State University, Department of Chemistry, Dover, Delaware	
Professor	2002-2005
Associate Professor	1997-2002
Assistant Professor	1993-1997
University of Texas at Austin, Department of Chemistry and Biochemistry, Austin, Texas	1992-1993
Postdoctoral Research Fellow	

AWARDS | HONORS | DISTINCTIONS

Visiting Scientist, Lyndra Therapeutics, Watertown, MA, 2023.
Lynwood W. Swanson Scientific Research Award, M. J. Murdock Charitable Trust, 2018.
Visiting Faculty, University of Cambridge, UK, Cambridge Crystallographic Data Centre, 2013
Lida G. Wall Faculty Research Mentoring Award, Eastern Illinois University, 2008.
Senior Faculty Fellow, ONR-ASEE Summer Faculty Research Program, 2004.
Excellence in Research and Creative Activity Award, Delaware State University, 2000.

SOCIETY MEMBERSHIP

American Chemical Society
American Crystallographic Association
Council on Undergraduate Research
Sigma Xi

RESEARCH AREAS

Small molecule molecular recognition. Molecular engineered functional materials. Design of novel cocrystalline quasiracemic compounds, noncentrosymmetric molecular assemblages, and crystal engineering *via* molecular topology. Chemical reactions in molecular crystals. Construction of predictable molecular frameworks by exploiting strong and weak intermolecular interactions. Nanoporous materials derived from coordination polymer and robust donor-acceptor molecular architectures. Single-crystal X-ray crystallography.

RESEARCH MENTOR EXPERIENCE

Undergraduate Research Mentor to 118 students (99 undergraduates and 19 masters level students) with two-thirds of these students receiving co-authorship on peer-reviewed manuscripts and/or presentations at national conferences. Many of these same students have received national (*e.g.*, Goldwater and NSF-GRFP) and institutional awards.

SPONSORED RESEARCH PROGRAMS

Externally Funded Projects – over 3.5M in research, instrumentation, workshop funding from NSF, AFOSR, U.S. Army, DOE, and Murdock.

Internally Funded Projects – over 40K in institutional funding to support research and educational initiatives.

PUBLICATIONS | PRESENTATIONS | UNDERGRADUATE RESEARCH PEDAGOGY

206 Conference and Colloquium Presentations
140 Publications (peer reviewed)

Rebecca Jones, George Mason University

Chemistry Division Nominee

NOMINEE STATEMENTS

Describe your leadership experience both within CUR and extramural.

My academic and professional leadership experience has positioned me well to step into this new role as a CUR Councilor. I have been a CUR member since 2006 and was an elected Chemistry Division representative from 2016-2022 (2 terms). I served as a Division and Issue Editor for Scholarship and Practice of Undergraduate Research, the journal of the Council on Undergraduate Research (CUR) for six years. I have a deep commitment to the paradigm of undergraduate research and am interested and willing in contributing to this next evolution of CUR. After earning a PhD in inorganic chemistry in 2004, my faculty career began at Austin Peay State University where I created the Office of Undergraduate Research (2010) and earned promotion and tenure (2011). In 2012, I relocated to George Mason University to begin the Office of Student Scholarship Creative Activities and Research (OSCAR), Mason's undergraduate research program. As Associate Director of OSCAR, I created and administrated the Undergraduate Research Scholars Program and the Undergraduate Student Travel Fund, and organized the Celebration of Student Scholarship from 2012-2015. In 2015, I joined the Department of Chemistry and Biochemistry and the STEM Accelerator as an Associate Professor. In June 2021, I was promoted to Professor. I have published on faculty mentoring undergraduate research as well as the historical development of chemistry curricula, photographic chemistry, and retention in STEM education. I have served on NSF panels in 2018-2022 years and as PI or co-PI of multiple student-centered NSF grants. I am an engaged member of the Chemistry and Biochemistry department at Mason, serving on and chairing multiple departmental committees and mentoring two Assistant Professors. I have served the College of Science as Chair of the Faculty, (2020-2023), faculty senator (2016-2019), Secretary of the Faculty (2017-2020) and administrator of the COS Undergraduate Research Colloquium (annually since 2015).

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

My top 5 strengths (from CliftonStrengths) are Strategic, Futuristic, Command, Individualization, Achiever; these will work together in my service on the CUR Council. The Strategic strength means I can come up with alternate paths and solutions. I am able to see patterns and issues that need to be addressed and often devise plans of action to seek resolution. My Futuristic strength means I am motivated by the future. I am excited to see where CUR is going and to contribute to that journey. The strength Command has enabled me to make brave decisions and motivate others to work with me toward a common goal. When the pandemic cancelled all the symposia I had organized for 2020, I wrote a book proposal and worked with all the presenters to create a combined publication. The two-volume book series, Advances in Teaching Inorganic Chemistry, was published by ACS Books in December 2020. The difficult to say "Individualization" means I am good at seeing the strengths in others and helping them maximize what they do well. I have a lot of experience working with diverse groups and helping committees set and reach common goals. Finally, I am an Achiever. Those of you who know me will not be surprised by this; Kim Frederick once said I'm a GSD… I "Get Shit Done". I like being busy and productive. I like contributing to something larger than myself and derive a lot of joy from working with others to make something new or better. This strength enables my other strengths to shine; being able to imagine the future, design a plan of action and make tough decisions are all supported by my willingness to do the work.

NOMINEE ABBREVIATED CV

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

NSF BIOGRAPHICAL SKETCH

Provide the following information for the Senior personnel.
Follow this format for each person. **DO NOT EXCEED 3 PAGES.**

IDENTIFYING INFORMATION:

NAME: Jones, Rebecca M.

ORCID: 0000-0002-8896-0529

POSITION TITLE: Professor

ORGANIZATION AND LOCATION: George Mason University, Fairfax, VA, United States

Professional Preparation:

ORGANIZATION AND LOCATION	DEGREE (if applicable)	DATE RECEIVED	FIELD OF STUDY
University of Cincinnati, Cincinnati, OH, US	PHD	2004	Chemistry
University of Cincinnati , Cincinnati, Ohio, United States	MS	2002	Chemistry
Ohio State University, Columbus, OH, US	BA	1998	Chemistry

Appointments and Positions

2021 - present Professor, George Mason University, Chemistry and Biochemistry, Fairfax, VA, United States

2015 - 2021 Associate Professor, George Mason University, Chemistry and Biochemistry, Fairfax, VA, US

2012 - 2015 Assistant Director, George Mason University, Office of Student Scholarship, Creative Activities and Research, Fairfax, VA, US

2004 - 2012 Assistant/Associate Professor, Austin Peay State University, Chemistry, Clarksville, TN, US

Products

Products Most Closely Related to the Proposed Project

1. Jones R, Cleaver R. Recruiting and Enrolling Rural Students: A Model for Increasing Diversity in STEM. Innovative Higher Education. 2020 January 25; 45(3):253-263. Available from: http://link.springer.com/10.1007/s10755-020-09499-6 DOI: 10.1007/s10755-020-09499-6
2. Fudala C, Jones R. The Chemistry of Mordançage, a Historic Photographic Process. Analytical Chemistry. 2019 October 17; 91(22):14482-14488. Available from: https://pubs.acs.org/doi/10.1021/acs.analchem.9b03205 DOI: 10.1021/acs.analchem.9b03205
3. Jones R. Assessing Undergraduate Research in Chemistry. ACS Symposium Series [Internet] Washington, DC: American Chemical Society; 2018-01. 301-310p. Available from: https://pubs.acs.org/doi/abs/10.1021/bk-2018-1275.ch018 DOI: 10.1021/bk-2018-1275.ch018
4. Davis S, Jones R. The Genesis, Evolution, and Influence of Undergraduate Research Mentoring Relationships. International Journal for the Scholarship of Teaching and Learning.

2020 May 31; 14(1):-. Available from: https://digitalcommons.georgiasouthern.edu/ij-sotl/vol14/iss1/6 DOI: 10.20429/ijsotl.2020.140106

5. Davis S, Jones R, Mahatmya D, Garner P. Encouraging or Obstructing? Assessing Factors That Impact Faculty Engagement in Undergraduate Research Mentoring. Frontiers in Education. 2020; 5:-. Available from: https://www.frontiersin.org/article/10.3389/feduc.2020.00114/full DOI: 10.3389/feduc.2020.00114

Other Significant Products, Whether or Not Related to the Proposed Project

1. Mahatmya D, Morrison J, Jones R, Garner P, Davis S, Manske J, Berner N, Johnson A, Ditty J. Pathways to Undergraduate Research Experiences: a Multi-Institutional Study. Innovative Higher Education. 2017; 42(5-6):491-504. Available from: http://link.springer.com/10.1007/s10755-017-9401-3 DOI: 10.1007/s10755-017-9401-3
2. Jones R. Advancing Scientific Communication with Infographics: An Assignment for Upper-Level Chemistry Classes. ACS Symposium Series [Internet] Washington, DC: American Chemical Society; 2019-01. 119-128p. Available from: https://pubs.acs.org/doi/abs/10.1021/bk-2019-1327.ch009 DOI: 10.1021/bk-2019-1327.ch009
3. Jones R. Implementing Best Practices to Advance Undergraduate Research in Chemistry. ACS Symposium Series [Internet] Washington, DC: American Chemical Society; 2018-01. 335-344p. Available from: https://pubs.acs.org/doi/abs/10.1021/bk-2018-1275.ch020 DOI: 10.1021/bk-2018-1275.ch020
4. Davis S, Jones R. Understanding the role of the mentor in developing research competency among undergraduate researchers. Mentoring & Tutoring: Partnership in Learning. 2017 November 24; 25(4):455-465. Available from: https://www.tandfonline.com/doi/full/10.1080/13611267.2017.1403534 DOI: 10.1080/13611267.2017.1403534
5. Davis S, Garner P, Jones R, Mahatmya D. The role of perceived support and local culture in undergraduate research mentoring by underrepresented minority faculty members: findings from a multi-institutional research collaboration. Mentoring & Tutoring: Partnership in Learning. 2020 April 01; 28(2):176-188. Available from: https://www.tandfonline.com/doi/full/10.1080/13611267.2020.1749347 DOI: 10.1080/13611267.2020.1749347

Synergistic Activities

1. Principal Investigator, "The RADSS program (Rural and Diverse Student Scholars)", NSF S-STEM, NSF Award #1564989, April 1, 2016 - March 31, 2023, $643,925.00 (https://www.nsf.gov/awardsearch/showAward?AWD_ID=1564989)
2. Organizer and planning chair, College of Science, Undergraduate Research Colloquium, 2016-present
3. Sigma Xi Chapter President, George Mason University, 2016-present
4. Symposia organizer, American Chemical Society Spring National Meeting, 2015-2020
5. Division of Chemistry Councilor, Issue Editor and Editorial Board, Scholarship and Practice of Undergraduate Research, Council on Undergraduate Research, 2016-2021

Certification:

When the individual signs the certification on behalf of themselves, they are certifying that the information is current, accurate, and complete. This includes, but is not limited to, information related to domestic and foreign appointments and positions. Misrepresentations and/or omissions may be subject to prosecution and liability pursuant to, but not limited to, 18 U.S.C. §§ 287, 1001, 1031 and 31 U.S.C. §§ 3729-3733 and 3802.

Certified by Jones, Rebecca M. in SciENcv on 2023-02-10 10:36:52