

## Michael Jackson

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### a. Professional Preparation

State University of New York, College at Oswego	Physics and Mathematics	B.S.	1992
New Mexico State University	Physics	Ph.D.	1998

### b. Appointments

Founding Dean and Professor, College of Science and Technology, Millersville University,  
2015-Present

Professor, Department of Physics, Central Washington University, 2007-2015

Chair, Department of Physics, Central Washington University, 2007-2013

Chair, Department of Physics, University of Wisconsin-La Crosse (UW-L), 2006-07

Professor, Department of Physics, UW-L, 2005-2007

Associate Professor, Department of Physics, UW-L, 2002-2005

Assistant Professor, Department of Physics, UW-L, 1999-2002

Assistant Professor, Department of Physics, State University of West Georgia, 1998-1999

Academic Staff Lecturer, Department of Physics, UW-L, 1997-1998

### c. Publications

Section (i) – Undergraduate co-authors are labeled with an \*; graduate students are also italic

1. M. Jackson, Clarissa Gerke\*, Jose Barajas\*, Ron M. Lees, “Measurement and Spectroscopic Assignment of Far-Infrared Laser Frequencies Generated by 13CD3OH and CH318OH,” *IEEE Journal of Quantum Electronics*, 54, No. 1, Feb. (2018). INSPEC Accession Number: 17466262, DOI: 10.1109/JQE.2017.2786861.
2. M. Jackson, B. Freeman\*, M. Smith\*, and M. Kemper\*, “Frequency measurement of far-infrared laser emissions from C-13 methanol isotopologues,” *IEEE Journal of Quantum Electronics*, **52** (11), Article No. 1400104, 4 pages, 10.1109/JQE.2016.2612878, November (2016).
3. M. Jackson and L. R. Zink, “Characterizing far-infrared laser emissions and the measurement of their frequencies,” *Journal of Visualized Experiments*, Issue 106, e53399, doi: 10.3791/53399 (2015).
4. R. M. Lees, M. Jackson, G. Moruzzi, A. Predoi-Cross, and B. E. Billinghamurst, “Assignment of Far-Infrared Laser Lines of O-17 Methanol by Synchrotron FTIR Spectroscopy and Laser Frequency Measurements,” *Journal of Molecular Spectroscopy*, **315**, 80-82, doi: 10.1016/j.jms.2015.03.001, September (2015).
5. M. Jackson, M. Smith\*, C. Gerke\*, and J. M. Barajas\*, “Measurement of far-infrared laser frequencies from methanol isotopologues,” *IEEE Journal of Quantum Electronics*, **51** (4), Article No. 1500105, 5 pages, 10.1109/JQE.2015.2398352, April (2015).

Section (ii)

1. M. Jackson, M. Smith\*, C. Gerke\*, and J. M. Barajas\*, “Measurement of far-infrared laser frequencies from methanol isotopologues,” *IEEE Journal of Quantum Electronics*, **51** (4), Article No. 1500105, 5 pages, 10.1109/JQE.2015.2398352, April (2015).

2. M. Jackson, A. J. Nichols\*, D. R. Womack\*, and L. R. Zink, “The first laser action observed from optically pumped CH<sub>3</sub><sup>17</sup>OH,” *IEEE Journal of Quantum Electronics*, **48**, 303-306 (2012).
3. M. Jackson, L. R. Zink, M. C. McCarthy, L. Perez\*, and J. M. Brown, “The far-infrared and microwave spectra of the CH radical in the  $\nu = 1$  level of the X<sup>2</sup>Π state,” *Journal of Molecular Spectroscopy*, **247**, 128-139 (2008).
4. M. Jackson, G. R. Sudhakaran, and E. Ganssen\*, “Far-infrared laser Stark spectroscopy of PH<sub>3</sub>,” *Journal of Molecular Spectroscopy*, **181**, 446-451 (1997).
5. G. R. Sudhakaran, M. Jackson, R. M. Lees, Li-Hong Xu, and I. Mukhopadhyay, “Stark spectroscopy of <sup>13</sup>CD<sub>3</sub>OH with the HCN Laser,” *Infrared Physics*, **34**, 661-665 (1993).

#### **d. Synergistic Activities**

1. Awards received: College of the Sciences Collaboration Award (for the Science Talent Expansion Program) (CWU, 2015); AAPT Fellow (2014); 2013 Outstanding Undergraduate Science Teacher Award by the Society for College Science Teachers; Undergraduate Mentor of the Year, SOURCE 2013 (CWU); 2013 David Halliday and Robert Resnick Award for Excellence in Undergraduate Physics Teaching, (AAPT); “Crystal Apple Award,” CWU Teacher Professional Education Advisory Board (2011-2012); CUR “Volunteer of the Year” for 2010-2011 and 2008-2009, “For Innovation in the Teaching of Physics” award, Wisconsin Association of Physics Teachers (2006); “CSAH Research Mentor Fellowship,” (UW-L, 2004-2005); Member of the UW-L Physics Department, “2004 Regents Teaching Excellence Award for a Department,” UW-System Board of Regents.
2. Selected research awards received by student mentees: 47 undergraduate co-authors on 31 refereed journal articles; invited presentations: B. Chuzles: AAPT (2006) and International Conference of Physics Students (2005), J. Olson: DAMOP-APS (2001); Selected for presentation of research at CUR’s Posters on the Hill: A. J. Nichols and D. R. Womack (2012), J. Milne (2011), B. Chuzles (2005), D. Sutton (2003), H. Hockel and M. Lauters (2001); Adam Powell was the 2013 Undergraduate Scholar of the Year, Jason Milne was the 2011 Honorable Mention; Travis Petersen and Kerry Olivier: CWU Science Honors program (includes thesis).
3. Invited Presentations: “How I have tripped and stumbled through research: lessons and reflections,” *Stetson Showcase*, Stetson University (2017); Marjorie Gardner Lecture, “Strategies for Incorporating Research into the Undergraduate Curriculum,” NSTA National Conference, (2015); “The SPIN-UP Report and its Role in Developing a ‘Rising’ Thriving Physics Program,” M. Jackson and the CWU physics department, Building a Thriving Undergraduate Physics Program, PhysTEC regional conference, (2015); “Can undergraduates efficiently advance your research? It depends on your mentoring ...,” *Becoming a more productive and effective teacher-scholar: Best practices for student mentoring* faculty workshop, The College of New Jersey (2013); “Teaching physics and its role in the survival (and growth) of a physics program,” 2013 Summer Meeting of the AAPT; M. Jackson and L. R. Zink, “Development of spectroscopic systems for the investigation of stable and unstable molecular species in the far-infrared,” *International Conference on Spectrophysics (INCONS 2005)* (2005).
4. Undergraduate Research and Education Initiatives: Elected Councilor, Physics and Astronomy (P&A) Division, Council on Undergraduate Research (5 terms; 2005–Present);

Vice-Chair P&A Division (2016–Present); CUR Executive Board Member and Chair, P&A Division (2013–2016); Chair Elect P&A Division (2012–2013); CUR Fellows Task Force Chair (2006–2013); Co-Chair, CUR Posters on the Hill Committee (2012–Present), American Physical Society Committee on Education (2016–Present).

5. External Funding: Recipient of approximately \$3 million from the American Chemical Society (PRF program), Research Corporation, NASA's Space Grant Consortium (Washington and Wisconsin), and the National Science Foundation (CRIF, MRI, International Education, and REU programs along with RUI designated proposals, and two BPUPP conference proposals). Recipient of NSF's Two Year Extension for Special Creativity award (2004) and the Brian Andreen Cottrell College Science Award from Research Corporation (2002). Also serving as a consultant on CUR's NSF-IUSE proposal "Integrating and Scaffolding Research into Undergraduate STEM Curricula: Probing Faculty, Student, Disciplinary, and Institutional Pathways to Transformational Change," Award No. 1625354 and co-PI on the project "Changing the Culture: Developing a Guide of Effective Practices to Improve, Assess, and Review Undergraduate Physics Programs" NSF-IUSE program, Award No. 1821372.