

Ania Bleszynski Jayich

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(a) Professional Preparation

Stanford University, Physics (B.S.), 2000

Stanford University, Mathematical and Computational Science (B.S.), 2000

Harvard University, Physics (PhD), 2006

Postdoctoral Institution: Yale University, 2006-2009

(b) Appointments

08/2010 – present Assistant Professor of Physics, University of California, Santa Barbara

08/2010 – present Bruker Endowed Chair in Science and Engineering, UC Santa Barbara

09/2009 – 8/2010 Visiting Scholar, Lukin group, Harvard University

05/2008 – 05/2009 L'Oreal For Women in Science postdoctoral fellow

Honors: NSF CAREER Award (2014), Presidential Early Career Award for Science and Engineering (2012); Air Force Office of Scientific Research Young Investigator Award (2010); L'Oreal Postdoctoral Fellowship for Women in Science (2008) (\$40,000 research award); Aspen Center for Physics Frontiers in Condensed Matter Systems Conference: Martin and Beate Block Winter Fund Award for outstanding young scientist (2008); International Conference on the Physics of Semiconductors (ICPS2006) Young Scientist Award.

(c) Publications

(i) Five publications most closely related to the proposed project:

- M. Pelliccione, B. A. Myers, A. Das, L. Pascal, A. C. Bleszynski Jayich, *Two-dimensional nanoscale imaging of gadolinium spins via scanning probe relaxometry with a single spin in diamond*, Phys. Rev. Applied **2**, 054014 (2014).
- P. Ouartchaiyapong, K. W. Lee, B. A. Myers, A. C. Bleszynski Jayich, *Dynamic strain-mediated coupling of a single diamond spin to a mechanical resonator*, Nature Communications **5**, 4429 (2014).
- B. A. Myers, M. C. Dartiailh, K. Ohno, A. Das, D. D. Awschalom, A. C. Bleszynski Jayich, *Probing surface noise with depth-calibrated spins in diamond*, Phys. Rev. Lett. **113**, 027602
- P. Ouartchaiyapong, L. M. A. Pascal, B. A. Myers, P. Lauria, A. C. Bleszynski Jayich, *High quality factor single-crystal diamond mechanical resonators*, App. Phys. Lett. **101**, 163505 (2012).
- K. Ohno, F. J. Heremans, L. C. Bassett, B. A. Myers, D. M. Toyli, A. C. Bleszynski Jayich, C. J. Palmstrom, D. D. Awschalom, *Engineering shallow spins in diamond with nitrogen delta-doping*, App. Phys. Lett. **101**, 082413 (2012).

(ii) Five other significant publications:

- K. Ohno, F. J. Heremans, C. F. de las Casas, B. A. Myers, B. J. Aleman, A. C. Bleszynski Jayich, D. D. Awschalom, *Three dimensional localization of spins in diamond using ^{12}C implantation*, App. Phys. Lett. **105**, 052406 (2014).
- S. Kolkowitz*, A. C. Bleszynski Jayich*, Q. Unterreithmeier, S. D. Bennett, P. Rabl, J. G. E. Harris, M. D. Lukin, *Coherent Sensing of a Mechanical Resonator with a Single-Spin Qubit*, Science **335**, 1603 (2012). (* = co-authors)
- M. A. Castellanos-Beltran, D. Q. Ngo, W. E. Shanks, A. B. Jayich, J. G. E. Harris, *Measurement of the Full Distribution of the Persistent Current in Normal-Metal Rings*, Phys. Rev. Lett. **110**, 156801 (2013).

- A. C. Bleszynski-Jayich, W. E. Shanks, B. Peaudecerf, E. Ginossar, F. von Oppen, L. Glazman, J. G. E. Harris, *Persistent Currents in Normal Metal Rings*, *Science* **326**, 272 (2009).
- A. C. Bleszynski, F. A. Zwanenburg, R. M. Westervelt, L. P. Kouwenhoven, A. Roest, E. P. A. M. Bakkers *Scanned Probe Imaging of Quantum Dots inside InAs Nanowires*, *Nano Lett.* **7**, 2559 (2007).

(d) Synergistic Activities

- Judge for Emerging Researchers National (ERN) Conference in STEM, D.C. Feb 2015
- Lecturer at the Les Houches Summer School on Quantum Opto and NanoMechanics, Aug 2015
- Conference Session Chair, Rocky Mountain Conference on Magnetic Resonance, July 2015
- Reviewer for Science, Nature, NanoLetters, Applied Physics Letters
- Society of Physics Students Faculty advisor (2013-2014), UCSB Physics Dept.
- Developed a new course at UCSB on Atomic Physics/Quantum optics (Winter/Spring 2014)
- Advisor on Physical Review X Visiting Committee (2014)
- Review panelist for L'Oreal For Women in Science Fellowship (2014)
- Conference Organizer: Rocky Mountain Conference on Magnetic Resonance, Snowbird (July, 2015). Artificial Atoms in Diamond, ITAMP Harvard University (Nov, 2010). German-American Frontiers of Science Conference, Berlin (May, 2012).
- Women in Physics advisor (2010-current), UCSB Physics Dept.

(e) Collaborators & Other Affiliations.

(i) Collaborators and Co-Editors:

David Awschalom (U of Chicago); Erik Bakkers (Philips Research Labs, Eindhoven); Andrew Cleland (UCSB); Viatcheslav Dobrovitski (Iowa State Univ); Mark Ellisman (UCSD); Michael Flatte (U. of Iowa); Leonid Glazman (Yale); Jack Harris (Yale); Craig Hawker (UCSB); Eric Heller (Harvard); Evelyn Hu (Harvard); Rob Illic (Cornell); Jeff Kimble (Cal Tech); Ken Kosik (UCSB); Leo Kouwenhoven (Delft); Misha Lukin (Harvard); Oskar Painter (Cal Tech); Chris Palmstrom (UCSB); Ramamoorthy Ramesh (Berkeley); Daniel Rugar (IBM); Susanne Stemmer (UCSB); Felix von Oppen (Freie Universität Berlin);

(ii) Graduate Advisor and Postdoctoral Sponsors:

R. M. Westervelt (Harvard), J. G. E. Harris (Yale).

(iii) Thesis Advisor and Postgraduate-Scholar Sponsor:

Graduate Students Advised (total 6):

Past: Bruno Peaudecerf (masters student, ENS, Paris), Shimon Kolkowitz (Harvard), Matthieu Dartiailh (masters student, ENS, Paris), Jens Boss (masters student, ETH Zurich), Danijela Markovic (masters student, ETH Zurich)

Current: Bryan Myers, Preeti Ovarthaiyapong, Claire McLellan, Kenny Lee, Sasha Zibrov, Alec Jenkins

Postdoctoral Associates Sponsored:

Past: Laetitia Pascal

Current: Tim Eichorn, Donghun Lee, Matthew Pelliccione

Undergraduate Students Advised:

Past: Juan Aguilar (Harvard), Clarmyra Hayes (Harvard), Jeremie Doehla (UCSB), Paul Lauria (UCSB), Victor Spiro Jaeger (UCSB), Eric Miller (UCSB), Gino Graziano (UCSB), Ananda Das (UCSB)

Current: Ilan Rosen, Yuanchi Qing, Oscar Erlandsson