

## CONTACT INFORMATION

PSF  
Arizona State University  
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## EDUCATION

**Piedmont College**, Demorest, Georgia 2019  
B.S. Applied Mathematics & Physics, *Summa Cum Laude*

## PUBLICATIONS

Citations: 48

\* = equal  
contribution

M. Jung, H. LaBollita, V. Pardo, and A. S. Botana, “Does  $\text{Ni}^{1+}$  lead to an antiferromagnetic insulating phase in layered nickelates?,” *in prep.* (2022).

H. LaBollita and A. S. Botana, “Correlated electronic structure of a quintuple-layer nickelate,” *Phys. Rev. B* **105** 085118 (2022).

G. A. Pan, D. F. Segedin, H. LaBollita et al., “Superconductivity in a quintuple-layer square-planar nickelate,” *Nature Materials* **21**, 160-164 (2022).

H. LaBollita and A. S. Botana, “Tuning the Van Hove singularities in  $\text{AV}_3\text{Sb}_5$  ( $A = \text{K}, \text{Rb}, \text{Cs}$ ) via pressure and doping,” *Phys. Rev. B* **104**, 205129 (2021).

M. Akram\*, H. LaBollita\*, D. Dey, J. Kapeghian, A. S. Botana, and O. Erten, “Moiré skyrmions and chiral magnetic phases in twisted  $\text{CrX}_3$  ( $X = \text{I}, \text{Br}, \text{Cl}$ ) bilayers,” *Nano Letters* **21**, 15, 6633-6639 (2021).

H. LaBollita and A. S. Botana, “Electronic structure and magnetic properties of higher-order nickelates:  $\text{La}_{n+1}\text{Ni}_n\text{O}_{2n+2}$  ( $n = 4 - 6$ ),” *Phys. Rev. B* **104** 035148 (2021).

J. Krishna, H. LaBollita, A. O. Fumega, V. Pardo, and A.S. Botana, “Effects of Sr-doping on the electronic and spin-state properties of infinite-layer nickelates: Nature of holes,” *Phys. Rev. B* **102**, 224506 (2020).

## AWARDS & HONORS

Wally Stoelzel Scholarship	2021 – 22
Teaching Excellence Award, Graduate & Professional Student Association, ASU	2020
Arizona State University Summer Graduate Fellowship	2020
NCAA Postgraduate Scholarship	2019
Highest GPA Male Athlete, Piedmont College	2019
Scholar Athlete of the Year, Piedmont College	2019
Glenn W. & Edna Ellard Scholarship	2016 – 19
Seaborn Ashley & Dana Smith Ashely Scholarship	2016 – 18
Math & Physics Department Scholarship	2015 – 19
Trustee Scholarship	2015

## TEACHING

**Arizona State University**, Tempe, AZ  
*Teaching Assistant*, PHY 121: Mechanics for Engineers Spring 2020  
*Teaching Assistant*, PHY 131: Electricity & Magnetism for Engineers Fall 2019, Fall 2020

**Piedmont College**, Demorest, GA  
*Teaching Assistant* 2018 – 19  
*Math and Physics Tutor* 2016 – 18

## PRESENTATIONS

† = Talk  
° = Poster

H. LaBollita† and A. S. Botana, “Electronic structure and magnetic properties of higher-order nickelates:  $\text{La}_{n+1}\text{Ni}_n\text{O}_{2n+2}$  ( $n = 4 - 6$ ),” APS March Meeting, Online due to COVID-19 Mar. 2021  
H. LaBollita†, “Hadronic Light-by-Light Contribution to the Anomalous Magnetic Moment of the Muon from the  $\omega$  meson,” QEP Research Symposium, Piedmont College May 2019  
H. LaBollita°, M. Hjorth-Jensen, S. Liddick, “Machine Learning Applied to Multi-Electron Events in Scintillator,” APS March Meeting Mar. 2019  
H. LaBollita°, M. Hjorth-Jensen, S. Liddick, “Machine Learning Applied to Multi-Electron Events in

Scintillator,” REU Research Symposium, Michigan State Univeristy	Jul. 2018
H. LaBollita <sup>†</sup> , “Characterization of Mirror Birefringence for ALPS,” REU program, Univeristy of Florida	Aug. 2017

SERVICE	<i>Organizer</i> , Grad2Grad Talks, ASU Department of Physics	2021 –
	<i>Graduate Student Representative</i> , ASU Department of Physics Bylaws Committee	2021 – 22
	<i>Mentor</i> , <a href="#">ASU Sundial Project</a>	2020 – 21

OUTREACH	<i>Instructor</i> , <a href="#">Clubes de Ciencia</a>	2021
	<i>Organizer</i> , Maker Faire, <i>Henry Ford Museum</i>	2018
	<i>Organizer</i> , UF Center for Pre-Collegiate Education and Training, <i>University of Florida</i>	2017

MENTORSHIP	Adriana Baniecki, SCENE high-school student	2021
	Siva Buddy, SCENE high-school student	2020