

Victor Luiz Quito

Post-doctoral Researcher

Affiliation: Department of Physics and Astronomy, Iowa State University and Ames National Laboratory
Ames, IA, USA

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[Google Scholar: Victor Quito](#)

CURRENT EMPLOYER *Postdoctoral researcher,* August, 2021 - Present
Affiliation: Department of Physics and Astronomy, Iowa State University, and Ames Laboratory
Ames, Iowa, USA
Supervisor: Peter P. Orth

PAST EMPLOYERS *Postdoctoral researcher,* September, 2018 - August, 2021
Affiliation: Department of Physics and Astronomy, Iowa State University, Ames, Iowa, USA
Supervisor: Rebecca Flint

Postdoctoral researcher, September, 2016 - August, 2018
National High Magnetic Field Laboratory (MagLab), Tallahassee, Florida, USA
Theory group postdoctoral scholar

EDUCATION *Ph.D. in Physics,* March, 2010 - February, 2016
Campinas State University, Brazil
Title: "Studies of Strongly Disordered Quantum Systems"
Advisor: Eduardo Miranda

Visiting Student, February, 2013 - January, 2014
California Institute of Technology
Supervisor: Gil Refael

B.S. in Physics, March, 2006 - February, 2010
Campinas State University, Brazil

PUBLICATIONS **V. L. Quito**, R. Flint
Title: Floquet engineering correlated materials with unpolarized light
[Phys. Rev. Lett. **126**, 177201 \(2021\)](#)

M. S. Frank, T-H Lee, G. Bhattacharyya, P. K. H. Tsang, **V. L. Quito**, V. Dobrosavljević, O. Christiansen, N. Lanata
Title: Quantum embedding description of the Anderson lattice model with the ghost Gutzwiller approximation
[Phys. Rev. B \(Letter\) **104**, L081103 \(2021\)](#)

V. L. Quito, R. Flint
Title: Polarization as a tuning parameter for Floquet engineering: Magnetism in the honeycomb, square, and triangular Mott insulators
[Phys. Rev. B **103**, 134435 \(2021\)](#)

V. L. Quito, Pedro L. S. Lopes, José Hoyos, E. Miranda
Title: Emergent SU(N) symmetry in disordered SO(N) spin chains
Topical issue: Recent Advances in the Theory of Disordered Systems [Eur. Phys. J. B **93**, 17 \(2020\)](#)

V. L. Quito, Pedro L. S. Lopes, José Hoyos, E. Miranda
Title: Highly-symmetric random one-dimensional spin models
[Phys. Rev. B **100**, 224407 \(2019\)](#)

Y.-C. Chiu, K. -W. Chen, R. Schönemann, **V. L. Quito**, S. Sur, Q. Zhou, D. Graf, E. Kampert, T. Förster, K. Yang, G. T. McCandless, J. Y. Chan, R. E. Baumbach, M. D. Johannes, L. Balicas
Title: Origin of the butterfly magnetoresistance in a Dirac nodal-line system
[Phys. Rev. B **100**, 125112 \(2019\)](#) (Editor's suggestion)

P. L. S. Lopes, **V. L. Quito**, B. Han, J. C. Y. Teo
Title: A non-Abelian twist to integer quantum Hall states
[Phys. Rev. B **100**, 085116 \(2019\)](#)

R. Schönemann, Y.-C. Chiu, W. Zheng, **V. L. Quito**, S. Sur, G. T. McCandless, J. Y. Chan, L. Balicas
Bulk Fermi surface of the Weyl type-II semimetallic candidate NbIrTe4
[Phys. Rev. B **99**, 195128 \(2019\)](#)

P. Titum, **V. L. Quito**, S. Syzranov
Title: Energy-level statistics of neutral excitations in a disordered electronic system
[Phys. Rev. B **98**, 014201 \(2018\)](#)

V. L. Quito, P. Titum, David Pekker, Gil Refael
Title: Anderson transition in one dimension using Wegner Flow Equations
[Phys. Rev. B **94**, 104202 \(2016\)](#)

V. L. Quito, José A. Hoyos, E. Miranda
Title: Random SU(2)-symmetric spin chains
[Phys. Rev. B **94**, 064405 \(2016\)](#)

V. L. Quito, José A. Hoyos, E. Miranda
Title: Emergent SU(3) symmetry in random spin-1 chains
[Phys. Rev. Lett. **115**, 167201 \(2015\)](#)

**SUBMITTED
MANUSCRIPTS
SUBMITTED
MANUSCRIPTS**

V. L. Quito, R. Flint
Title: Floquet engineering multi-channel Kondo physics
[arXiv:2111.07994](#)
To be submitted to Phys. Rev. X

Chengshu Li, **V. L. Quito**, Eduardo Miranda, Rodrigo Pereira, Ian Affleck, Pedro L. S. Lopes
Title: The case of SU(3) criticality in spin-2 chains
[arXiv:2108.10329](#)
Submitted to Phys. Rev. B

M. Kornjača, **V. L. Quito**, R. Flint

Title: Mobile Majorana zero-modes in two-channel Kondo insulators
[arXiv:2104.11173](https://arxiv.org/abs/2104.11173)
Submitted to Science Advances

ACADEMIC HONORS	2020 Postdoctoral Research Excellence Award Iowa State University	2020	
	Brazil-U.S. Physics Ph.D. Student and Postdoc Visitation Program Collaborative trip to Campinas State University	June 2019	
	FAPESP PhD scholarship, Prestigious Brazilian funding agency	March, 2010 - February, 2016	
	Highest GPA score of the 2010 physics graduates, Campinas State University	2010	
	FAPESP Undergraduate Research scholarship, Prestigious Brazilian funding agency	2009-2010	
REFEREE	Physical Review Letters, Physical Review B, Physical Review Research, Brazilian Journal of Physics,	2019- 2020- 2020- 2016-	
	OUTREACH	Facilitator: "Go Further Conference: Quantum TicTaqToe"	Apr and Oct, 2021
		Judge of the "2021 State Science + Technology Fair of Iowa"	Mar, 2021
		Judge of the "5th Annual 3-Minute Thesis Competition"	Jan, 2021
Facilitator: "Go Further Conference: Quantum TicTaqToe"		Oct, 2020	
Presenter at the "MagLab Open House"		Feb, 2018	
OTHER ACTIVITIES	Condensed Matter Physics Journal Club, Co-organizer, with Professor Peter Orth	2020-	
TALKS AND CONFERENCES ATTENDED	International Conference on Strongly Correlated Electron Systems (SCES) <i>Invited Talk</i> : Floquet engineering multi-channel Kondo lattices (video)	2021	
	ICTP-SAIFR Blackboard talk Emergent symmetries in one-dimensional strongly disordered interacting systems (video)	2021	
	ICTP-SAIFR Colloquium Floquet-tuning strongly correlated systems (video)	2021	
	APS March Meeting <i>Talk</i> : Floquet engineering multi-channel Kondo lattices	2021	
	Aspen Center for Physics Summer Program: Quantum Spin Liquids	Summer 2019	
	APS March Meeting <i>Talk</i> : Using light to tune magnetism on the honeycomb lattice	2019	

Gordon Research Conference: Correlated Electron Systems <i>Poster</i> : Role of screening and charge transfer for a Mott transition in a Hydrogen lattice	2018
Gordon Research Seminar: Correlated Electron Systems	2018
APS March Meeting <i>Talk</i> : Role of screening and charge transfer for a Mott transition in a Hydrogen lattice	2018
Cornell Summer School: Emergent Phenomena in Quantum Materials <i>Poster</i> : Role of screening and charge transfer for a Mott transition in a Hydrogen lattice	2018
MagLab Theory Winter School	2018
Aspen Center for Physics Summer Program: Quantum Criticality in Metallic Systems	Summer 2017
APS March Meeting <i>Talk</i> : Emergent symmetries in disordered quantum spin systems	2017
MagLab Theory Winter School	2017
APS March Meeting <i>Talk</i> : Emergent SU(3) symmetry in random spin-1 chains	2015
APS March Meeting <i>Talk</i> : Flow equation approach to one-body and many-body localization	2014
Theory Winter School: Topological Phases of Condensed Matter <i>Poster</i> : Flow equation approach to disordered systems	2014
Les Houches Summer School: Topological Aspects of Condensed Matter Physics <i>Poster</i> : Emergent SU(3) symmetry in random spin-1 chains	2014
XVII Training Course in the Physics of Strongly Correlated Systems <i>Talk</i> : Bilinear and biquadratic random spin-1 chains	2012
School for advanced studies: Physics of Graphene Federal University of Minas Gerais	2012
XI Young Researchers Meeting, Campinas State University	2011
Brazilian School on Statistical Mechanics <i>Poster</i> : Bilinear and Biquadratic Random Spin-S Chains	2011
São Paulo School of Advanced Science New Trends in Quantum Matter with Cold Atoms and Molecules	2011:
University of São Paulo Summer School	2009

**TEACHING
ASSISTANT
EXPERIENCE**

Phase Transitions and Critical Phenomena	Five invited lectures, 2018
Mathematical Methods for Physicists I and II, undergraduate	2015

Physics III (Introduction to electrodynamics), undergraduate	2014
Quantum Mechanics II, graduate level	2012
Electrodynamics, graduate level	2011 and 2014
Statistical Mechanics, graduate level	Two semesters, 2011

**COMPUTER
SKILLS**

Languages & Software: Fortran, Matlab, Mathematica, Python, and C
Operating Systems: Unix, Linux, and Windows.