Bhubanjyoti Bhattacharya

Curriculum Vitae, 2020

Field of research: Particle Physics (phenomenology)

Assistant Professor of Physics
Department of Natural Sciences
Lawrence Technological University

21000 W. Ten Mile Road
Southfield, MI
bbhattach@ltu.edu

Adjunct Assistant Professor
Department of Physics and Astronomy
Wayne State University

666 W. Hancock St.
Detroit, MI
bhujyo@wayne.edu

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Employment

2017 –	Assistant Professor of Physics, Lawrence Technological University
2017 –	Adjunct Assistant Professor of Physics, Wayne State University
2016 – 2017	Postdoctoral Fellow, Wayne State University
2012 – 2016	Postdoctoral Fellow, Université de Montréal *Institute of Particle Physics (IPP) Theory Postdoctoral Fellowship, 2013 – 2015. Value: CA$20K/yr*

Education

2006 – 2011	Ph.D. Physics, University of Chicago, (*Advisor:* Jonathan L. Rosner) *Dissertation Title:* Relative Phases in Dalitz Plots for $D^0 \to 3$ Pseudoscalars *Subrahmanyan Chandrasekhar Fellowship, 2006–2008*
2004 – 2006	M.Sc. Physics, Indian Institute of Technology Kanpur *"General Proficiency Medal"* for highest GPA in graduating class of 2006 *Best Performance Awards*, 2005 & 2006
2001 – 2004	B.Sc. Physics Honours, Presidency College, Calcutta University *Jagadis Bose National Science Talent Search Scholarship (JBNSTS)*, 2001–2006 *Best Performance Awards*, Presidency College, 2002 & 2003

Grants

- "RUI: Discovering New Sources of CP Violation in Flavor Phenomenology," *Principal Investigator*, National Science Foundation, $45k for 2020–2021 ($135k for 2020–2023)
- "Transforming the intro-physics lab experience for the LTU engineering and science majors," *Principal Investigator*, Kern Entrepreneurship Educational Network (KEEN), $17.4k for 2020–2021; *with co-PIs: C. Zhou, G. Moschelli, V. Tobos (LTU Physics)*
- "Bringing Computational Essays to the Intro Physics Classroom," CRE Student Researcher Award*, Lawrence Technological University, $2.25K for 2019–2020
- CRE Faculty Development Award*, Lawrence Technological University, $3K for 2019–2020
- "Search for New Physics through Lepton-Flavor Violation," *Principal Investigator*, Lawrence Technological University Seed Grant, $4.75K for the academic year 2018–2019

*Funds awarded to the PI from Howard Hughes Medical Institute (HHMI)"2017 Inclusive Excellence Grant" (Senior Personnel/Participating Faculty)

Publications (refereed journals)

*=corresponding author Inspirehep link

[34] B. Bhattacharya*, A. Datta, S. Kamali, and D. London, "A measurable angular distribution for $\bar{B} \to D^* \tau^- \bar{\nu}_\tau$," JHEP 07 (2020) 193, [arXiv:2003.03032[hep-ph]]

[33] B. Bhattacharya*, A. Datta, S. Kamali, and D. London, "CP Violation in $\bar{B}^0 \to D^{*+} \mu^- \bar{\nu}_\mu$," JHEP 05 (2019) 191, [arXiv:1903.02567[hep-ph]]

[32] E. Bertholet, E. Ben-Haim, B. Bhattacharya, M. Charles, and D. London, *"Extraction of the CKM phase γ using charmless 3-body decays of B mesons,"* Phys. Rev. D **99**, 114011 (2019), [arXiv:1812.06194[hep-ph]]

[31] B. Bhattacharya, C. M. Grant, and A. A. Petrov, *"Invisible Widths of Heavy Mesons,"* Phys. Rev. D **99**, 093010 (2019), [arXiv:1809.04606[hep-ph]]

[30] B. Bhattacharya, R. Morgan, J. Osborne, and A. A. Petrov, *"Studies of Lepton Flavor Violation at the LHC,"* Phys. Lett. B, 785 (2018) 165 [arXiv:1802.06082[hep-ph]]

[29] B. Bhattacharya* and A. A. Petrov*, *"Hadronic decays of B_c mesons with flavor SU(3)$_F$ symmetry,"* Phys. Lett. B, 774 (2017) 430, [arXiv:1708.07504[hep-ph]]

[28] A. K. Alok, B. Bhattacharya, A. Datta, D. Kumar, J. Kumar and D. London, *"New Physics in $b \to s\mu^+\mu^-$ after the Measurement of R_{K^*},"* Phys. Rev. D **96**, 095009 (2017), [arXiv:1704.07397[hep-ph]]

[27] A. K. Alok, B. Bhattacharya*, D. Kumar, J. Kumar, D. London and S. U. Sankar, *"New Physics in $b \to s\mu^+\mu^-$: Distinguishing Models through CP-Violating Effects,"* Phys. Rev. D **96**, 015034 (2017), [arXiv:1703.09247[hep-ph]]

[26] B. Bhattacharya*, A. Datta, J. P. Guévin, D. London, and R. Watanabe, *"Simultaneous Explanation of the R_K and $R_{D^{(*)}}$ Puzzles: a Model Analysis,"* JHEP 01 (2017) 015, [arXiv:1609.09078[hep-ph]]

[25] B. Bhattacharya*, A. Datta, and D. London, *"Is there really a $W \to \tau\nu$ puzzle?,"* Phys. Rev. D **93**, 093008 (2016), [arXiv:1603.03779[hep-ph]]

[24] B. Bhattacharya, G. Paz, and A. J. Tropiano, *"Model-independent determination of the axial-mass parameter in quasielastic antineutrino-nucleon scattering,"* Phys. Rev. D **92**, 113011 (2015), [arXiv:1510.05652[hep-ph]]

[23] P. Saha, K. Kiers, B. Bhattacharya, D. London, A. Szynkman, and J. Melendez, *"Measuring CP-Violating Observables in Rare Top Decays at the LHC,"* Phys. Rev. D **93**, 054044 (2016), [arXiv:1510.00204[hep-ph]]

[22] B. Bhattacharya, J. M. Cline, A. Datta, G. Dupuis, and D. London, *"Quark-flavored scalar dark matter,"* Phys. Rev. D **92**, 115012 (2015), [arXiv:1509.04271[hep-ph]]

[21] B. Bhattacharya and D. London, *"Using U spin to extract γ from charmless $B \to PPP$ decays,"* JHEP 04 (2015) 154, [arXiv:1503.00737[hep-ph]]

[20] B. Bhattacharya*, A. Datta, D. London, and S. Shivashankara, *"Simultaneous Explanation of the R_K and $R(D^{(*)})$ Puzzles,"* Phys. Lett. B, 742 (2015) 370, [arXiv:1412.7164[hep-ph]]

[19] B. Bhattacharya*, A. Datta and D. London, *"Probing New Physics in Higgs Couplings to Fermions using an Angular Analysis,"* Phys. Lett. B, 736 (2014) 421, [arXiv:1407.0695[hep-ph]]

[18] B. Bhattacharya, M. Gronau, M. Imbeault, D. London and J. L. Rosner, *"Charmless $B \to PPP$ Decays: the Fully-Symmetric Final State,"* Phys. Rev. D **89**, 074043 (2014), [arXiv:1402.2909[hep-ph]]

[17] B. Bhattacharya, M. Imbeault, and D. London, *"Direct measurement of γ using $B \to K\pi\pi$ and $B \to KK\overline{K}$ decays,"* Phys. Lett. B, 728 (2014) 206, [arXiv:1303.0846[hep-ph]]

[16] B. Bhattacharya, M. Gronau, and J. L. Rosner, *"CP asymmetries in three-body $B^{\pm}$ decays to charged pions and kaons,"* Phys. Lett. B, 726 (2013) 337, [arXiv:1306.2625[hep-ph]]

[15] B. Bhattacharya, A. Datta, M. Duraisamy, and D. London, *"Searching for New Physics with $\bar{b} \to \bar{s}$ $B_s \to V_1V_2$ Penguin Decays,"* Phys. Rev. D **88**, 016007 (2013), [arXiv:1306.1911[hep-ph]]

[14] B. Bhattacharya, A. Datta, and D. London, *"Reducing Penguin Pollution,"* Int. J. Mod. Phys. A, 28, 1350063 (2013), [arXiv:1209.1413[hep-ph]]

[13] B. Bhattacharya, D. London, M. Gronau, and J. L. Rosner, *"Shift in weak phase γ due to CP asymmetries in D decays to two pseudoscalar mesons,"* Phys. Rev. D **87**, 074002 (2013), [arXiv:1301.5631[hep-ph]]

[12] B. Bhattacharya and J. L. Rosner, *"Flavor SU(3) tests from $D^0 \to K^0K^-\pi^+$ and $D^0 \to \overline{K}^0K^+\pi^-$ Dalitz plots,"* Phys. Lett. B, 714 (2012) 276, [arXiv:1203.6014[hep-ph]] (overlap with *"Relative Phases in $D^0 \to K^0K^-\pi^+$ and $D^0 \to \overline{K}^0K^+\pi^-$ Dalitz Plots,"* [arXiv:1104.4962[hep-ph]])

[11] B. Bhattacharya, A. Datta, M. Imbeault, and D. London, *"Measuring β_s with $B_s \to K^{0(*)}\overline{K}^{0(*)}$ – a Reappraisal,"* Phys. Lett. B, 717 (2012) 403, [arXiv:1203.3435[hep-ph]]

[10] B. Bhattacharya, M. Gronau, and J. L. Rosner, *"CP asymmetries in singly-Cabibbo-suppressed D decays to two pseudoscalar mesons,"* Phys. Rev. D **85**, 054014 (2012), [arXiv:1201.2351[hep-ph]]

[9] B. Bhattacharya, A. M. Thalapillil, and C. E. M. Wagner, *"Implications of sterile neutrinos for medium/long-baseline neutrino experiments and the determination of θ_{13},"* Phys. Rev. D **85**, 073004 (2012), [arXiv:1111.4225[hep-ph]]

[8] B. Bhattacharya, Richard. J. Hill, and Gil Paz, *"Model independent determination of the axial mass parameter in quasielastic neutrino-nucleon scattering,"* Phys. Rev. D **84**, 073006 (2011), [arXiv:1108.0423[hep-ph]]

[7] B. Bhattacharya and J. L. Rosner, *"Cross ratios between Dalitz plot amplitudes in three-body D^0 decays,"* Phys. Rev. D **82**, 114032 (2010), [arXiv:1010.1770[hep-ph]]

[6] B. Bhattacharya and J. L. Rosner, *"Relative phases in Dalitz plot amplitudes for $D^0 \to K_S\pi^+\pi^-$ and $D^0 \to \pi^0K^+K^-$,"* Phys. Rev. D **82**, 074025 (2010), [arXiv:1008.4083[hep-ph]]

[5] B. Bhattacharya and J. L. Rosner, *"Effect of η–η' mixing on $D \to PV$ decays,"* Phys. Rev. D **82**, 037502 (2010), [arXiv:1005.2159[hep-ph]]

[4] B. Bhattacharya, C. W. Chiang, and J. L. Rosner, *"Dalitz Plot Structure in $D^0 \to \pi^+\pi^-\pi^0$,"* Phys. Rev. D **81**, 096008 (2010), [arXiv:1004.3225[hep-ph]]

[3] B. Bhattacharya and J. L. Rosner, *"Charmed meson decays to two pseudoscalars,"* Phys. Rev. D **81**, 014026 (2010), [arXiv:0911.2812[hep-ph]]

[2] B. Bhattacharya and J. L. Rosner, *"Decays of Charmed Mesons to PV Final States,"* Phys. Rev. D **79**, 034016 (2009); 81, 099903(E) (2010), [arXiv:0812.3167[hep-ph]]

[1] B. Bhattacharya and J. L. Rosner, *"Flavor symmetry and decays of charmed mesons to pairs of light pseudoscalars,"* Phys. Rev. D **77**, 114020 (2008), [arXiv:0803.2385[hep-ph]]

Conference proceedings

[1] B. Bhattacharya and D. London, "Extracting γ from three-body B-meson decays," Proceedings of CKM 2018, the 10th Workshop on the CKM Unitarity Triangle, University of Heidelberg, Germany, 17–21 September, 2018, doi: 10.5281/zenodo.2565849, [arXiv:1811.10671[hep-ph]]

[2] B. Bhattacharya and D. London, "Testing the SM with 3-body B Decays," in J. H. Alvarenga Nogueira *et al.*, "Summary of the 2015 LHCb workshop on multi-body decays of D and B mesons," [arXiv:1605.03889[hep-ex]]

[3] B. Bhattacharya, D. London, and M. Imbeault (speaker), "Measurement of γ from three-body B decays," in 2013 European Physical Society Conference on High Energy Physics - EPS-HEP 2013, July 18–24 2013, Stockholm, Sweeden, [arXiv:1310.1873[hep-ph]]

[4] B. Bhattacharya, D. London (speaker), and M. Imbeault, "Measurement of γ using $B \to K\pi\pi$ and $B \to KK\overline{K}$ decays," in the Eleventh International Conference on Flavor Physics and CP Violation - FPCP2013, May 19–24 2014, Buzios, Rio de Janeiro, Brazil, [arXiv:1306.5574[hep-ph]]

[5] B. Bhattacharya, "Direct CPV in Nonleptonic Charm Decays," Proceedings of CKM 2012, the 7th International Workshop on the CKM Unitarity Triangle, University of Cincinnati, USA, 28 September–2 October, 2012, [arXiv:1302.3198[hep-ph]]

[6] B. Bhattacharya, M. Imbeault, and D. London, "Extracting γ from three-body B decays," Proceedings of CKM 2012, the 7th International Workshop on the CKM Unitarity Triangle, University of Cincinnati, USA, 28 September–2 October, 2012, [arXiv:1212.1167[hep-ph]]

[7] B. Bhattacharya, M. Gronau, and J. L. Rosner, "Nonleptonic charm decays and CP Violation," presented at Charm 2012, The 5th International Workshop on Charm Physics 14–17 May 2012, Honolulu, Hawai'i, [arXiv:1207.6390[hep-ph]]

[8] B. Bhattacharya, M. Gronau, and J. L. Rosner, "Direct CP Violation in D Decays in view of LHCb and CDF Results," in the Tenth International Conference on Flavor Physics and CP Violation - FPCP2012, May 21–25 2012, Hefei, China, [arXiv:1207.0761[hep-ph]]

[9] B. Bhattacharya and J. L. Rosner, "Flavor Symmetry and Charm Decays," in Proceedings of International Workshop on Charm Physics (Charm 2007), Ithaca, New York, 5–8 Aug 2007, p. 24 [arXiv:0710.0336[hep-ph]]

Invited Research Talks

- **"Measurable Angular Distributions in $B \to D^*\mu\nu$ & $B \to D^*\tau\nu$,"** plenary talk presented at the BaBar collaboration meeting via remote session, June 03, 2020
- **"Studying CP Violation in Angular Distributions of Semi-Leptonic B Decays,"**

parallel session talk at Brookhaven Forum 2019, September 25–27, 2019, Brookhaven National Lab, Upton, NY

- **"CP Violation in the Precision Era,"** invited colloquium, Physics Department, University of Mississippi, Oxford, September 2, 2019
- **"CP Violating New Physics in light of Flavor Anomalies,"** invited plenary talk at Anomalies 2019, a Indo-US Workshop , July 18–20, 2019, Indian Institute of Technology, Hyderabad, India
- **"CP Violation at the Intensity Frontier,"** Faculty Seed Grant research status talk at the 7th Annual Research Day 2019, Lawrence Technological University, Southfield, Apr 5, 2019
- **"Determination of γ using flavor SU(3): Making a case for three-body decays,"** invited talk at workshop on Future Challenges in Non-Leptonic B Deays, January 14–18, 2019, Mainz Institute of Theoretical Physics, Germany
- **"Extracting γ from three-body B-meson decays,"** invited parallel talk, CKM 2018, September 17–21, 2018, Universität Heidelberg, Germany, [arXiv:1811.10671[hep-ph]]
- **"Can flavor phenomenology provide a window to new physics?,"** invited colloquium, Physics Department, Presidency University, Kolkata (India), July 24, 2018
- **"Anomalies in B-meson decays and Lepton Flavor Violation,"** invited lecture at Post Flavor Physics and CP Violation (FPCP) 2018 Workshop, Indian Institute of Technology and University of Hyderabad, Hyderabad (India), July 19, 2018
- **"Recent developments in Lepton Flavor,"** research status talk at the 6th Annual Research Day 2018, Lawrence Technological University, Southfield, Apr 6, 2018
- **"Toward explaining B decay anomalies,"** invited talk at New Physics Interpretations at the LHC 2 Workshop, Apr 5–7, 2017, Argonne National Laboratory, Chicago
- **"Particle Physics in the LHC Era,"** invited presentation at Lawrence Technological University, Southfield, Feb 28, 2017
- **"Multibody hadronic decays,"** invited talk at workshop on Implications of LHCb measurements and future prospects, Nov 3–5, 2015, CERN, Geneva
- **"Multibody decays & flavor symmetries,"** invited talk at LHCB workshop on multibody decays of B and D mesons, Jul 27–30, 2015, CBPF, Rio-de-Janeiro. Conference Proceeding : B. Bhattacharya and David London, in J. H. Alvarenga Nogueira *et al.*, [arXiv:1605.03889[hep-ex]]
- **"Status and prospects of B Physics,"** invited talk at CAP Congress 2015, Jun 15–19, 2015, University of Alberta, Edmonton
- **"New Physics with $B_s \to VV$,"** invited talk at workshop on Implications of LHCb measurements and future prospects, Oct 14–16, 2013, CERN, Geneva
- **"CP Violation in D decays and the extraction of the CKM phase γ,"** invited talk at CAP Congress 2013, May 27–31, 2013, Université de Montréal
- **"CP Violation,"** invited colloquium, Physics Department, University of Mississippi, Oxford, March 26, 2013
- **"Why is Direct CP Violation in D decays interesting?"** HEP Seminar at University of Michigan, Ann Arbor, October 5, 2012
- **"Why is Direct CP Violation in D decays interesting?"** HEP Journal Club Seminar at Michigan State University, East Lansing, October 4, 2012
- **"New approaches to extracting CKM Unitarity angles,"** Theory Group Seminar at

Wayne State University, Detroit, October 3, 2012

- **"Direct CPV in Nonleptonic Charm Decays,"** invited parallel talk, CKM 2012, September 28–October 2, 2012, University of Cincinnati. Conference Proceeding : [arXiv:1302.3198[hep-ph]]
- **"Extracting γ from three-body B decays,"** invited parallel talk, CKM 2012, September 28–October 2, 2012, University of Cincinnati. Conference Proceeding : B. Bhattacharya (speaker), Maxime Imbeault and David London, [arXiv:1212.1167[hep-ph]]
- **"Nonleptonic charm decays and CP Violation,"** HEP Lunch Talk at University of Chicago, July 2, 2012
- **"Nonleptonic charm decays and CP Violation,"** invited plenary talk, Charm 2012, University of Hawaii at Manoa, Honolulu. Conference Proceeding : B. Bhattacharya (speaker), M. Gronau and J. L. Rosner, [arXiv:1207.6390[hep-ph]]
- **"CP Asymmetries in two-body *D* decays,"** Montreal Joint High Energy Physics Seminars, Feb 22, 2012

Professional Development Workshops/Summer schools attended

2019 Partnership for Integration of Computation into Undergraduate Physics (PICUP) Faculty Development Workshop 2019, River Falls, Wisconsin

2018 New Physics and Astronomy Faculty Workshop, American Association of Physics Teachers, Baltimore, Maryland

2017 Wolfram Summer School, WSS 2017 Bentley University, Waltham, Massachussettes

2009 Theoretical Advanced Study Institute in Elementary Particle Physics, TASI University of Colorado, Boulder, Colorado

2008 Prospects in Theoretical Physics, PiTP Institute for Advanced Study, Princeton, New Jersey

2005 Visiting Students Research Program, VSRP Tata Institute of Fundamental Research, Mumbai, India

Professional activities

- NSF Reviewer, 2019 & 2020
- Referee for *Phys. Rev. D, Phys. Rev. Lett., Phys. Lett. B, JHEP, Euro. J. Phys. A, Europhys. Lett., Adv. HEP, Chin. Phys. C, IJMPA*
- Session chair: Pheno 2012, CAP 2015, BF 2019

Teaching experience

- *Teaching Undergraduate Courses (as the primary instructor):*
  - University Physics I (lecture and laboratory) for Science and Engineering majors, LTU (Classical Mechanics, Gravity, Fluids, and Thermodynamics), Fall 2017, Spring 2018, Fall 2018
  - University Physics II (lecture and laboratory) for Science and Engineering majors, LTU (Wave mechanics, Optics, Electrostatics, Circuits, and Magnetism), Spring 2019, Fall 2019
  - Quantum Mechanics (lecture) for Physics majors, LTU

- *Teaching Undergraduate Courses (as a teaching assistant):*
  - General Physics for Undergraduates, UChicago
    (Classical Mechanics, Electromagnetism, Wave Mechanics) 2006, 2008, 2009, 2011
  - Experimental Physics for Undergraduates, UChicago, 2009
- *Grading Graduate Courses:*
  - Quantum Field Theory I, II, and III, UChicago, 2008 – 2009
  - Graduate Quantum Mechanics I and II, UChicago, 2010 – 2011
- *Developing material for Graduate Courses:*
  - Quantum Field Theory III, UChicago, 2009 : Complete solutions for problem sets
  - Advanced Electrodynamics II, UChicago, 2010 : Complete solutions and course material
  - Physics of the LHC, UChicago, 2010 : Computational environments based on *MADGRAPH*, *PGS*, *PYTHIA 6.4* and its interfacing with *ROOT*

Supervision (research)

Undergraduate students

[9] Andrea Houck, UG student, Lawrence Technological University.
Course-based Research Experience (CRE) learning assistant (2020)˙
Project on "Computational Essays in the Intro Physics Classroom," *A junior at LTU starting in Fall 2020*

[8] Kylie LeBlanc, UG student, Lawrence Technological University.
Research Experience for Undergraduates (REU) 2018 program at Wayne State University.
Project on "Angular distribution in $\bar{B} \to D^* \ell^- \overline{\nu}$ " Advised Senior Project I at Lawrence Technological University, August - December, 2018
Currently ninth grade physics teacher at a charter school in Detroit

[7] Joseph Wieske, UG student, Wayne State University.
Research Experience for Undergraduates (REU) 2017 program at Wayne State University (Supervisor: Professor G. Paz). Project on "Neutrino-nucleus scattering," 2016 – 2017
Currently pursuing a Ph.D. in Physics at Michigan State University

[6] Francis Walz, UG student, Towson Univeristy.
Research Experience for Undergraduates (REU) 2017 program at Wayne State University.
Project on "New physics in $b \to s\mu^+\mu^-$ decays," June – August, 2017
Currently pursuing a Ph.D. in Physics at Purdue University

[5] Jameson Tockstein, UG student, Wayne State University.
Project on "Neutrino-nucleus scattering," 2016 – 2017
Currently pursuing a Ph.D. in Nuclear Engineering at University of Florida

[4] Robert Morgan, UG student, Wayne State University.
Project on "Lepton flavor violation at colliders," 2016 – 2017, Phys. Lett. B, 785 (2018) 165
Currently pursuing a Ph.D. in Physics at University of Wisconsin, Madison

[3] Jean-Pascal Guévin, UG student, Université de Montréal.
Summer project on "Relating R_K and $R_{D^{(*)}}$ puzzles in various new physics models," May – August, 2016, JHEP 01 (2017) 015, [arXiv:1609.09078[hep-ph]] *Currently "Analyst" at an investment management firm in Québec, Canada*

[2] Nicolas Boisvert Beaudry, Masters student, Université de Montréal.
Summer project on "$B \to K\pi$ puzzle," May – August, 2016 *Currently "Investigator" for TMX Group (Financial Services), Montréal region, Canada*

[1] Julien Gabouriad, UG student, Université de Montréal.
Summer project titled "BSM physics with diquarks," May – August, 2015
Currently pursuing a Ph.D. in Mathematics at Université de Montréal

Graduate students

[2] Suneth Jayawardena, Graduate student, Wayne State University. Primary advisor: Nausheen Shah. Project on "Private Higgs models," and other topics 2019 – current.

[1] Cody M. Grant, Graduate student, Wayne State University. Primary advisor: Alexey A. Petrov. Project on "Invisible decays of mesons," (Phys. Rev. D **99**, 093010 (2019)) and other topics 2017 – current.

Postdoctoral fellows

[1] James Osborne, Postdoctoral fellow, Wayne State University.
Principle postdoctoral advisors: Nausheen Shahe and Alexey Petrov (Wayne State). Project on "Lepton flavor violation at colliders," 2017 – 2018, Phys. Lett. B, 785 (2018) 165
Project on "Private Higgs models," 2019 – current
Currently in a postdoctoral position at University of California, San Diego