

Veronica Dexheimer  
Department of Physics  
Kent State University  
Kent, OH 44240  
USA

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## Curriculum Vitae

### Full Name

Veronica Antochviz Dexheimer Strickland

### Current Academic Position

Tenured Associate Professor (since August of 2020)

### Grants Awarded

- DOE award “Dense and Hot Matter Equation of State: Connecting Heavy-Ion Collisions to Neutron Stars” (Single PI)  
June 2024- May 2027  
Awarded amount: \$350,000
- NSF Cyberinfrastructure for Sustained Scientific Innovation (CSSI) award “Frameworks: MUSES, Modular Unified Solver of the Equation of State” (co-PI)  
October 2021- September 2026  
Awarded amount: \$4,421,367 (\$440,138 for Dexheimer’s group)
- NSF Focus Research Hub award “Nuclear Physics from Multi-Messenger Mergers (NP3M)” (senior investigator)  
August 2021- July 2026  
Awarded amount: \$3,250,000 (~\$160,000 for Dexheimer’s group)
- NSF CAREER award “Dense Phases in Neutron Stars” (Single PI)  
July 2018- June 2024  
Awarded amount: \$425,000 plus additional \$124,998

### Other Awards

- Fulbright Scholar Award 2022/2023
- Kent State University President’s Faculty Excellence Award 2023-2024

### Education

- 2006 – 2009  
Ph.D. Physics  
Advisers: Stefan Schramm and Horst Stoecker  
Dissertation: Chiral Symmetry Restoration and Deconfinement in Neutron Stars  
FIAS, Johann Wolfgang Goethe University – Frankfurt an Main, Germany  
Scholarship: Buchmann Foundation
- 2003 – 2006  
M.S. Physics

Advisers: Bardo Bodmann and Cesar Vasconcellos  
Thesis: Nuclear Matter Compressibility in Neutron Stars  
Universidade Federal do Rio Grande do Sul – Porto Alegre, Brazil  
Scholarship: Coordenação de Aperfeiçoamento de Pessoal de Nível Superior (CAPES)

- 1999 – 2003  
B.S. Physics  
Universidade Federal do Rio Grande do Sul – Porto Alegre, Brazil

#### Teaching Experience and Appointments

- 2020 – present  
Tenured Associate Professor  
Kent State University – Kent OH, USA
- 2015 – 2020  
Tenure-Track Assistant Professor  
Kent State University – Kent OH, USA
- 2013 – 2015  
Non-Tenure-Track Assistant Professor  
Kent State University – Kent OH, USA
- 2012  
Researcher  
Universidade Federal de Santa Catarina - Florianopolis, Brazil
- 2010 – 2012  
Visiting Professor  
Gettysburg College – Gettysburg PA, USA
- 2009 – 2010  
Adjunct Professor  
Gettysburg College – Gettysburg PA, USA
- 2004  
Docent internship  
Universidade Federal do Rio Grande do Sul – Porto Alegre, Brazil

#### Classes Taught

- 2025  
PHY 21430 Frontiers in Astronomy (online) - spring
- 2024  
PHY-76303 (Graduate) Applications of Quantum Chromodynamics – spring  
PHY 21430 Frontiers in Astronomy (online) - fall
- 2023  
PHY 44802/ 54802 (Undergraduate/Graduate) Astrophysics – fall
- 2022  
PHY 65301 (Graduate) Statistical Mechanics - spring
- 2021

- PHY 13002 General College Physics II – spring
- PHY 44802/54802 (Undergraduate/Graduate) Astrophysics – fall
- 2020
  - PHY 44802/54802 (Undergraduate/Graduate) Astrophysics – spring
- 2019
  - PHY 13002 General College Physics II – spring
  - PHY 13002 General College Physics II – fall
- 2018
  - PHY 13002 General College Physics II – fall
  - PHY 44802/54802 (Undergraduate/Graduate) Astrophysics – spring
- 2017
  - PHY 13002 General College Physics II – fall
  - PHY 13002 General College Physics II – spring
  - PHY 13012 College Physics II – spring
- 2016
  - PHY 44802/54802 (Undergraduate/Graduate) Astrophysics – spring
  - PHY 13002 General College Physics II – spring
  - PHY 13012 College Physics II – spring
- 2015
  - PHY 65301 (Graduate) Statistical Mechanics - fall
  - PHY 13002 General College Physics II – spring
  - PHY 13012 College Physics II– spring (2 sections)
- 2014
  - PHY 13002 General College Physics II – spring and fall
  - PHY 13012 College Physics II – spring and fall
  - PHY 21430 Frontiers in Astronomy (online) - fall
  - PHY 44802/54802 (Undergraduate/Graduate) Astrophysics – spring
- 2013
  - PHY 13002 General College Physics II – spring and fall
  - PHY 13012 College Physics II – spring and fall
  - PHY 21430 Frontiers in Astronomy (online) – spring and fall
- 2012
  - PHY 103 Elementary Physics I –fall
  - PHY 103 lab Elementary Physics I Laboratory –fall
- 2011
  - PHY 103 Elementary Physics I – fall (2 sections)
  - PHY 103 lab Elementary Physics I Laboratory – fall
  - PHY 109 lab Introductory Physics I Laboratory – fall
  - PHY 104 Elementary Physics II – spring
  - PHY 104 lab Elementary Physics II Laboratory – spring
  - PHY 110 lab Introductory Physics II Laboratory – spring
- 2010
  - PHY 103 Elementary Physics I – fall (2 sections)
  - MATH 105 Calculus with Precalculus I – fall

PHY 104 lab Elementary Physics II Laboratory – spring  
PHY 110 lab Introductory Physics II Laboratory – spring

- 2009  
PHY 103 lab Elementary Physics I Laboratory – fall

#### Service

- Director, Kent State University Center for Nuclear Research, 2021-present
- Associate Director, Kent State University Center for Nuclear Research, 2015-2019
- Member of the Undergraduate Program Committee at Kent State University 2014-2016, 2019-2022
- Member of the Candidacy Exam Committee at Kent State University 2013-2014, 2016-2018 (chair 2017-2018)
- Faculty Advisory Committee 2017-2018, 2019-2020, 2021-2022, 2023-2025
- College Advisory Committee 2021-2022
- Non-tenure Track Faculty Search Committee 2017-2018
- Tenure Track Faculty Search Committee 2022-2023, 2023-2024 (chair)
- Physics Department Colloquium organizer 2016-2017, 2020, 2021
- Center for Nuclear Research Seminar organizer 2017-2019
- Undergraduate advisor 2020-2021
- Journal Referee: *Astrophys. J*, *Physical Review C*, *Astronomische Nachrichten*, *Annals of Physics*, *International Journal of Modern Physics E*, *Canadian Journal of Physics*, *The European Physical Journal D*, *Nuclear Science and Techniques*, *General Relativity and Gravitation*, *International Journal of Modern Physics D*, *Monthly Notices of the Royal Astronomical Society*, *Universe*, *International Journal of Modern Physics E*, *Physical Review D*, *Monthly Notices of the Royal Astronomical Society*, *The European Physical Journal A*, *Symmetry*, *Physics Letters B*, *Indian Journal of Physics*, *Phys. Rev. Let.*, *The European Physical Journal C*, *Nuclear Physics A*
- Reviewer for NASA, the Natural Sciences and Engineering Research Council of Canada (NSERC), the Netherlands Organization for Scientific Research (NWO), the National Science Foundation (NSF), the Department of Energy (DOE), Fulbright
- Guest coeditor for the special issue “Properties and Dynamics of Neutron Stars and Proto-Neutron Stars” of the journal *Universe*
- Member of the *CompStar*\New*CompStar*\PHAROS Collaboration, FRIB Alliance, *CompOSE* Team, and *MUSES* and *NP3M* collaborations
- Development of a program to introduce high school students to astrophysics research
- Development of innovative curricular materials for undergraduate introductory physics courses
- Co-organizer, Ohio Regional Section - Spring Meeting of the American Physical Society, Kent State University, Kent OH, March 2014
- Organizer of the Virtual FRIB Theory Alliance Summer School: Dense matter in Astrophysics, Michigan State University, East Lansing MI, June 2020
- Co-organizer of the Virtual Workshop From heavy-ion collisions to neutron stars, August 2020

- Co-organizer of the symposium Advances in Nuclear Matter Dynamics: A Tribute to Declan Keane, Kent State University, Kent OH, December 2023
- Member of APS DNP Mentoring Committee 2023-2024 and Dissertation Award Committee 2024-2025
- Member of the International Advisory Committee of the International Conference on QCD in Extreme Conditions (XQCD) and of the International Steering Committee of the Compact Stars in the QCD Phase Diagram (CSQCD) international workshop

#### Graduate Students Advised

- Advisor of Ph.D student Yuhan Wang  
Kent State University – Kent OH, USA  
2023 - present
- Co-Advisor of Ph.D student Rafael Jacobsen  
Universidade Federal de Santa Maria, Brazil  
2022 - present
- Advisor of Ph.D student Alexander Clevinger  
Kent State University – Kent OH, USA  
2020 - present
- Advisor of Ph.D student Krishna Aryal  
Kent State University – Kent OH, USA  
2019 - 2024
- Advisor of Ph.D student Jeffrey Peterson  
Kent State University – Kent OH, USA  
2016 - 2022
- Co-Advisor of Ph.D student Bruno Franzon  
FIAS, Johann Wolfgang Goethe University – Frankfurt an Main, Germany  
2014 - 2017
- Advisor of M.S. student Amal Alruwaili  
Kent State University – Kent OH, USA  
2014 - 2015
- Advisor of PhD student Jacob Roark  
Kent State University – Kent OH, USA  
2013 - 2018
- Co-Advisor of Ph.D student Rosana Gomes  
Universidade Federal do Rio Grande do Sul, Brazil  
2012 - 2016

#### Postdocs Mentored

- Joaquin Grefa  
Kent State University – Kent OH, USA  
2023 – present
- Mateus Pelicer  
Kent State University – Kent OH, USA  
2023 – present

- Rajesh Kumar  
Kent State University – Kent OH, USA  
2022 - present
- Constantinos Constantinou  
Kent State University – Kent OH, USA  
2018 - 2019

## Complete Publication List

### Preprints

1. Phase Stability in the 3-Dimensional Open-source Code for the Chiral mean-field Model. Nikolas Cruz-Camacho, Rajesh Kumar, Mateus Reinke Pelicer, Jeff Peterson, T. Andrew Manning, et al. e-Print: 2409.06837 [nucl-th]
2. Finite-temperature expansion of the dense-matter equation of state. Debora Mroczek, Nanxi Yao, Katherine Zine, Jacquelyn Noronha-Hostler, Veronica Dexheimer et al. e-Print: 2404.01658 [astro-ph.HE]

### Refereed Journal Articles

1. Astrophysics and Nuclear Physics Informed Interactions in Dense Matter: Insights from PSR J0437-4715. Tuhin Malik, V. Dexheimer, Constança Providência. *Phys.Rev.D* 110 (2024) 4, 4.
2. Approaching the conformal limit of quark matter with different chemical potentials. Connor Brown, Veronica Dexheimer, Rafael Bán Jacobsen, Ricardo Luciano Sonego Farias. *Symmetry* 16 (2024) 852.
3. Structure in the speed of sound: from neutron stars to heavy-ion collisions. Nanxi Yao, Agnieszka Sorensen, Veronica Dexheimer, Jacquelyn Noronha-Hostler. *Phys.Rev.C* 109 (2024) 6, 065803 (chosen as editor's suggestion).
4. Modern nuclear and astrophysical constraints of dense matter in a renormalized chiral approach. Rajesh Kumar, Yuhan Wang, Nikolas Cruz Camacho, Arvind Kumar, Jacquelyn Noronha-Hostler, Veronica Dexheimer. *Phys.Rev.D* 109 (2024) 7, 074008.
5. Theoretical and Experimental Constraints for the Equation of State of Dense and Hot Matter. MUSES Collaboration: Rajesh Kumar, Veronica Dexheimer et al. *Living Rev.Rel.* 27 (2024) 1, 3.
6. Effects of hyperon potentials and symmetry energy in quark deconfinement. Rajesh Kumar, Krishna Aryal, Alexander Clevinger, Veronica Dexheimer. *Phys.Lett.B* 849 (2024) 138475.
7. Dense Nuclear Matter Equation of State from Heavy-Ion Collisions. Agnieszka Sorensen, Kshitij Agarwal, Kyle W. Brown, Zbigniew Chajecski, Pawel Danielewicz et al. *Prog.Part.Nucl.Phys.* 134 (2024) 104080.
8. Temperature and Strong Magnetic Field Effects in Dense Matter. J. Peterson, P. Costa, R. Kumar, V. Dexheimer, R. Negreiros, C. Providencia. *Phys.Rev.D* 108 (2023) 6, 063011.
9. Probing neutron-star matter in the lab: connecting binary mergers to heavy-ion collisions. Elias R. Most, Anton Motornenko, Jan Steinheimer, Veronica Dexheimer, Matthias Hanauske, Luciano Rezzolla, and Horst Stoecker. Published in *Phys.Rev.D* 107 (2023) 4, 043034.

10. Magnetic-field Induced Deformation in Hybrid Stars. Ishfaq A. Rather, Asloob A. Rather, V. Dexheimer, Ilídio Lopes, A.A. Usmani, , S.K. Patra. Published in *Astrophys.J.* 943 (2023) 1, 52.
11. Quick Guides for Use of the CompOSE Data Base. Veronica Dexheimer, Marco Mancini, Micaela Oertel, Constança Providência, Laura Tolos, Stefan Typel. Published in *Particles* 5 (2022) 3, 346-360.
12. Axion effects in the stability of hybrid stars. Bruno S. Lopes, Ricardo L.S. Farias, Veronica Dexheimer, Aritra Bandyopadhyay, Rudnei O. Ramos. Published in *Phys.Rev.D* 106 (2022) 12, L121301.
13. Compactness in the Thermal Evolution of Twin Stars. F. Lyra, L. Moreira, R. Negreiros, R.O. Gomes, V. Dexheimer. *Phys.Rev.C* 107 (2023) 2, 025806.
14. Exploring the effects of  $\Delta$  baryons in magnetars. K.D. Marquez, M.R. Pelicer, S. Ghosh, J. Peterson, D. Chatterjee, V. Dexheimer, D.P. Menezes. Published in *Phys.Rev.C* 106 (2022) 3, 035801 (chosen as editor's suggestion).
15. Horizons: nuclear astrophysics in the 2020s and beyond. H. Schatz, A.D. Becerril Reyes, A. Best, E.F. Brown, K. Chatziioannou et al. Published in *J.Phys.G* 49 (2022) 11, 110502.
16. Hybrid Equations of State for Neutron Stars with Hyperons and Deltas. A.Clevinger, J.Corkish, K.Aryal and V.Dexheimer. Published in *Eur.Phys.J.A* 58 (2022) 5, 96 (invited article for topical issue).
17. CompOSE Reference Manual. S. Typel, M. Oertel, T. Klähn, D. Chatterjee, V. Dexheimer, C. Ishizuka, M. Mancini, J. Novak, H. Pais, C. Providência, A. Raduta, M. Servillat, L. Tolos. Published in *Eur.Phys.J.A* 58 (2022) 11, 221.
18. Low Density Neutron Star Matter with Quantum Molecular Dynamics: The Role of Vector Interactions. Parit Mehta, Rana Nandi, R.O. Gomes, V. Dexheimer, J. Steinheimer. Published in *Universe* 8 (2022) 7, 380 (invited article for topical issue).
19. Finding Structure in the Speed of Sound of Supranuclear Matter from Binary Love Relations. Hung Tan, Veronica Dexheimer, Jacquelyn Noronha-Hostler, Nicolas Yunes. Published in *Phys.Rev.Lett.* 128 (2022) 16, 161101.
20. Extreme matter meets extreme gravity: Ultraheavy neutron stars with phase transitions. Hung Tan, Travis Dore, Veronica Dexheimer, Jacquelyn Noronha-Hostler, Nicolás Yunes. Published in *Phys.Rev.D* 105 (2022) 2, 023018.
21. The Effect of Charge, Isospin, and Strangeness in the QCD Phase Diagram Critical End Point. Krishna Aryal, Constantinos Constantinou, Ricardo L.S. Farias, Veronica Dexheimer. Published in *Universe* 7 (2021) 11, 454.
22. Effects of Magnetic Fields in Hot White Dwarfs. J. Peterson, V. Dexheimer, R. Negreiros, B.G. Castanheira. Published in *Phys.Rev.D* 105 (2022) 2, 023018.
23. Heavy Magnetic Neutron Stars. Ishfaq A. Rather, Usuf Rahaman, V. Dexheimer, A.A. Usmani, S.K. Patra. Published in *Astrophys. J.* 917 (2021) 1, 46.
24. Delta Baryons in Neutron-Star Matter under Strong Magnetic Fields. Veronica Dexheimer, Kauan D. Marquez, Débora P. Menezes. Published in *Eur.Phys.J.A* 57 (2021) 216 (invited article for topical issue).
25. Future physics perspectives on the equation of state from heavy ion collisions to neutron stars. Veronica Dexheimer, Jorge Noronha, Jacquelyn Noronha-Hostler, Claudia Ratti, Nicolás Yunes. Published in *J.Phys.G* 48 (2021) 7, 073001.

26. GW190814 as a massive rapidly-rotating neutron star with exotic degrees of freedom. V. Dexheimer, R.O. Gomes, T. Klähn, S. Han, M. Salinas. Published in *Phys.Rev.C* 103 (2021) 2, 025808.
27. Equation of state of hot dense hyperonic matter in the Quark–Meson-Coupling (QMC-A) model. J.R. Stone, V. Dexheimer, P.A.M. Guichon, A.W. Thomas, S. Typel. Published in *Mon.Not.Roy.Astron.Soc.* 502 (2021) 3, 3476-3490.
28. High-Energy Phase Diagrams with Charge and Isospin Axes under Heavy-Ion Collision and Stellar Conditions. K. Aryal, C. Constantinou, R.L.S. Farias, V. Dexheimer. Published in *Phys.Rev.D* 102 (2020) 7, 076016.
29. On the Deconfinement Phase Transition in Neutron-Star Mergers. Elias R. Most, L. Jens Papenfort, Veronica Dexheimer, Matthias Hanauske, Horst Stöcker, Luciano Rezzolla. Published in: *Eur.Phys.J.A* 56 (2020) 2, 59 (invited article for topical issue).
30. Limiting magnetic field for minimal deformation of a magnetised neutron star. R.O. Gomes, Helena Pais, V. Dexheimer, Constança Providência, S. Schramm. Published in *Astron.Astrophys.* 627 (2019) A6.
31. Hyperons and quarks in proto-neutron stars. J. Roark, X. Du, C. Constantinou, V. Dexheimer, A.W. Steiner, J.R. Stone. Published in *Mon.Not.Roy.Astron.Soc.* 486 (2019) no.4, 5441-5447.
32. Can magnetic fields stabilize or destabilize twin stars? R.O. Gomes, V. Dexheimer, S. Han, S. Schramm. Published in *Mon.Not.Roy.Astron.Soc.* 485 (2019) no.4, 4873-4877.
33. What do we learn about vector interactions from GW170817? Veronica Dexheimer, Rosana de Oliveira Gomes, Stefan Schramm, Helena Pais. Published in *J.Phys.* G46 (2019) no.3, 034002 (invited article for topical issue).
34. Phase Transitions in Neutron Stars. V. Dexheimer, L.T.T. Soethe, J. Roark, R.O. Gomes, S.O. Kepler, S. Schramm. Published in *Int.J.Mod.Phys.* E27, No. 11, 1830008 (2018) (invited review).
35. Signatures of quark-hadron phase transitions in general-relativistic neutron-star mergers. Elias R. Most, L. Jens Papenfort, Veronica Dexheimer, Matthias Hanauske, Stefan Schramm, Horst Stöcker, Luciano Rezzolla. Published in *Phys.Rev.Lett.* 122 (2019) no.6, 061101 (chosen as editors' suggestion).
36. Deconfinement phase transition in proto-neutron-star matter. J. Roark, V. Dexheimer. Published in *Phys.Rev.* C98 (2018) no.5, 055805.
37. Cooling of Small and Massive Hyperonic Stars. Rodrigo Negreiros, Laura Tolos, Mario Centelles, Angels Ramos, Veronica Dexheimer. Published in *Astrophys.J.* 863 (2018) no.1, 104.
38. Many Aspects of Magnetic Fields in Neutron Stars. Rodrigo Negreiros, Cristian Bernal, Veronica Dexheimer, Orlenys Troconis. Published in *Universe* 4 (2018) no.3, 43.
39. Anisotropy in the equation of state of strongly magnetized quark matter within the NJL Model. Sidney S. Avancini, Veronica Dexheimer, Ricardo L. S. Farias, Varese S. Timoteo. Published in *Phys.Rev.* C97 (2018) no.3, 035207.
40. Many-body forces in magnetic neutron stars. R.O. Gomes, B. Franzon, V. Dexheimer, S. Schramm. Published in *Astrophys.J.* 850 (2017) no.1, 20.



41. Tabulated Neutron Star Equations of State Modeled within the Chiral Mean Field Model. V. Dexheimer. Published in Publications of the Astronomical Society of Australia 34 (2017) (invited article for topical issue).
42. The application of the Quark-Hadron Chiral Parity-Doublet Model to neutron star matter. A. Mukherjee, S. Schramm, J. Steinheimer, V. Dexheimer. Published in Astron.Astrophys. 608 (2017) A110.
43. What is the magnetic field distribution for the equation of state of magnetized neutron stars? V. Dexheimer, B. Franzon, R.O. Gomes, R.L.S. Farias, S.S. Avancini, S. Schramm. Published in Phys.Lett. B773 (2017) 487-491.
44. Internal composition of proto-neutron stars under strong magnetic fields. B. Franzon, V. Dexheimer, S. Schramm. Published in Phys.Rev. D94 (2016) no.4, 044018.
45. Modelling Hybrid Stars in Quark-Hadron Approaches. S. Schramm, V. Dexheimer, R. Negreiros. Published in Eur.Phys.J. A52 (2016) no.1, 14 (invited article for topical issue).
46. A self-consistent study of magnetic field effects on hybrid stars. B. Franzon, V. Dexheimer, S. Schramm. Published in Mon.Not.Roy.Astron.Soc. 456 (2016) no.3, 2937-2945.
47. Reconciling Nuclear and Astrophysical Constraints. V. Dexheimer, R. Negreiros, S. Schramm. Published in Phys.Rev. C92 (2015) 1, 012801.
48. Many-body forces in the equation of state of hyperonic matter. R.O. Gomes, V. Dexheimer, S. Schramm, C.A.Z. Vasconcellos. Published in Astrophys.J. 808 (2015) 1, 8.
49. Role of strangeness in hybrid stars and possible observables. V. Dexheimer, R. Negreiros, S. Schramm. Published in Phys. Rev. C91 (2015) 5, 055808.
50. On the possibility of rho-meson condensation in neutron stars. R. Mallick, S. Schramm, V. Dexheimer, A. Bhattacharyya. Published in Mon.Not.Roy.Astron.Soc. 449 (2015) 1347.
51. EMMI Rapid Reaction Task Force Meeting on 'Quark Matter in Compact Star'. M. Buballa, V. Dexheimer, A. Drago, E. Fraga, P. Haensel, I. Mishustin, G. Pagliara, J. Schaffner-Bielich, S. Schramm, A. Sedrakian and F. Weber. Published in J.Phys. G41 (2014) 12, 123001.
52. The influence of strong magnetic fields on proto-quark stars. V. Dexheimer, D.P. Menezes, M. Strickland. Published in J. Phys. G 41(2014) 015203.
53. Stability windows for proto-quark stars. V. Dexheimer, J.R. Torres, D.P. Menezes. Published in Eur. Phys. J. C (2013) 73: 2569.
54. Non-congruence of the nuclear liquid-gas and deconfinement phase transitions. M. Hempel, V. Dexheimer, S. Schramm, I. Iosilevskiy. Published in Phys. Rev. C88 (2013) 014906.
55. Hybrid Stars in an SU(3) Parity Doublet Model. V. Dexheimer, J. Steinheimer, R. Negreiros, S. Schramm. Published in Phys. Rev. C87 (2013) 015804.
56. Bulk Properties of a Fermi Gas in a Magnetic Field. M. Strickland, V. Dexheimer, D.P. Menezes. Published in Phys. Rev. D 86: 125032, 2012.
57. Hybrid Stars in a Strong Magnetic Field. V. Dexheimer, R. Negreiros, S. Schramm. Published in Eur.Phys.J. A48: 189, 2012.
58. Quark core impact on hybrid star cooling. Rodrigo Negreiros, V.A. Dexheimer, S. Schramm. Published in Phys.Rev. C85: 035805, 2012.

59. Neutron Stars with Small Radii – the Role of Delta Resonances. T. Schurhoff, S. Schramm and V. Dexheimer. Published in *Astrophys. Journ. Lett.* 724: 74-77, 2010.
60. Modeling Hybrid Stars with an SU(3) non-linear sigma model. Rodrigo Picanco Negreiros, V.A. Dexheimer and S. Schramm. Published in *Phys. Rev. C* 82: 035803, 2010.
61. Kaon properties in (proto)neutron stars. Amruta Mishra, Arvind Kumar, Sambuddha Sanyal, V. Dexheimer and Stefan Schramm. Published in *Eur. Phys. J. A* 45: 169-177, 2010.
62. Hydrodynamics with a chiral hadronic equation of state including quark degrees of freedom. J. Steinheimer, V. Dexheimer, H. Petersen, M. Bleicher, S. Schramm and H. Stoecker. Published in *Phys. Rev. C* 81: 044913, 2010.
63. Novel Approach to Modeling Hybrid Stars. V.A. Dexheimer and S. Schramm. Published in *Phys. Rev. C* 81: 045201, 2010.
64. Neutron stars within the SU(2) parity doublet model. V. Dexheimer, G. Pagliara, L. Tolos, J. Schaffner-Bielich and S. Schramm. Published in *Eur. Phys. J. A* 38: 105-113, 2008.
65. Proto-Neutron and Neutron Stars in a Chiral SU(3) Model. V. Dexheimer and S. Schramm. Published in *Astrophys. J.* 683: 943–948, 2008.
66. Nuclear matter and neutron stars in a parity doublet model. V. Dexheimer, S. Schramm and D. Zschesche. Published in *Phys. Rev. C* 77: 025803, 2008.
67. Density Dependent Nuclear Matter Compressibility. V.A. Dexheimer, C.A.Z. Vasconcellos and B.E.J. Bodmann. Published in *Phys.Rev. C* 77: 065803, 2008.

#### Other Documents

1. Hot QCD White Paper. M. Arslanodk, S.A. Bass, A.A. Baty, I. Bautista, C. Beattie et al. e-Print: 2303.17254 [nucl-ex].
2. QCD Phase Structure and Interactions at High Baryon Density: Continuation of BES Physics Program with CBM at FAIR. D. Almaalol, M. Hippert, J. Noronha-Hostler, J. Noronha, E. Speranza, G. Basar, S. Bass, D. Cebra, V. Dexheimer et al. e-Print: 2209.05009 [nucl-ex].
3. Long Range Plan: Dense matter theory for heavy-ion collisions and neutron stars. Alessandro Lovato, Travis Dore, Robert D. Pisarski, Bjoern Schenke, Katerina Chatziioannou et al. e-Print: 2211.02224 [nucl-th].

#### Refereed Proceedings

1. Dense-matter equation of state at zero & finite temperature. Alexander Clevinger, Veronica Dexheimer, Jeffrey Peterson. e-Print: 2311.10852 [nucl-th]. Preapred for Quark Matter 2023 3-9 September 2023, Houston TX. Published in *EPJ Web Conf.* 296 (2024) 14002.
2. Equations of state for dense matter and astrophysical constraints. Rafael Ban Jacobsen, Veronica Dexheimer, Ricardo Luciano Sonogo Farias. Prepared for the 10th International Workshop on Astronomy and Relativistic Astrophysics (IWARA 2022) 5-9 September 2022, Antigua, Guatemala. Published in *Astron.Nachr.* 344 (2023) 1-2, e230038.

3. Phase Transitions under Strong Magnetic Fields in Neutron Star. Ishfaq A. Rather, Veronica Dexheimer, Ilídio Lopes. EPJ Web Conf. 290 (2023) 03004.
4. Equation of State at High-Baryon Density and Compact Stellar Objects. Veronica Dexheimer. Prepared for the 29th International Conference on Ultrarelativistic Nucleus-Nucleus Collisions (Quark Matter 2022) 4-10 April 2022, Krakow, Poland. Published in Acta Phys.Polon.Supp. 16, 1-A143 (2023) 12-14.
5. Magnetic deformation in Neutron Stars. Ishfaq A. Rather, Usuf Rahaman, V. Dexheimer, A.A. Usmani, S.K. Patra. Prepared for the 65th DAE BRNS Symposium on nuclear physics. Published in Springer Proc. Phys. 277 (2022) 478-479.
6. Strangeness in astrophysics: Theoretical developments, Veronica Dexheimer, Krishna Aryal. Prepared for the 19th International Conference on Strangeness in Quark Matter (SQM2021) 17-22 May 2021. Published in EPJ Web Conf. 259 (2022) 05001.
7. Deconfinement Phase Transition under Chemical Equilibrium. Veronica Dexheimer, Krishna Aryal, Madison Wolf, Constantinos Constantinou, Ricardo L.S. Farias. Prepared for the 9th International Workshop on Astronomy and Relativistic Astrophysics (IWARA2020) 6-12 September 2020. Published in: Astron.Nachr. 342 (2021) 1-2, 347-351.
8. 3-Dimensional QCD Phase Diagrams for Strange Matter. V. Dexheimer, K. Aryal, C. Constantinou, J. Peterson, R.L.S. Farias. Prepared for the 36th Winter Workshop on Nuclear Dynamics (WWND 2020) 1-7 March 2020. Published in J.Phys.Conf.Ser. 1602 (2020) 1, 012013.
9. Exotic matter in neutron stars and the equation of state. Stefan Schramm, Veronica Dexheimer, Jan Steinheimer, Ayon Mukherjee. Prepared for Frontier Research in Astrophysics - III (FRAPWS2018) 28 May-2 June 2018, Mondello, Palermo, Italy. Published in PoS FRAPWS2018 (2019) 048.
10. MAGIC - how MATter's extreme phases can be revealed in Gravitational wave observations and in relativistic heavy Ion Collision experiments. Matthias Hanauske, Luke Bovard, Jan Steinheimer, Anton Motornenko, Volodymyr Vovchenko, Stefan Schramm, Veronica Dexheimer, Jens Papenfort, Elias R. Most, Horst Stöcker. Prepared for 5th Biennial Workshop on Discovery Physics at the LHC (Kruger2018) 03-07 Dec 2018, Hazyview, Mpumulanga, South Africa. Published in J. Phys. Conf. Ser. 1271 (2019) no.1, 012023.
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12. Detecting the Hadron-Quark Phase Transition with Gravitational Waves. Matthias Hanauske, Luke Bovard, Elias Most, Jens Papenfort, Jan Steinheimer, Anton Motornenko, Volodymyr Vovchenko, Veronica Dexheimer, Stefan Schramm, Horst Stöcker. Prepared for Compact Stars in the QCD Phase Diagram VII (CSQCD VII) 1-15 Jun 2018, New York, NY, USA. Published in Universe 5 (2019) no.6, 156.
13. The Equation of State and Cooling of Hyperonic Neutron Stars. Laura Tolos, Mario Centelles, Angels Ramos, Rodrigo Negreiros, Veronica Dexheimer. To appear in the proceedings of the 15th Marcel Grossmann Meeting on Recent Developments in Theoretical and Experimental General Relativity, Astrophysics, and Relativistic Field

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  16. Models of hyperstars and hybrid stars. S. Schramm, V. Dexheimer, R. Mallick, R. Negreiros. Prepared for 14th Marcel Grossmann Meeting on Recent Developments in Theoretical and Experimental General Relativity, Astrophysics, and Relativistic Field Theories 12-18 Jul 2015, Rome, Italy. Published in The Fourteenth Marcel Grossmann Meeting, World Scientific (2017) 3399-3403.
  17. Dense and hot matter in compact stars and heavy-ion collisions. Stefan Schramm, Veronica Dexheimer, Ayon Mukherjee, Jan Steinheimer. Contribution to 17th International Conference on Strangeness in Quark Matter (SQM 2017) 10-15 July 2017. Published in EPJ Web Conf. 171 (2018) 08002.
  18. Phase Transitions in Dense and Hot Matter. Veronica Dexheimer. Prepared for 11th International Workshop on Critical Point and Onset of Deconfinement 07-11 Aug 2017, Stony Brook, NY, USA. Published in PoS CPOD2017 (2018) 033.
  19. Magnetic field distribution in strongly magnetized neutron stars. V. Dexheimer, B. Franzon, R.O. Gomes, R.L.S. Farias, S.S. Avancini, S. Schramm. Prepared for 4th Caribbean Symposium on Cosmology, Gravitation, Nuclear and Astroparticle Physics May 7-13, 2017, Havana, Cuba. Published in Astron.Nachr. 338 (2017) no.9-10, 1052-1055.
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  24. The population of highly magnetized neutron stars. R.O. Gomes, V. Dexheimer, B. Franzon, S. Schramm. Prepared for Compact Stars in the QCD phase diagram V 23-27 May 2016, L' Aquila, Italy. Published in J.Phys.Conf.Ser. 861 (2017) no.1, 012016.
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26. Neutron Stars—Possibilities and Limits for Exotic Phases. S. Schramm, V. Dexheimer, R. Mallick. Prepared for International Symposium on New Horizons in Fundamental Physics: From Neutrons Nuclei via Superheavy Elements and Supercritical Fields to Neutron Stars and Cosmic Rays 23-29 Nov 2015, Makutsi, South Africa. Published in New Horizons in Fundamental Physics - FIAS Interdisciplinary Science Serie, Springer (2017) 297-306.
  27. Effects of strong magnetic fields on hybrid stars. B. Franzon, V. Dexheimer, S. Schramm. Prepared for The Modern Physics of Compact Stars and Relativistic Gravity 30 Sep - 03 Oct 2015, Yerevan, Armenia. Published in PoS MPC2015 (2016) 018.
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  30. Many-body forces, isospin asymmetry and dense hyperonic matter. R.O. Gomes, V. Dexheimer, S. Schramm, C.A.Z. Vasconcellos. To appear in the proceedings of Compact Stars in the QCD Phase Diagram IV September 26-30 2014, Prerow, Germany. E-Print: arXiv:1504.02788.
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  33. Effects of strong magnetic fields on the population of hyperon stars. R. O. Gomes, V. Dexheimer, C. A. Z. Vasconcellos. Prepared for 2nd Caribbean Symposium on Cosmology, Gravitation, Nuclear and Astroparticle Physics 4-6 May 2013, Havana, Cuba and 3rd International Symposium on Strong Electromagnetic Fields and Neutron Stars 7-10 May 2013, Varadero, Cuba. Published in Astron.Nachr. 335 (2014) 666.
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  35. Effective Field Theory for Neutron Stars with Genuine Many-body Forces. C.A.Z. Vasconcellos, R.O. Gomes, V. Dexheimer, R.P. Negreiros, J. Horvath, D. Hadjimichef. Prepared for 2nd Caribbean Symposium on Cosmology, Gravitation, Nuclear and Astroparticle Physics 4-6 May 2013, Havana, Cuba and 3rd International Symposium on Strong Electromagnetic Fields and Neutron Stars 7-10 May 2013, Varadero, Cuba. Published in Astron.Nachr. 335 (2014) 763.

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38. Hyperon Stars in Strong Magnetic Fields. R.O. Gomes, V. Dexheimer, C.A.Z. Vasconcellos. To appear in the proceedings of Compact Stars in the QCD Phase Diagram III 12-15 Dec 2012, Guarujá, SP, Brazil. e-Print: arXiv:1307.7450 [nucl-th].
39. Modeling Hybrid Stars in Quark-Hadron Approaches. S. Schramm, V. Dexheimer, R. Negreiros, T. Schuerhoff, J. Steinheimer. To appear in the proceedings of Compact Stars in the QCD Phase Diagram III 12-15 Dec 2012, Guarujá, SP, Brazil. e-Print: arXiv:1306.0989 [astro-ph.SR].
40. Deconfinement to Quark Matter in Magnetars. V. Dexheimer, R. Negreiros, S. Schramm. Prepared for Extreme QCD 21-23 Aug 2012, Washington DC, USA. Published in J. Phys. Conf. Ser. 432 (2013) 012005.
41. Modeling Hybrid Stars. V. Dexheimer, S. Schramm, J. Stone. Prepared for XII International Symposium on Nuclei in the Cosmos (NIC 2012) 5-10 Aug 2012, Cairns, Australia. Published in PoS NIXII (2012) 101.
42. Deconfinement to Quark Matter in Neutron Stars – The Influence of Strong Magnetic Fields. V. Dexheimer, R. Negreiros, S. Schramm, M. Hempel. Prepared for XII Hadron Physics April, 22-27, 2012, Bento Gonçalves, Brazil. Published in AIP Conf.Proc. 1520 (2013) 264-269.
43. Nuclear matter and neutron stars in a quark-hadron model. S. Schramm, R.P. Negreiros, T. Schurhoff, V. Dexheimer. Prepared for 2nd International Symposium on Strong Electromagnetic Fields and Neutron Stars 5-7 May 2011, Varadero, Cuba. Published in Int.J.Mod.Phys. E20: 125-132, 2011.
44. Structure and Cooling of Neutron and Hybrid Stars. S. Schramm, V. Dexheimer, R. Negreiros, T. Schurhoff, J. Steinheimer. Prepared for Exciting Physics Symposium 2011, Makutsi, South Africa. Published in Exciting Interdisciplinary Physics, FIAS Interdisciplinary Science Series (2013) 323.
45. Properties and Stability of Hybrid Stars. S. Schramm, R. Negreiros, J. Steinheimer, T. Schurhoff, V. Dexheimer. Prepared for Strangeness in Quark Matter 18-24 Sep 2011, Cracow, Poland. Published in Acta Phys.Polon. B43: 749-758, 2012.
46. Dense Matter and Neutron Stars in Parity Doublet Models. S. Schramm, V. Dexheimer, R. Negreiros, J. Steinheimer. To appear in the proceedings of STARS2011, Havana, Cuba, 1 – 4 May 2011. e-Print: arXiv:1110.0609 [nucl-th].
47. Nuclear matter, nuclei, and neutron stars in hadron and quark-hadron models. S. Schramm, V. Dexheimer, R. Negreiros, T. Schurhoff. Prepared for Advances in Nuclear Physics in Our Time 28 Nov-2 Dec 2010, Goa, India. Published in Exploring Fundamental Issues in Nuclear Physics: Nuclear Clusters - Superheavy, Superneutronic, Superstrange, of Anti-Matter, World Scientific (2012) 142-151.
48. Phase structure of strongly interacting matter and simulations of heavy-ion collisions using a quark-hadron model. S. Schramm J. Steinheimer, V. Dexheimer, H. Stocker. Prepared for International Conference on Strangeness in Quark Matter (SQM 2009) 27 Sep – 2 Oct 2009, Buzios, Brazil. Published in J.Phys.G G37: 094041, 2010.

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50. Chiral Symmetry Restoration and Deconfinement to Quark Matter in Neutron Stars. V.A. Dexheimer and S. Schramm. Prepared for Light-Cone 8-13 July 2009, Sao Jose dos Campos, Brazil. Published in *Nucl. Phys. Proc. Suppl.* 199: 319-324, 2010.
51. Phase Structure in hadron-quark models and its implementation in heavy-ion simulations. S. Schramm, J. Steinheimer, V. A. Dexheimer. Prepared for 18th International Conference on Particles and Nuclei 9-14 Nov 2008, Eilat, Israel. Published in *Nucl. Phys. A* 827: 546, 2009.
52. Neutron Stars as a Probe for Dense Matter. V. Dexheimer and S. Schramm. Prepared for International Conference on Particles And Nuclei 9-14 Nov 2008, Eilat, Israel. Published in *Nucl. Phys. A* 827: 579, 2009.
53. Proto-Neutron and Neutron Stars. V. Dexheimer, S. Schramm and H. Stoecker. Prepared for International Workshop on Astronomy and Relativistic Astrophysics 2007 3-6 Oct 2007, Joao Pessoa, Brazil. Published in *Astronomy and Relativistic Astrophysics: New Phenomena and New States of Matter in the Universe*, World Scientific (2010) 47-53.
54. Parity Doublet Model applied to Neutron Stars. V. Dexheimer, S. Schramm and Horst Stoecker. Prepared for International Symposium on Exotic States of Nuclear Matter 11-15 Jun 2007, Catania, Italy. Published in *Exotic States of Nuclear Matter*, World Scientific (2012) 71-76.
55. Neutron Stars in a Chiral Model with Finite Temperature. V. Dexheimer, S. Schramm and H. Stoecker. Prepared for 3rd Nuclear Physics in Astrophysics Conference and 21st International Nuclear Physics Divisional Conference of the European Physical Society 26-31 Mar 2007, Dresden, Germany. Published in *J. Phys. G* 35: 014060, 2008.
56. The Nuclear matter compressibility function in a parameterized coupling model. V.A. Dexheimer, C.A.Z. Vasconcellos and B.E.J. Bodmann. Prepared for International Workshop on Astronomy and Relativistic Astrophysics 2-5 Oct 2005, Natal, Brazil. Published in *Int. J. Mod. Phys. D* 16: 269-376, 2007.
57. The role of the nuclear incompressibility in a relativistic mean field theory for neutron stars. V.A. Dexheimer, C.A.Z. Vasconcellos, B.E.J. Bodmann and M. Dillig. Prepared for 9th Hadron Physics and 7th Relativistic Aspects of Nuclear Physics 28 Mar – 3 Apr 2004, Angra dos Reis, Brazil. Published in *AIP Conf. Proc.* 739: 479-481, 2005.
58. The Role of the nuclear matter compression modulus in neutron stars. V.A. Dexheimer, C.A.Z. Vasconcellos, M. Razeira and M. Dillig. Prepared for International Workshop on Astronomy and Relativistic Astrophysics 2-16 Oct 2003, Olinda, Brazil. Published in *Int. J. Mod. Phys. D* 13: 1519-1524, 2004.

#### Work presented

1. “An overview of the MUSES cyberinfrastructure and what it can do for you”. Nuclear Seminar at Ohio University, Athens OH, January 2025.

2. “Using Neutron Stars to Reveal the Secrets of Dense Matter”. Colloquium at Baylor University, Waco TX, November 2024.
3. “Using Neutron Stars to Reveal the Secrets of Dense Matter”. Colloquium at Kent State University, Kent OH, October 2024.
4. “Neutron stars and Constraints for the Equation of State of Dense Matter + MUSES”. 10th International Conference on Compact Stars in the QCD Phase diagram (CSQCD2024), YITP, Kyoto, Japan, October 2024.
5. “Neutron stars and Constraints for the Equation of State of Dense Matter”. The XVIth Quark Confinement and the Hadron Spectrum Conference, Cairns, Australia, August 2024 (invited plenary talk).
6. “Future Plans for Workflows”. MUSES Collaboration Meeting 2024, University of Illinois at Urbana-Champaign, IL, May 2024 (invited talk).
7. “Neutron stars in the QCD phase diagram”. Colloquium at Texas A&M University Commerce, March 2024 (invited talk).
8. “Modular Unified Solver of the Equation of State (MUSES)”. STAR Juniors' Day, March 2024 (invited talk).
9. “Phase Transitions in Neutron Stars”. NP3M Collaboration meeting, January 2024 (invited talk).
10. “How much of the QCD phase diagram is still uncharted?”. Advances in Nuclear Matter Dynamics: A Tribute to Declan Keane, Kent State University, Kent OH, December 2023.
11. “New states of matter created in stellar collisions”. Research and Innovation Forum at Kent State University, November 2023 (invited talk).
12. “Neutron stars in the QCD phase diagram”. Colloquium at Wayne State University, September 2023 (invited talk).
13. “Finding Structure in the Speed of Sound of Dense Matter”. Seminar at Wayne State University, September 2023 (invited talk).
14. “A very informal introduction to the Walecka model”. CNR Seminar, Kent State University, OH, September 2023.
15. “Neutron stars in the QCD phase diagram”. Latin American Network on Electromagnetic Effects in Strongly Interacting Matter Online Seminar, September 2023 (invited talk).
16. “Temperature and Strong Magnetic Field Effects in Dense Matter”. Quark Matter 2023, Houston, TX, September 2023.
17. “Neutron Star Working Group Overview”. MUSES Collaboration Meeting 2023, University of Illinois at Urbana-Champaign, IL, May 2023 (invited talk).
18. “Lepton Module Overview”. MUSES Collaboration Meeting 2023, University of Illinois at Urbana-Champaign, IL, May 2023 (invited talk).
19. “Neutron stars in the QCD phase diagram”. Physics Graduate Program Seminar at UFSC, Florianopolis, Brazil, May 2023 (invited talk).
20. “Neutron Stars: natural laboratories for nuclear physics”. Women in STEM Day. Kent State University Twinsburg Academic Center, Twinsburg OH, April 2023 (invited talk).
21. “Neutron stars in the QCD phase diagram”. Nuclear Theory Seminar at University of Maryland, College Park MD, April 2023 (invited talk).
22. “Constraints on the equation of state of neutron stars”. American Physical Society (APS) April Meeting, Minneapolis MN, April 2023.



23. “Nuclear phase diagram: from heavy ions to neutron stars”. 10th Workshop of the APS Topical Group on Hadronic Physics, Minneapolis MN, April 2023 (invited talk).
24. “Finding Structure in the Speed of Sound of Dense Matter”. Matter, Astrophysics, Gravitation, Ions, And Cosmology (MAGIC 2023), Praia do Rosa SC, Brazil, March 2023 (invited talk).
25. “Exotic Matter in Neutron Stars”. Seminar at Vienna University of Technology, Austria, February 2023 (invited talk).
26. “Exotic Matter in Neutron Stars”. Colloquium at Vanderbilt University, Nashville TN, February 2023 (invited talk).
27. “Exotic Matter in Neutron Stars”. VandyGRAF Seminar at Vanderbilt University, Nashville TN, February 2023 (invited talk).
28. “Exotic matter in neutron stars”. CosmoCoffee seminar at CERN, Meyrin Switzerland, February 2023 (invited talk).
29. “Net strangeness and isospin fractions in the EOS as probed by protoneutron stars, binary neutron star mergers, and heavy-ion collisions”. INT Program on Dense Nuclear Matter Equation of State from Heavy-Ion Collisions, University of Washington, Seattle WA, December 2022 (invited online talk).
30. “Phases of Matter Inside Neutron Stars”. Café com Física seminar at Universidade de Coimbra, Portugal, October 2022 (invited talk).
31. “Probing exotic matter in neutron stars”. Online NPA seminar at Yale University, New Haven CT, October 2022 (invited talk).
32. “Equations of State for Dense Matter”. Modern equations of state and spectroscopy in neutron-star matter workshop, Universidad de Alcalá, Alcalá de Henares, Madrid, Spain, September 2022 (invited talk).
33. “Equations of State for Dense Matter”. 10<sup>th</sup> International Workshop on Astronomy and Relativistic Astrophysics (IWARA 2022), Antigua, Guatemala, September 2022 (invited online talk).
34. “Neutron Stars”. Public lecture at Kent Free Library, Kent OH, May 2022 (invited talk).
35. “Probing exotic matter in neutron stars”. Online seminar at Aristotle University of Thessaloniki, Greece, May 2022 (invited talk).
36. “Phase Transitions”. NP3M online seminar series, Penn State University, State College, PA, May 2022 (invited talk).
37. “Neutron Star Working Group Overview”. MUSES Collaboration Meeting 2022, University of Illinois at Urbana-Champaign, IL, May 2022 (invited talk).
38. “Experimental and Astrophysical Constraints on the EoS to inform the MUSES Code”. MUSES Collaboration Meeting 2022, University of Illinois at Urbana-Champaign, IL, May 2022 (invited talk).
39. “EoS at High-Baryon Density and Compact Stellar Objects”. Quark Matter 2022, Krakow, Poland, April 2022 (invited plenary talk).
40. “Exotic matter in neutron stars”. Online seminar at McGill University, February 2022 (invited talk).
41. “High Temperature Workgroup”. NP3M Collaboration kickoff meeting, October 2021 (online discussion).
42. “Can Deconfinement Occur in Neutron Stars?”. Fall Meeting of the Division of Nuclear Physics (DNP) of the American Physical Society (APS), October 2021 (virtual invited plenary talk)

43. “Dense matter equation of state and the QCD phase diagram”. Seventh physics & astrophysics at the extreme (PAX- VII) workshop, August 2021 (online discussion).
44. “New States of Matter inside Neutron Stars”. IX Encontro (Online) de Fisica e Astronomia da UFSC, Florianopolis, Brazil , August 2021 (invited lecturer).
45. “Extreme Matter meets Extreme Gravity: Observational Implications of Ultra-Heavy Neutron Stars with Cross-Overs and Phase Transitions”. A Virtual Tribute to Quark Confinement and the Hadron Spectrum, University of Stavanger, Norway, Aug 2021 (invited talk).
46. "Equation of state from heavy-ion collisions to neutron stars". Online talk at RBRC Seminar series, Stony Brook University, Stony Brook NY, July 2021 (invited talk).
47. “What can we learn about new exotic states of matter from neutron stars and their mergers? ”. Online Colloquium at Universidade Federal Fluminense, Rio de Janeiro, Brazil, June 2021 (invited talk).
48. “What can we learn about exotic matter from neutron stars and their mergers?”. Online S@INT seminar at INT - University of Washington, Seattle, WA, May 2021 (invited online talk).
49. “Strangeness in astrophysics: Theoretical developments”. Online Strangeness in Quark Matter Conference, May 2021 (invited plenary talk).
50. “Comparisons among neutron-star mergers and heavy-ion collisions”. 9th Workshop of the APS Topical Group on Hadronic Physics (online), April 2021 (invited talk).
51. “Dense matter: heavy-ion vs. neutron-star physics”. Nuclear Theory Group virtual seminar, Lawrence Berkeley National Laboratory, Berkeley CA, March 2021 (invited talk).
52. “Dense matter: heavy-ion vs. neutron-star physics”. INT Program on Topological Phases of Matter: From Low to High Energy, University of Washington, Seattle WA, March 2021 (invited talk).
53. “Discussion: What do we have?”, CompOSE 21, Barcelona, Spain, February. 2021 (discussion).
54. “Exotic Degrees of Freedom in Neutron Stars and Their Mergers”. XX Escola de Verao Jorje Andre Swieca de Fisica Teorica (online), Brazil, February 2021 (invited talk).
55. “Exotic Matter Produced in Neutron-Star Mergers”. Biweekly webinar on Quark matter and relativistic hydrodynamics, Tehran, Iran, January (invited talk).
56. “Exotic Matter in Neutron Stars”. 43rd Committee on Space Research (COSPAR) Scientific Assembly (online), Sydney, Australia, January 2021 (invited talk).
57. “What do needs to be done in theory and computation in order to extract the most science from the Multi-Messenger Astronomy observations that will come in the next 10+ years?”. Online Workshop on Simulations for Multi-Messenger Astronomy (S4MMA), December 2020 (discussion).
58. “Exotic Matter in Neutron Stars”. XLIII Reuniao de Trabalho sobre Fisica Nuclear no Brasil – Brazilian annual Nuclear Physics Meeting (online), December 2020 (invited talk).
59. “QCD Phase Diagrams with Charge and Isospin Axes under Heavy-Ion Collision and Stellar Conditions”. XXXII International (ONLINE) Workshop on High Energy Physics "Hot problems of Strong Interactions", Logunov Institute for High Energy Physics, Protvino, Russia, November 2020 (invited talk).

60. "The physics of Neutron Stars". Online Meeting of the Cleveland Astronomical Society, Cleveland OH, November 2020 (invited public lecture).
61. "Deconfinement Phase Transition in Neutron-Star Mergers". Video Conference - 9th International Workshop on Astronomy and Relativistic Astrophysics (IWARA 2020), Mexico City, Mexico, September 2020 (invited talk).
62. "Panel: QCD matter in equilibrium". Virtual Workshop From heavy-ion collisions to neutron stars, August 2020 (organizer and discussion leader).
63. "Introduction to modeling the core of neutron stars". Virtual FRIB-Theory Alliance Summer School: Dense matter in Astrophysics, Michigan State University, East Lansing MI, June 2020 (organizer and lecturer).
64. "Exotic Matter Produced in Neutron-Star Mergers". Imam Abdulrahman Alfaisal University/Kuwait University Virtual High-Energy Physics Colloquium, May 2020 (invited talk).
65. "Exotic Matter Produced in Neutron-Star Mergers". Online Theoretical Physics Colloquium at Arizona State University, Mesa AZ, May 2020 (invited talk).
66. "Deconfinement Phase Transition in Neutron-Star Mergers ". 36th edition of the Winter Workshop on Nuclear Dynamics, Puerto Vallarta, Mexico, March 2020 (invited talk).
67. "Exotic Matter Produced in Neutron-Star Mergers". Nanjing University, Nanjing, China, December 2019 (invited talk).
68. "Exotic Matter Produced in Neutron-Star Mergers". Guangxi Normal University, Guilin, China, January 2020 (invited talk).
69. "Signatures of Quark-Hadron Phase Transitions in General-Relativistic Neutron-Star Mergers". Quark Matter 2019, Wuhan, China, November 2019.
70. "Exotic Matter in Neutron-Star Mergers". California State University Long Beach CA, October 2019 (invited talk).
71. "Signatures of Quark-Hadron Phase Transitions in General-Relativistic Neutron-Star Mergers". XLIX International Symposium on Multiparticle Dynamics (ISMD2019), Santa Fe NM, September 2019 (invited talk).
72. "Neutron Stars". Kent State University Twinsburg, OH, May 2019 (keynote speaker at Women in STEM Day).
73. "What can we learn about neutron star cores from gravitational waves?" PHAROS Conference 2019: the multi-messenger physics and astrophysics of neutron stars, Girona, Spain, April 2019.
74. "Dense Matter and Compact Stars". XIX Theoretical Nuclear Physics Summer School Jorge Andre Swieca, Campos do Jordao, Brazil, February 2019 (invited lecturer).
75. "Neutron Stars: A Laboratory for Exotic Matter". Akron Physics Club, Akron OH, January 2019 (invited public lecture).
76. "Gravitational Waves from Neutron Star Mergers". Kent State University, OH, December 2018 (invited talk).
77. "Neutron Stars: A Laboratory for Exotic Matter". Burrell Observatory, Berea OH, November 2018 (invited public lecture).
78. "Equation of state effects on NS mergers". Neutron stars: the equation of state, superconductivity/superfluidity and transport coefficients (PHAROS meeting), Coimbra, Portugal, September 2018.

79. "Equation of state effects on NS mergers". Compact Stars in the QCD phase diagram VII, New York NY, June 2018.
80. "Equation of state effects on NS mergers". Astro-Solids, Dense Matter, and Gravitational Waves, INT, Seattle WA, April 2018 (invited talk).
81. "Realistic Equation of State for Neutron Star Mergers". Fire and ice: Hot QCD meets cold and dense matter, Saariselkä, Finland, April 2018 (invited talk).
82. "Phase Transitions in Dense Matter". Rutgers University, New Brunswick, NJ, February 2018 (invited talk).
83. "Phase Transitions in Dense Matter". Ohio University, Athens OH, January 2018 (invited talk).
84. "Phase Transitions in Dense Matter". National Superconducting Cyclotron Laboratory, East Lansing MI, December 2017 (invited talk).
85. "Phase Transitions in Dense Matter". Critical Point and Onset of Deconfinement 2017, Stony Brook NY, August 2017 (invited plenary talk).
86. "Phase Transitions in Dense Matter". Los Alamos National Laboratory, NM, June 2017 (invited talk).
87. "The Magnetic Field Profile in Strongly Magnetized Neutron Stars". 4th Caribbean Symposium on Cosmology, Gravitation, Nuclear and Astroparticle Physics / 5th International Symposium on Strong Electromagnetic Fields and Neutron Stars, Havana and Varadero, Cuba, May 2017.
88. "Phase Transitions in Dense Matter". Kent State University, OH, April 2017.
89. "Phase Transitions in Dense Matter". Wooster College, OH, April 2017 (invited talk).
90. "The Magnetic Field Profile in Strongly Magnetized Neutron Stars". Annual NewCompStar Conference 2017, Warsaw, Poland, March 2017.
91. "Phase Transitions in Dense Matter". Quark Matter 2017, Chicago IL, February 2017.
92. "Effect of the Magnetic Field on the Dense Matter EoS". NewCompStar School 2016 - Neutron stars: gravitational physics theory and observations, Coimbra, Portugal, September 2016 (invited lecturer).
93. "Deconfinement phase transition in hot and dense matter". Laboratory and astronomical observations of dense matter, INT, Seattle WA, July 2016 (invited talk).
94. "A Self-consistent Study of Magnetic Field Effects on Hybrid Stars". Compact Stars in the QCD phase diagram V, L'Aquila, Italy, May 2016.
95. "Phase Transitions in Dense Matter". Oak Ridge National Laboratory, TN, May 2016 (invited talk).
96. "Phase Transitions in Dense Matter". Washington University in St. Louis, MO, March 2016 (invited talk).
97. "Signatures for strangeness in compact stars". Beijing, China, June 2015 (invited talk).
98. "Signatures for strangeness in compact stars". sQGP and extreme QCD, KITPC, Beijing, China, June 2015 (invited talk).
99. "The Role of Strangeness in Neutron Stars". Indiana University, Bloomington IN, November 2014 (invited talk).
100. "Neutron Star Equation of State". NASA Goddard Space Flight Center, Greenbelt MD, USA, June 2014 (invited talk).

101. "Equation of State for Hybrid Compact Stars". The Structure and Signals of Neutron Stars, from Birth to Death, Florence, Italy, March 2014.
102. "Equation of State for Hybrid Compact Star". XXVII Texas Symposium of Relativistic Astrophysics, Dallas TX, USA, December 2013.
103. "The Physics of Compact Stars". Kent State University, Kent OH, December 2013.
104. "Massive Stars within Self-Consistent Approaches". EMMI Rapid Reaction Task Force: Quark Matter in Compact Stars, Frankfurt am Main, Germany, October 2013 (invited speaker).
105. "The Influence of Strong Magnetic Fields on Neutron Stars and Proto-Neutron Stars". Spring 2013 Meeting of the APS Ohio Section, Athens OH, USA March 2013.
106. "Magnetic Field Effects on the EOS at Finite Temperature". NEOS 2012, Frankfurt am Main, Germany, November 2012.
107. "Deconfinement to Quark Matter in Neutron Stars – The influence of Magnetic Fields". XQCD 2012, Washington DC, USA, August 2012.
108. "Deconfinement to Quark Matter in Neutron Stars – The influence of Magnetic Fields". ITA, Sao Jose dos Campos, Brazil, May 2012 (invited talk).
109. "Deconfinement to Quark Matter in Neutron Stars – The influence of Magnetic Fields". USP, Sao Paulo, Brazil, May 2012 (invited talk).
110. "Deconfinement to Quark Matter in Neutron Stars – The influence of Magnetic Fields". XII Hadron Physics, Bento Gonçalves, Brazil, April 2012.
111. "Neutron Stars – A Laboratory in Space". UFSC, Florianopolis, Brazil, April 2012 (invited talk).
112. "Deconfinement to Quark Matter in Magnetars". FIAS – Johann Wolfgang Goethe University, Frankfurt am Main, Germany, July 2011.
113. "Deconfinement to Quark Matter in Magnetars". CompStar 2011: Gravitational Waves and Electromagnetic Radiation from Compact Stars, Catania, Italy, May 2011.
114. "Modeling Hybrid Stars". EMMI workshop: Neutron Matter in Astrophysics: From Neutron Stars to the r-Process, GSI, Darmstadt, Germany, July 2010.
115. "Quark Stars". 30th Annual Central Pennsylvania Consortium Astronomers Meeting, Gettysburg PA, April 2010.
116. "Quark Stars". Dickinson College, Carlisle PA, March 2010 (invited talk).
117. "A Novel Approach to Model Hybrid Stars". Light-Cone 2009: Relativistic Hadronic and Particle Physics, Sao Jose dos Campos, Brazil, Jul 2009.
118. "Chiral Symmetry Restoration and Deconfinement in Neutron Stars". Institut fuer Theoretische Physik, Frankfurt am Main, Germany, May 2009 (invited talk).
119. "The Physics of Neutron Stars". Gettysburg College, Gettysburg PA, USA, Apr 2009 (invited talk).
120. "Neutron Stars as a Probe for Dense Matter". CompStar 2009: The crust of Compact Stars and Beyond, Coimbra, Portugal, Feb 2009.
121. "Neutron Stars as a Probe for Dense Matter". International Conference on Particles and Nuclei (PANIC08), Eilat, Israel, Nov 2008.
122. "Chiral Symmetry Restoration in Neutron Stars". Frankfurt Institute for Advanced Studies, Frankfurt am Main, Germany, June 2008 (invited talk).
123. "Proto-Neutron and Neutron Stars". CompStar 2008: The Complex Physics of Compact Stars, Ladek Zdroj, Poland, Feb 2008.

124. "Neutron Star Cooling". Institut fuer Theoretische Physik, Frankfurt am Main, Germany, Dec 2007 (invited talk).
125. "Proto-Neutron and Neutron Stars". International Workshop on Astronomy and Relativistic Astrophysics, Joao Pessoa, Brazil, Oct 2007.
126. "Neutron Stars in a Chiral Model with Finite Temperature". International Nuclear Physics Divisional Conference of the European Physical Society, Dresden, Germany, Mar 2007.
127. "Neutron and Proto-Neutron Stars". Frankfurt Institute for Advanced Studies, Frankfurt am Main, Germany, Feb 2007 (invited talk).
128. "Determination of the Maximum Mass of Neutron Stars Through the Compression Modulus Using a New Model". International Workshop on Astronomy and Relativistic Astrophysics, Natal, Brazil, Oct 2005.