

**Reed Hodges**  
*Curriculum vitae*  
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**Personal Information:**

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**Education:**

PhD Physics Duke University, *expected Spring 2024*  
Durham, North Carolina USA  
Advisor: Thomas Mehen  
BS Physics Georgia Southern University, 2018, *summa cum laude*  
Statesboro, Georgia USA  
Minor: Mathematics

**Experience:**

2019-*present* Graduate Research Assistant, Duke Univ Dept of Physics  
2018-2021 Graduate Teaching Assistant, Duke Univ Dept of Physics  
2016-2017 Blue Waters Petascale Computing Intern, Shodor Education Foundation/National Center for Supercomputing Applications

**Publications:**

1. M Copeland, S Fleming, R Gupta, R Hodges, & T Mehen (2023). Polarized TMD fragmentation functions for  $J/\psi$  production. [inspire] [arXiv]
2. L Dai, S Fleming, R Hodges, & T Mehen (2023). Strong decays of  $T_{cc}^+$  at NLO in an effective field theory. *Phys Rev D* **107**, 076001. [doi] [inspire] [arXiv]
3. S Fleming, R Hodges, & T Mehen (2021).  $T_{cc}^+$  decays: Differential spectra and two-body final states. *Phys Rev D* **104**, 116010. [doi] [inspire] [arXiv]
4. R Hodges, K Rosado-Ayala, & M Durach (2017). Computational approaches to scattering by microspheres. *J Comput Sci Educ* **8**(3), 19-24. [pdf]
5. R Hodges, C Dean, & M Durach (2017). Optical neutrality: invisibility without cloaking. *Opt Lett* **42**(4), 691-694. [doi] [arXiv]

## **Presentations & Seminars:**

1. R Hodges, M Copeland, S Fleming, RK Gupta, & T Mehen (Mar 2023). Polarized  $J/\psi$  TMD fragmentation functions. Contributed talk at the XXth annual workshop on Soft-Collinear Effective Theory, Berkeley, California USA.
2. R Hodges, SP Fleming, TC Mehen, & L Dai (Apr 2022). Studying  $T_{cc}^+$  decays using effective field theory. Contributed talk at the APS April Meeting, New York, New York USA.
3. R Hodges (Dec 2021).  $T_{cc}^+$  decays: Differential spectra and two-body final states. Effective Field Theory Seminar at Technische Universität München, virtual.
4. R Hodges & TC Mehen (Oct 2021). NRQCD matching calculations aided by the threshold expansion. Contributed talk at the Fall Meeting of the APS Division of Nuclear Physics, virtual.
5. R Steele & R Hodges (Apr 2018). Temperature dependence of the refractive index of soda-lime glass. Poster presented at the College of Science & Mathematics Office of Undergraduate Research Symposium, Statesboro, Georgia USA.
6. RM Hodges & M Durach (Apr 2017). Angular momentum in photonic nanojets due to chirality. Poster presented at the College of Science & Mathematics Office of Undergraduate Research Research Symposium, Statesboro, Georgia USA.
7. RM Hodges & M Durach (Mar 2017). Invisibility of a metamaterial without a cloak. Poster presented at the APS March Meeting, New Orleans, Louisiana USA.
8. RM Hodges & M Durach (Nov 2016). Invisible metamaterial microspheres. Contributed talk at the Georgia Undergraduate Research Conference, Milledgeville, Georgia USA.
9. K Rosado, RM Hodges, & M Durach (Nov 2016). Developing Fortran codes for photonics research. Poster presented at the Georgia Undergraduate Research Conference, Milledgeville, Georgia USA.
10. RM Hodges & M Durach (Nov 2016). Invisible metamaterial microspheres. Poster presented at the Georgia Undergraduate Research Conference, Milledgeville, Georgia USA.
11. RM Hodges, CE Dean, & M Durach (Mar 2016). Scattering on hyperbolic microspheres: from photonic nanojets to Poisson-Arago bright spots. Poster presented at the APS March Meeting, Baltimore, Maryland USA.
12. RM Hodges, CE Dean, & M Durach (Nov 2015). Photonic nanojets produced by all-dielectric and hyperbolic meta-microspheres. Poster presented at the Georgia Undergraduate Research Conference, Statesboro, Georgia USA.