Nicholas H. Rivera
www.nrivera.scripts.mit.edu/nhr

CONTACT INFORMATION

nrivera@mit.edu

EDUCATION

Massachusetts Institute of Technology, Cambridge, MA

PhD Candidate in **Physics** (Expected) June 2021

- Doctoral Supervisor: Prof. Marin Soljačić
- **DOE Computational Science Graduate Fellow** 2016-2020
- **MIT School of Science Fellow** 2020-2021

Bachelor of Science in **Physics** June 2016

- GPA: 5.0/5.0

ACCEPTED PUBLICATIONS (* DENOTES EQUAL CONTRIBUTION)

3. Lin, X. **Rivera, N.**, Lopez, J.J., Kaminer, I., Chen, H., and Soljacic, M. "Tailoring the energy distribution and loss of 2D plasmons." In press.
2. **Rivera N.***, Kaminer, I.*, Zhen B., Joannopoulos, J.D. and Soljacic M. "Shrinking light to allow forbidden transitions on the atomic scale." **Science**, 353, 6296. (2016).
1. **Rivera, N.**, Hsu, C.W., Zhen, B., Buljan, H., Joannopoulos J.D., and Soljacic, M. "Controlling directionality and dimensionality of radiation through separable bound states in the continuum." **Scientific Reports**, 6, 33394. (2016).

SUBMITTED PUBLICATIONS

1. Machado, F.*, **Rivera N.***, Buljan, H., Soljacic, M., and Kaminer, I. "Shaped polaritons reshape selection rules". In review.

PATENTS

2. **Rivera N.H.**, Kaminer, I., Zhen B., Joannopoulos, J.D. and Soljacic M. "Thin-Film Polaritons for spectroscopic, light emission, quantum optics, and sensing applications". Provisional Patent Application filed Jun. 2016.
1. **Rivera N.H.**, Kaminer, I., Zhen B., Joannopoulos, J.D. and Soljacic M. "Plasmons for spectroscopic, light emission, and broadband light generation applications". Provisional Patent Application filed Dec. 2015.

HONORS AND AWARDS

1. **LeRoy Apker Award (APS)** Oct 2016
2. **Order of the Lepton Award (MIT)** Jun 2016
3. **Joel Matthew Orloff Award for Outstanding Service (MIT)** Jun 2016
4. **Joel Matthew Orloff Award for Outstanding Research (MIT)** Jun 2016
5. **Hertz Foundation Fellowship Finalist** Jan 2016

CONFERENCE PRESENTATIONS

5. **Invited Presentation**: March Meeting (APS)., New Orleans, LA Mar 2017
4. **Invited Presentation**: Workshop on Light-Matter Interaction and Excited State Dynamics (Northrop Grumman)., Redondo Beach, CA Oct 2016
3. **Contributed Talk**: Frontiers in Optics/Laser Science, Rochester, NY Oct 2016
2. **Contributed Talk**: Conference on Lasers and Electro-Optics., San Jose, CA Jun 2016
1. **Contributed Talk**: Frontiers in Optics/Laser Science, San Jose, CA Oct 2015

JOURNALS I REFEREE FOR

Optica, Phys. Rev. A, ACS Photonics, Optics Letters