

## Maresh C. Gandikota

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### CONTACT INFORMATION

H108, Academic Block, ICTS  
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### EDUCATION

**Ph.D., Physics**, Syracuse University, Syracuse, NY, USA **2021**

Thesis Title: Interplay of Geometry and Mechanics:  
Disordered Spring Networks and Shape-Changing Cerebella  
Thesis Advisor: Prof. J. M. Schwarz

**Integrated M.Sc., Physics**, National Institute of Science Education  
and Research, Orissa, India **2015**

Thesis Title: Martensitic phase transition of bacteriophage T4's tail sheath  
Thesis Advisor: Prof. Somendra Bhattacharjee  
G.P.A.: 8.2

**Twelfth grade board exam**, National College, Bangalore, India **2010**

Marks: 81%

**Tenth grade board exam**, HJKP, Bangalore, India **2008**

Marks: 97.4%

### EMPLOYMENT

**Postdoc**, International Centre for Theoretical Sciences, Karnataka, India **2024–Present**

**Postdoc**, Department of Chemistry, Columbia University, NY, USA **2021–2024**

**Research Assistant**, Department of Physics, Syracuse University, NY, USA **2016–2021**

**Teaching Assistant**, Department of Physics, Syracuse University, NY, USA **2015–2020**

### PUBLICATIONS

9. A.D. Chen, M. C. Gandikota, and A. Cacciuto, “[The shape of cleaved tethered membranes](#)”, Soft Matter, Accepted Manuscript (2025).
8. M. C. Gandikota, Shibabanda Das and A. Cacciuto, “[Spontaneous crumpling of active spherical shells](#)”, Soft Matter, 20.17 (2024).
7. M. C. Gandikota and A. Cacciuto, “[The crumpling transition of active tethered membranes](#)”, Soft Matter, 19.28 (2023).
6. M. C. Gandikota and A. Cacciuto, “[Rectification of confined soft vesicles containing active particles](#)”, Soft Matter, 19.2 (2023).
5. M. C. Gandikota and A. Cacciuto, “[Effective forces between active polymers](#)”, Physical Review E, 105, 034503 (2022).
4. M. C. Gandikota Amanda Parker and J. M. Schwarz, “[Rigidity transitions in zero-temperature polygons](#)”, Physical Review E, 106, 055003 (2022).
3. M. C. Gandikota and J. M. Schwarz, “[Buckling without bending morphogenesis: Nonlinearities, spatial confinement, and branching hierarchies](#)”, New Journal of Physics, 23, 063060 (2021).

2. M. C. Gandikota, Katarzyna Pogoda, Anne van Oosten, T. A. Engstrom, A . E. Patteson, P. A. Janmey, J. M. Schwarz, “[Loops versus lines and the compression stiffening of cells](#)”, Soft Matter, 16(18), 4389-4406 (2020).
1. S. Paul, M. C. Gandikota, “[Fourier Transform of Electric Signal using Kundt’s Tube](#)”, Student Journal of Physics, 6(2), 95-100 (2016).

## TEACHING

### Recitations/Substitute Lecturer

PHY 216, General Physics II for honors and majors      **Spring & Fall 2017, Spring 2018**  
 PHY 212, General Physics II      **Spring & Fall 2016**  
 PHY 211, General Physics I      **Fall 2015**

### Labs

AST 101, Our Place in the Universe      **Fall 2020**  
 PHY 102, Major Concepts of Physics II      **Spring 2019, 2020**

### Grading/Substitute Lecturer

PHY 635, Physical Cell Biology      **Fall 2018**  
 PHY 360, Vibrations, Waves and Optics      **Fall 2018**

### Guest Lecturer

CHEM G4221, Statistical Thermodynamics      **Fall 2022**

## MENTORING

### Undergraduate Students

Alexandra Brown (REU program)      **Summer 2016**

## LANGUAGES

**Human:** English, Telugu (mother tongue), Kannada (native), Hindi.

**Programming:** Bash, C++, Python, MATHEMATICA.

**Markup:**  $\text{\LaTeX}$ , Markdown.

**Operating System:** Linux, Windows.

## AWARDS

**Summer Graduate Fellowship**, Soft Matter Program, Syracuse University      **Summer 2017**  
**Henry Levinstein Fellowship**, Physics Department, Syracuse University      **Summer 2016**  
**All India Rank 24**, Graduate Aptitude Test in Engineering (GATE)      **2015**  
**Summer Research fellow**, Indian Academies of Sciences      **Summer 2012**  
**INSPIRE fellowship**, Department of Science and Technology, Government of India      **2010-15**

## CONFERENCES/ WORKSHOPS

**Gordon Research Seminar & Conference**, contributed posters.      **2023**  
**Northeast Complex Fluids and Soft Matter workshop**, contributed talk.      **2023**  
**APS March Meeting**, contributed talks.      **2017, 2018, 2019, 2020**  
**Soft Matter Summer School**, University of Massachusetts, Amherst, poster.      **2017**

SERVICE TO  
PROFESSION

**Experiment Leader**, Girls Science Day, Columbia University. **April, Nov 2023**

**Organizer**, Soft Matter Journal Club, Syracuse University. **2019-2020**

**Moderator**, APS Conference for Undergraduate Women in Physics, Syracuse University. **2016**

**Volunteer, Photographer**, Active and Smart Matter conference, Syracuse University. **2016**

**Volunteer**, Science Day, annual joint outreach program to high school students, NISER, IOP, Bhubaneswar. **2011, 2012, 2014**

## NON-ACADEMIC

**President**, Argentine Tango Club, Syracuse University. **Fall 2017 - Fall 2020**

**Editorial Board**, Jignasa, annual magazine of NISER, Bhubaneswar. **2014**

## REFERENCES

**J. M. Schwarz**

Professor  
Department of Physics  
Syracuse University  
229A Physics Building  
Syracuse, NY 13244, USA  
email: [jmschw02@syr.edu](mailto:jmschw02@syr.edu)

**A. Cacciuto**

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Department of Chemistry  
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**Chandan Dasgupta**

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