

# Gagandeep S. Anand

Astronomy PhD Candidate  
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## EDUCATION

### UNIVERSITY OF HAWAII

PHD IN ASTRONOMY  
Expected 2021 | Honolulu, HI

### UNIVERSITY OF HAWAII

M.S. IN ASTRONOMY  
December 2018 | Honolulu, HI

### BOSTON UNIVERSITY

M.A. IN ASTRONOMY  
May 2017 | Boston, MA

### VASSAR COLLEGE

A.B. IN ASTRONOMY & PHYSICS  
MINOR IN MATHEMATICS  
May 2015 | Poughkeepsie, NY

## SKILLS

### COMPUTER LANGUAGES

• IDL •  $\text{\LaTeX}$  • Python

### ASTRONOMICAL SOFTWARE

• CIAO • DOLPHOT • DS9 • GALFIT  
• IRAF • MaxIm DL • PHOEBE • XSPEC

## TEACHING

### BOSTON UNIVERSITY

#### TEACHING FELLOW

- Astronomy 105- Alien Worlds (Spring 2016)
- Astronomy 109- Cosmology (Fall 2015/Fall 2016)
- Astronomy 203- Principles of Astronomy II (Spring 2017)

### VASSAR COLLEGE

#### ASTRONOMY ACADEMIC INTERN

- Astronomy 101- Solar System Astronomy (Fall 2014)
- Astronomy 105- Stars, Galaxies, & Cosmology (Spring 2015)

## RESEARCH

### UNIVERSITY OF HAWAII AT MANOA

September 2017 – Present | Professor R. Brent Tully

- Studying the resolved stellar populations of nearby galaxies with Hubble Space Telescope imaging
- Determining distances to galaxies using stars near the tip of the red giant branch and curating the Extragalactic Distance Database

### IPAC/CALTECH

February 2020 – Present | Professors Janice Lee & Schuyler Van Dyk

- Measuring tip of the red giant branch distances to nearby star-forming galaxies using parallel ACS imaging from the PHANGS-HST survey

### W.M. KECK OBSERVATORY

July 2017 – August 2017 | Dr. Luca Rizzi

- Enhanced an existing pipeline for photometric analysis of imaging data from the Hubble Space Telescope

### BOSTON UNIVERSITY

July 2015 – May 2017 | Professor Elizabeth Blanton

- Examined bent radio galaxies to study the physics of the intracluster medium and to find high-redshift galaxy clusters

### COLBY COLLEGE

May 2014 – Aug. 2014 | Professor Elizabeth McGrath

- Used CANDELS data to analyze progenitors to today's massive quiescent galaxies

### VASSAR COLLEGE

Sept. 2011 – May 2015 | Professor Fred Chromey

- Collected and reduced spectra and CCD images for various research projects using the 0.8m campus telescope
- Used Physics of Eclipsing Binaries (PHOEBE) 2.0 to model contact binaries and hierarchical star systems

## AWARDS

- ARCS George and Mona Elmore Award in Astronomy (2020)
- IPAC Visiting Graduate Student Fellowship (Spring+Summer 2020)
- Keck Visiting Scholar (Summer 2017)

## ACCEPTED PROPOSALS

- Co-I: Every Known Nearby Galaxy, Hubble Space Telescope, SNAP Proposal, 153 orbits (Cycle 27)
- Co-I: A Swift Look at the COBRA Sample: Confirming Clusters found via Bent Radio AGN, Swift X-ray Telescope, 190.1 ks (2017a)

## PROFESSIONAL SERVICE

- Referee- Astrophysical Journal (2 papers)

## REFEREED PUBLICATIONS

Summary: 8 Refereed Publications (4 as first author), 50+ citations

[NASA ADS Link to All Publications](#)

### FIRST-AUTHOR PUBLICATIONS

- Peculiar Velocities of Galaxies Just Beyond the Local Group, Anand et al. 2019, ApJ
- The Distance and Motion of the Maffei Group, Anand et al. 2019, ApJL
- A Robust Tip of the Red Giant Branch Distance to the Fireworks Galaxy (NGC 6946), Anand et al. 2018, AJ
- The Distance to the Galaxy Coma P, Anand et al. 2018, ApJL

### CO-AUTHOR PUBLICATIONS

- KKH 22, The First Dwarf Spheroidal Satellite of IC 342, Karachentsev et al. 2020, A&A
- Cosmicflows 4: The Calibration of Optical and Infrared Tully-Fisher Relations, Kourkchi et al. 2020, ApJ
- Does Gravity Fall Down? Evidence for Gravitational-wave Deflection along the Line of Sight to GW170817, Rubin et al. 2020, ApJL
- The High-Redshift Clusters Occupied by Bent Radio AGN (COBRA) Survey, Paterno-Mahler et al. 2017, ApJ

## CONFERENCE PRESENTATIONS

### POSTERS

- PHANGS-HST: New Tip of the Red Giant Branch Distances
  - 236th Meeting of the American Astronomical Society, June 2020
- The Extragalactic Distance Database: Color Magnitude Diagrams and Tip of the Red Giant Branch Distances
  - 235th Meeting of the American Astronomical Society, January 2020
- Tip of the Red Giant Branch Distances to Nearby Galaxies,
  - Stars: Birth and Death (GMT Community Science Meeting), September 2018
  - The 21st Century HR Diagram (Space Telescope Science Institute), April 2018
- Chandra Observation of the WAT Radio Source/ICM Interaction in Abell 623
  - 229th Meeting of the American Astronomical Society, January 2017
  - Chandra Science for the Next Decade (Harvard-Smithsonian Astrophysical Observatory), August 2016

### TALKS

- PHANGS-HST: New Tip of the Red Giant Branch Distances
  - IPAC/Caltech Colloquium, July 2020
- Tip of the Red Giant Branch Distances to Nearby Galaxies
  - Caltech Tea Talk, June 2020
  - Visiting Scholars Talk, W.M. Keck Observatory, August 2017
- Peculiar Velocities of Galaxies Just Beyond the Local Group
  - Constrained Local Universe Simulations 2019 Meeting (University of Lyon), September 2019
- Exploring the Structural Evolution of Massive Quiescent Galaxies
  - Keck Northeast Astronomy Consortium, November 2014
  - Colby Undergraduate Summer Research Retreat, July 2014
- Observations and Analysis of Orbital Period Changes in Contact Binaries
  - Keck Northeast Astronomy Consortium, October 2013
  - Vassar Undergraduate Research Summer Institute, July 2013