

## Faculty Profiles

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Dr. S. Bagvanth Reddy,  
M. Sc., Ph. D. (USA)  
Assistant Professor (C),  
**Head of the Department,**  
Department of Physics,  
PU PG Centre, Wanaparthy.  
Phone: 9640486128  
Email: bagvanthreddy.physicist@gmail.com



Dr. S. Bagvanth Reddy has obtained his M. Sc. and junior research fellow experience from Hyderabad Central University in the years 2003-05 and 2005-07 respectively. He has qualified the national level exams: CSIR-NET and GATE. During his research work at HCU, he published conference papers on laser induced shockwave dynamics. He pursued his PhD in the University of Alabama at Birmingham, USA in 2007-13 on “***High frequency resolution terahertz time-domain spectroscopy***”. In his PhD research, he devised a new method for analysing terahertz frequency regional spectra of layered materials. During his postdoctoral research at Tata Institute of Fundamental Research in Mumbai between 2013 and 2015, he worked on design, simulation, fabrication and characterization of THz metamaterials. His research work is published as several articles in peer reviewed national and international journals and in international conference proceedings. His current research interests are: laser induced shock waves, metamaterials, THz radar, and terahertz spectroscopy. Since 2016, he has been working as an Assistant Professor (C) in the PG Center at Wanaparthy, Palamuru Univerisity.

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# Profile

**Name:** Dr. Bagvanth Reddy Sangala  
**Father's Name:** S. Kanthi Reddy (late)  
**Date of Birth:** May 9<sup>th</sup>, 1983  
**Place of Birth:** Bijinapally, Nagarkurnool (District)  
**Social Status:** General  
**Marital Status:** Unmarried  
**Nationality:** India  
**Languages known:** Telugu, Hindi, English, Sanskrit, Tamil, Kannada  
**Email id:** bagvanth\_uab@ymail.com  
**Phone:** 9640486128



## 1. Educational Qualifications (starting with highest degree obtained) :

Sl. No.	Examination/ Degree	Name of Board/University	Percentage of marks/Grade	Discipline/Subject(s)	Year of Passing / Award
1	<b>Ph.D</b>	University of Alabama at Birmingham, AL, USA	NA	Physics	Aug, 2013
2	<b>M.S.</b>	University of Alabama at Birmingham, AL, USA	3.8 out of 4	Physics	2008
3	<b>M.Sc.</b>	Hyderabad Central University (HCU), AP, India	76.4%	Physics	2005
4	<b>B. Sc.</b>	Sri Krishnadevaraya University (Silver Jubilee College, APRDC), AP	84.5%	Mathematics, Physics, Industrial Chemistry	2003
5	<b>Intermediate</b>	Board of Intermediate Education, AP	84.2%	Mathematics, Physics, Chemistry	2000
6	<b>10<sup>th</sup></b>	Board of Secondary Education, AP	68%	Telugu, Hindi, English, Maths, Science, Social	1998

## 2. Title of Ph.D. Thesis: High Frequency Resolution Terahertz Time-Domain Spectroscopy

(i) Date & Year of awarded: Aug 10<sup>th</sup>, 2013

## 3. Whether Qualified UGC/CSIR/JRF/SET: CSIR-UGC NET. Qualifying date of test: 01/12/2005.

## 4. Details of Employment (in chronological order starting with most recent)

Sl. No.	Name of the Employer	Status of the Institute/University (Govt./Quasi Govt./Autonomous/Private)	Post held/Designation	Period of Employment	Pay band/Scale and Grade Pay	Nature of Duties
1	<b>Palamuru University</b>	Govt.	Academic Consultant	2016-Present	23,000 INR per month	Teaching
2	<b>Palamuru University</b>	Govt	Part Time Lecturer	2015-2016	15,000 INR per month	Teaching
3	<b>Tata Institute of Fundamental Research</b>	Govt.	Visiting postdoctoral fellow and Scientist	2013-2015	37,000 INR per month	Research

4	<b>University of Alabama at Birmingham, AL, USA</b>	Govt.	Graduate Research Assistant	2009-2013	1800 USD per month	Research
5	<b>University of Alabama at Birmingham, AL, USA</b>	Govt.	Graduate Teaching Assistant	2007-2009	1600 USD per month	Teaching
6	<b>Advanced Center for High Energy Materials, HCU, India</b>	Govt.	Junior Research Fellow	2005-2007	8,000 INR per month	Research

### 5. Experience:

- (i) Teaching 2.5 Years (1 yr part time Lecturer, 1.5 yr-academic Consultant)
- (ii) Research (Excluding M.Phil./Ph.D. Research) 3rs Years 2 months (1 yr 8 months at Pre PhD, 1 yr 6 months as postdoc)
- (iii) Total: 5.5 years

### 6. Details of Research Experience:

Sl. No.	Position	Institution	Country	Period	Project	Funding
1	<b>Visiting Postdoctoral fellow and Scientist</b>	Tata Institute of Fundamental Research	India	Oct, 2013-April, 2015	Terahertz (THz) Metamaterials, THz Spectroscopy	Department of Atomic Energy, India
2	<b>PhD student</b>	University of Alabama at Birmingham	USA	Aug, 2007-Aug, 2013	High Frequency Resolution THz spectroscopy	NASA, USA
3	<b>Junior Research Fellow</b>	Advanced Center for Research in High Energy Materials	India	Nov, 2005-Jul, 2007	Laser Induced Plasma assisted shock wave Dynamics in air	DRDO, India

### 7. Academic Experience:

Sl.No.	Post held	Organization	Period	Remarks
1	<b>Part time Lecturer</b>	Palamuru University	2015-16	No
2	<b>Academic Consultant</b>	Palamuru University	2016-present	No

### 8. Administrative Experience:

Sl.No.	Name of Post	Name of the University	Duration		Experience
			From	To	
1	NA	NA	NA	NA	NA

### 9. Invited Talks in Conference / Seminar / Workshop:

Sl.No.	Name of conference / Seminar / Workshop	Delivered Topic	Name of the Organization	Level (State/ National/International)
1	NA	NA	NA	NA

**10. Publications:**

Sl. No	Type of Publication (Books/Research papers/Articles in journals/Research Article)	ISSN/ ISSB	Publisher	Published/ Accepted	Communicated
1	High Frequency Resolution Terahertz Time-Domain Spectroscopy (Book)	ISBN: 9781303323508	ProQuest Dissertations And Theses	2013	2013
2	Bio-interfacing of resonant transmission characteristics of InSb-based terahertz plasmonic waveguide (Journal Article)	ISSN:2057-1976	Biomedical Physics and Engineering Express	2015	2014
3	Resonant Terahertz InSb Waveguide Device for sensing Polymers (Journal Article)	ISSN:1866-6892(print) ISSN: 1866-6906 (onlin)	Journal of Infrared and Millemeter and Terahertz waves	2016	2015
4	Evaluation of Structure-reactivity descriptors and biological activity spectra of 4-(6-methoxy-2-naphthyl)-2-butanone using spectroscopic techniques (Journal Article)	ISSN:1386-1425	Spectrochimica Acta Part A:Molecular and Biomolecular Spectroscopy	2016	2015

**11. Paper Presentations in Conference / Seminar / Workshops:**

Sl. No	Paper Title	Title of Conference / Seminar/Workshop	Present ation Type	Remarks
1	Shock Wave Dynamics in Air Using Probe Beam Deflectometry	SEVENTH DAE - BRNS NATIONAL LASER SYMPOSIUM(NLS-7) (India)	Poster	Presented by a Co-author
2	Beam Delectometry Method for Characterization of Laser-induced Shock Waves	High Energy Materials Conference & Exhibits-2007 (India)	Oral	Presented by a Co-author
3	Terahertz time-domain spectroscopy of Ices of N <sub>2</sub> , CO <sub>2</sub> , and Ar	American Physical Society, 2011 (USA)	Oral	No
4	Terahertz time-domain spectroscopy of $\alpha$ -Nitrogen Ice	IRMMWTHz-2011 (USA)	Oral	No
5	Terahertz time-domain spectroscopy of N <sub>2</sub> and CO <sub>2</sub> ice mixtures at 20K	Science and Technology Open house at Tuskegee, AL-2012 (USA)	Poster	No
6	Measurement of Decoherence Lifetimes in a High Mobility Two-Dimensional Electron Gas	Ultrafast Phenomena XVIII-2012 (Switzerland)	Poster	Presented by a Co-author
7	Terahertz Time-Domain Spectroscopy of Nitrogen Ice	American Physical Society, 2013 (USA)	Oral	No
8	A Narrowband THz Metamaterial Polarizer	Photonics-2014 (India)	Oral	No
9	A tunable Fano-Resonance in the THz Metamaterials	COMSOL-2014, (India)	Poster	No

10	Indium Antimonide (InSb) based planar THz plasmonic Waveguide	IRMMW-THz-2014 (USA)	Oral	Presented by a co-author
11	Indium antimonide (InSb) based THz sensor	IRMMW-THz-2015 (Hong kong)	Oral	Presented by a co-author

## 12. Training Courses / FDP Refresh Courses / Orientation Courses:

Duration & Position	Institution	Nature of the work done
Teacher Orientation Program Jun17th-Jun 30 <sup>th</sup> , 2016	Palamuru University	Listening talks and participation in discussions
Photonics-2006 December 13 <sup>th</sup> -16 <sup>th</sup> . (International Conference)	Hyderabad Central University	Participation in organizing a conference. Sorted out papers for topics to write CDs and books, helped speakers with technical support, etc.

## 13. Full Length Papers in proceedings of Conferences (National / International)

1. "High Pressure Phase Transformations in Heavy Rare Earth Metals and Connections to Actinide Crystal Structures," MRS Proceedings, 2008. (International)
2. "Terahertz time-domain spectroscopy of  $\alpha$ -nitrogen ice," IRMMW-THz proceedings, 2011. (International)
3. "Decoherence in a Landau Quantized Two Dimensional Electron Gas", The European Physical Journal Conferences, 2013. (International)
4. "Indium Antimonide (InSb) based planar THz plasmonic Waveguide" IRMMW-THz proceedings, 2014. (International)
5. "Indium antimonide (InSb) based THz sensor, IRMMW-THz proceedings, 2015. (International)

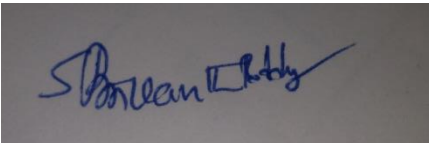
## 16. Details of travel(s) abroad:

- (i) Countries visited : USA
- (ii) Duration : Six years
- (iii) Purpose : To pursue PhD.

## Declaration:

**I hear by declare that the above information given by me is true, complete and correct in the best of my knowledge and belief and that nothing has been concealed or distorted thereof.**

**Date:** December 21<sup>st</sup>, 2017.



**Signature**

**Name:** Dr. Bagvanth Reddy Sangala