

RATNA K.N.S.R.

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INTERESTS Syntax, Natural Language Processing

EDUCATION

Indian Institute of Technology Hyderabad, Ph.D. Linguistics, Expected: 2024 (GPA: 9/10)

- **Organized** weekly tutorial sessions on natural language syntax, in particular, Phrase Structure Grammar (PSG) to a batch of 200+ B.Tech students.

University of Hyderabad, Master in English Language Studies, 2019 (GPA: 8.8/10)

University of Hyderabad, Integrated Masters in Systems Biology, 2017 (GPA: 7.5/10)

PUBLICATIONS

- **R. Nirupama** & P. Mondal. (2023). On the Implementation of the Algorithm for Representation of Discontinuity in Natural Language. *ICNLP 2023* (to be published in IEEE Xplore).
- **R. Nirupama** & P. Mondal. (2022). The Representation of Discontinuity and the Correspondence Principle. *PACLIC36*. <https://aclanthology.org/2022.paclic-1.3/>

AWARDS AND HONORS

Full Fee Waiver based on merit, Neuromatch Deep Learning Course	2023
Best Presentation Award , 5 th International Conference on Natural Language Processing (ICNLP)	2023
Senior Research Fellowship , Ministry of Education, Govt. of India	2021
Junior Research Fellowship , Ministry of Education, Govt. of India	2019
National Eligibility Test - Linguistics	2018 & 2019
GATE Fellowship – Ecology and Evolution (AIR 52)	2019
TSSET – Life Sciences	2017
Second Best Poster Award , GIAN workshop on Ionic Signaling and Human Disease (₹5000/- cash prize)	2016
Full Tuition Fee waiver based on merit	2002-03

TALKS

1. *On the Implementation of the Algorithm for Representation of Discontinuity in Natural Language*. ICNLP, Guangzhou, 2023.
2. *The Representation of Discontinuity and the Correspondence Principle* at PACLIC36, Manila, 2022.
3. *Choice of Discipline and English Language Proficiency Levels*, National Seminar on Innovative Practices and Research in the Era of Digi Education, Hyderabad as M.A. student, 2019.
4. *Academic Background, Language Proficiency and Choice of Discipline : An Exploration*, National Seminar on Interfaces in English Language Studies: Research and Practice, Hyderabad as M.A. student, 2019.
5. Postgrad Thesis Defense
Mushroom Body Circuitry to understand the role of feedback mechanisms from the alpha and beta lobes to the calyx, May 2017.
6. GIAN Workshop on Ionic Signaling Poster Session
Memory Retrieval by Activating Engram Cells in Mouse Models of Early Alzheimer's disease by Dheeraj Roy et al., Hyderabad as I.M.Sc student - July 2016.

RESEARCH EXPERIENCES

Ph.D.	2019 – 2024
<ul style="list-style-type: none">▪ Achieved a unified representation of continuity and discontinuity in natural language by integrating constituency relations, head-dependent relations, and functor-argument relations, for 4 simple and 4 complex discontinuous sentences. Proposed the correspondence principle to unify the dependency and the functor-argument relations.▪ Published papers in ACL-Anthology and IEEE Xplore	

University of Hyderabad, India

2018-2019

Research Intern

- **Designed** and **conducted** an innovative study; **Explored** the impact of academic background on language proficiency levels among 132 undergraduates in the age group of 17-23 years through questionnaires, and **analyzed** the data using Microsoft Excel.
- **Presented** the research findings at two national seminars.

University of Hyderabad, India

May 2016 - May 2017

Masters Project

- **Constructed** a model of the locust brain's Mushroom Body Circuitry using NEURON and analyzed data from Clamp Patch simulations using MATLAB.

University of Hyderabad, India

Summer 2015

Research Intern

- **Analyzed** RNA-Seq datasets to **investigate** RNA expression changes during Neural Stem Cell differentiation in mouse using Microsoft Excel
- **Contributed** as a second author to the presentation of research findings as a poster at IISER Trivandrum.

SERVICE

ACADEMIC:**National Seminar on English Language Education in India**

Hyderabad

Student Volunteer

March, 2018

- **Coordinated** with speakers and panelists, **welcomed** and **registered** attendees, **managed** logistics, **led** Q&A sessions, and **facilitated** the smooth running of the event.

Project Akshara

Hyderabad

Student Volunteer

Jan 2014 - Apr 2014

- **Trained** 150+ children in maths and English, **organized** activities to promote a more positive and supportive learning environment, **gained** experience in working with children from disadvantaged backgrounds, and **developed** strong communication, interpersonal, and teaching skills.

NON-ACADEMIC:**International Relations Cell, IITH**

2023 – Present

*Ph.D. Outbound Coordinator***Martial Arts Club, IITH**

2023

Instructor

TECHNICAL SKILLS

• Microsoft Office • MATLAB • Linux • Adobe Acrobat • Technical Writing • Machine Learning

LANGUAGES

Computer: Python; experience in MATLAB, R, C**Natural:** proficient in English (Fluent), Telugu (Native), Hindi (Fluent), Russian (Elementary)