

A. V. Ravishankar Sarma

Lecturer

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Current Duties

I am currently working as a lecturer in the Department of Humanities and Social Sciences , IIT Kanpur. I taught level-1 course titled *Introduction to Logic:PHI142* course in the winter (2007-2008) and Summer (May-July 2008) and in the last semester (2008). I will be teaching *Philosophy of Science: PHI446* course at level-2, in the next semester.

I will be discipline convener from November 30th onwards and in the absence of my colleagues, I would act as officiating supervisor for three PhD students and co-supervisor for another two students.

Main Areas of Interest

Formal Logic

Philosophy of Science

Other Areas of Specialization

Epistemic Logic, Belief Revision, Belief Revision in Games.

Philosophical Logic

Causality in Physics and AI.

Education

Ph.D. Philosophy(formal Logic), Indian Institute of Technology Bombay, 2006.

M.A. Philosophy (major in Logic), Hyderabad Central University, Hyderabad 1998

M. Sc. Physics (Solid state Physics), Kakatiya University, Warangal, 1996

B.Sc. Mathematics, Physics, and Chemistry, Nagarjuna University, Nagarjuna nagar, 1994.

Academic Performance

Table 1: Academic Performance from School

| S. No. | Year | Name of Degree | University | Subjects | % CPI |
|--------|-----------|----------------|----------------------|-------------------|-------|
| 1 | 1989 | SSC | SSC board-AP | Maths, science | 63 |
| 2 | 1991 | Inter | BIE, Hyderabad | MPC | 53.6% |
| 3 | 1991-1994 | B. Sc | Nagarjuna University | MPC | 74 |
| 4 | 1994-1996 | M. Sc | Kakatiya University | Physics | 64 |
| 5 | 1997-1999 | M. A | Hyderabad University | Philosophy | 64.5 |
| 5 | 2000-2006 | PhD | IIT Bombay | Philosophy(Logic) | 8.85 |

Research Experience

1. Lecturer, Indian Institute of Technology Kanpur, Kanpur, Uttar Pradesh: (September 6th, 2007-present).
2. Visiting Faculty, International Institute of Information Technology, Gachibowli, Hyderabad: April 15th 2007 to August 30th 2007.
3. Post Doctoral Fellow, Homi Bhabha Centre for Science Education(HBCSE), Mumbai, Feb 15th 2007 to April 13th 2007.
4. Guest Researcher, Institute for Logic, Language and Computation(ILLC), University of Amsterdam, Amsterdam, October 1st 2006 to January 1st 2007.
5. Research Associate, Indian Institute of Management Bangalore, Bangalore, February 15th 2006 to September 30th 2006.
6. Research Assistant, Indian Institute of Technology Bombay, Powai, 2000-2006.

Research Plan for next Five years

A brief Research plan for the next 5 years has been attached with this mail.

Courses Taught

| Course No. and Title | Level | Number of Times | Developed by you? |
|--------------------------------|-------|-----------------|-------------------|
| PHI:142: Introduction to Logic | I | 3 | No |
| PHI:446: Philosophy of Science | II | - | - |

Teaching Experience

| Duraion | Organization | Area(s) |
|---------|--------------|--------------------------------|
| 1 year | IIT Kanpur | Logic and Phiosophy of Science |

Tentative courses planned for next five years

1. Level-1

Introduction to Logic (old)

Scientific reasoning(Survey of the methods of induction, other methodologies and experimental inquiry)

Introduction to Philosophical method (Study of how to do Philosophy while analyzing Philosophical Arguments)

Introduction to History and philosophy of science (Various world-views from Galilio to Einstein).

2. Level-2

Philosophy of Science

History and Philosophy of science (With Prof. Mahendra Verma and Prof. Y. N. Mohapatra)

Core Logic (brings out historical development of developments in Formal Logic)

Philosophy of Economics (Philosophical tools used in Economics)

Philosophy of Decision Theory (Preliminaries of Utility Theory, Rational Choice Theory, Game theory)

3. Ph. D

Philosophical Logic, Advanced Philosophical method, Advanced Epistemology

Knowledge representation and Reasoning.

4. **Summer Courses:** First order Logic through Prolog and *Introduction to Game Theory*

Initiation grant proposal

I have been working on a project proposal titled *On an explanatory driven belief revision system* from November 2007 and the work is expected to be finished by June 2009. The project is generously supported by IITK under the Initiation grant given to new faculty. An extended abstract has been attached with this application form.

Sponsored Projects

A project proposal titled *Interactivist Process based design of autonomous system* has been submitted to the Indo-French center for promotion of advanced research. **The proposal is currently under the review.** An abstract of the project has been attached. Principal Investigators: Prof. Bipin Indurkha (IIT Hyderabad), George Stojanov (France)

Co-investigators: A. V. Ravishankar Sarma, A. Kulakov (American University of Paris)

Period of Project: 3 years

Sponsoring Organization: IFCPAR/CEFIPRA

Administrative Experience

Seminar Convener in HSS department (From April 2008-)

Philosophy Discipline Convener (From December 1st 2008)

Faculty guardian in the students Counselling service.

Ph. D Thesis

On causal and constructive modeling of Belief Revision, IIT Bombay, 2006.

My PhD thesis, entitled *On causal and Constructive Modeling of Belief revision* is in the area of Epistemic logic (Formal Epistemology) which attempts to link *causality* with the *revision of beliefs*.

Publications

Some problems concerning semantics of causal counterfactuals, in the proceedings of Workshop on conditionals, information and Implication (WoCoi-2002), Hagen, Germany, pp 157–169, 2002

Belief revision and semantics of counterfactuals, in the proceedings of *Workshop on conditionals, information and Implication* (WoCoi-2002), Hagen, Germany, pp 170–182, 2002

Causality and the dynamics of Belief, in the proceedings of International conference on Cognitive science (ICCS04), 2004.

Belief revision: A fresh look (2008) submitted to *Logic at the crossroads, an interdisciplinary view*, Volume-2.

International refereed Conference Papers

On an explanatory driven belief revision system, in the sixth European Congress for Analytical Philosophy (ECAP 6), Volume of abstracts, pp 105, published by Jagillonian University press, Poland, 2008

Causal Relevance in Belief revision-1, First World Congress and school on Universal Logic, Montreux, Switzerland, 2005

On causal relevance in Belief change, student sessions at First Indian conference on Logic and its applications to other disciplines (FICS05), IIT Bombay, Mumbai, 2005.

Role of causal knowledge in Belief revision, Contributory talks on Third summer school on "causality, uncertainty and Ignorance, Konstanz, Germany, 2004.

On Causal Epistemic Ranking of beliefs, *Degrees of belief DOB-2004*, Uni-Konstanz, Germany, 2004.

Unpublished and Working Papers

Belief structures in Scientific theory change (2008)

On causal Epistemic Ranking of beliefs in Theory change.

Descriptive and explanatory models for Belief revision(2005)

The role of causal structures in belief revision(2006)

Logical analysis of Metaphors based on conceptual spaces.(2007)

Interactivist approach for Metaphors: A critique.(2007)

Mental models and semantics of conceptual Metaphors.(2007)

Strategic IT outsourcing based on principal-agent model.(2006)

the role of Reputation variables in the successful negotiation of outsourcing.(2006)

On causal belief revision systems.(2007)

Names and Addresses of three Referees

1. Prof. G. Sivakumar
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2. Prof. Bipin Indurkha
International Institute of Information Technology
Gachibowli
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3. Prof. Amitabha Gupta
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