

# Amitash Ojha

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## Research Interests

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| <i>Creativity</i>                        | Modeling creativity support tools, understanding creative processes, Communication and design process.  |
| <i>Visual metaphors</i>                  | Theory of visual metaphors, role of perceptual similarity in visual metaphors, eye tracking studies to understand the role of perceptual features on metaphorical process |
| <i>Multimodal communication</i>          | Multimodal interaction and effect on cognition, empirical research on effective communication.  |
| <i>Metaphor and language</i>             | Representation of metaphorical thought in different languages and modalities.   |
| <i>Applications of Cognitive Science</i> | Applying recent findings of cognitive science in the field of law, management, journalism, design, creativity, etc.   |

**Presently** *Lecturer* at International Institute of Information Technology, Hyderabad, INDIA

## Education

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| <i>2007-Present</i> | <b>PhD in Cognitive Science, IIIT-Hyderabad</b><br>Thesis : An experimental study on visual metaphor<br>Advisor : Prof. Bipin Indurkha<br>Expected Graduation Date : December 2012 |
| <i>2005-2007</i>    | <b>Masters in Philosophy, University of Hyderabad</b><br>Specialization : Philosophy of mind, Language, Science<br>Degree : Gold Medalist  |
| <i>1998-2001</i>    | <b>Graduation in Commerce , Patna University</b><br>Honors : Accounts and auditing<br><br><b>National Eligibility Test (NET)</b><br>Year : 2006<br>Subject : Philosophy            |

## Teaching Experience

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| <i>Instructor</i><br>(2 years) | <b>Usability Engineering</b> , Spring, 2013, IIIT-H<br><b>Philosophy of Mind</b> , Spring, 2013, IIIT-H<br><b>Introduction to Cognitive Science</b> , Monsoon, 2012, IIIT-H<br><b>Philosophy of Mind</b> , Spring, 2012, IIIT-H<br><b>Introduction to Cognitive Science</b> , Monsoon, 2011, IIIT-H<br><b>Philosophy of Mind</b> , Spring, 2011, IIIT-H<br><b>Advanced Cognitive Science</b> : Spring 2010, IIIT-H |
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## **Collaborations**

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| August- November 2009 | <b>Short Stay Fellow at Utrecht University, The Netherlands</b><br>Collaborated with Prof. Frans Verstraten from Department of Experimental Psychology, Utrecht University. Conducted experiment exploring the role of low-level perceptual features on metaphorical interpretations.  |
| May-July 2011         | <b>Visiting fellow at Gestion de Scientifique (Department of Scientific Management), Ecole des Mines, Paris France.</b> Collaborated with Prof Armand Hatchuel and his team to explore the role of perception in design process.   |
| Others (2009-2012)    | <i>Department of Media studies, University of Amsterdam, The Netherlands</i><br><i>Department of communication sciences, Tilburg University, The Netherlands</i><br><i>Cognitive Science Department, Osnabruck University, Germany</i><br><i>Department of Spatial Sciences, Munster University, Germany</i><br><i>Department of Artificial intelligence, American University of Paris, France</i> |

## **Research Experience**

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|---|--|
| <i>Experimental studies on Visual metaphors and Perceptual processing</i> | Did experiments to study issues of visual metaphor processing. Exploring issues of target and source reversal, theories of visual rhetoric. Studying the interaction between low-level perceptual processes and high-level conceptual processes. Exploring the role of low-level perceptual similarity on metaphorical process.  |
| <i>Eye-tracking studies</i>   | Eye-tracking studies on visual metaphors to study the perception of low-level features like color, shape, texture, orientation, etc and their role in anchoring metaphorical interpretation.   |
| <i>Creativity assistance tool</i>   | Building creativity support system to generate new ideas and metaphors for various domains.  |
| <i>Language and culture</i>   | Exploring language and image interaction in multimodal communication. Studying the role of culture and language in metaphorical interpretation   |
| <i>Brain Imaging</i>  | Did Experiments using fMRI on the processing of visual metaphor comprehension.   |
| <i>MS Thesis Mentoring</i>  | Pictorial runes and their meaning (MS thesis)<br>Role of visual metaphors in science education (MS Thesis)   |
| <i>Independent studies guided</i>   | Role of language in spatial cognition ( <i>Published in the proceedings of ICCS, Beijing, China, 2010</i> )<br><br>Choice of modality for information transfer and its implication on user experience ( <i>Published in the proceedings of ICCS, Beijing, China, 2010</i> )<br><br>The influence of Code mixing on perception and language production ( <i>Published in the proceedings of ICCS, Beijing, China, 2010</i> )<br><br>Effect of Animacy on relative clause production in Hindi-Urdu ( <i>Published in the proceedings of ICCS, Beijing, China, 2010</i> )<br><br>Several others that include applications of Cognitive Science in Marketing, Management, Design, etc. |

## Technical skills

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| <i>Programming</i>                | Python, Perl                                      |
| <i>Operating systems</i>          | Mac, Linux, Windows                               |
| <i>Others</i>                     | HTML  |
| <i>Eye Trackers</i>               | Good with SR-Research, SMI and Tobii eye trackers |
| <i>Psychology software tools</i>  | Direct RT, E-Prime, psychopy, Presentation        |
| <i>Statistical Analysis tools</i> | SPSS, Matlab                                      |

## Publications

2012

**Neural correlates of visual metaphor processing** (*In preparation*)

**Role of perceptual similarity and creativity** (Submitted), Metaphor and symbol

**On the role of perceptual features in metaphor comprehension**, In Ervas, Francesca, Elisabetta Gola (Eds.). *Metaphor and Communication* [working title]. John Benjamins (2012)

**An experimental study on the role of runes in conveying emotions in comics** (submitted), *Journal of Pragmatics*

2011

**Text, Table and Graph - which is faster & more accurate to understand?**. In the proceedings of IEEE International Conference on Technology for Education, TRE, Hyderabad,

**Role of imagery in multimodal metaphors**, *International conference on design principles, Rome, Italy (2011)*

**From percepts to concepts: A perception-based model of metaphor processing**, *In the proceedings of Metaphor and communication, Cagliari, Italy, 2011*

**Attention in visual metaphors**, *In the proceedings of Interaction summer conference, Greece, 2011*

**Interpretation of metaphors with perceptual features using wordnet**, *In the proceedings of Human computer interaction, Orlando, US, 2011*

2010

**Role of perceptual features in imagery while comprehending visual metaphors**, *Research and Applying metaphors conference, Amsterdam, The Netherlands, 2010*

**The effect of color on retrieval of textual information**, *European conference on visual perception, Lausanne, Switzerland, 2010*

**Role of perceptual similarity in comprehending visual metaphors: Evidences from eye movement study**, *International conference on cognitive science, Beijing, China, 2010*

**Cultural background and visual metaphors**, *International and Interdisciplinary conference, 2010, New Delhi India, (to be published in the journal of philosophy and religion)*

**Pictorial metaphors and Perception: a case of relational shift**, *Confrence on cognitive development, CBCS, Allahabad (2010)*

**Perceptual metaphors and creativity**, *Creativity Experience and Cognition, IIIT Gandhinagar, (2010)*

**Interaction between text and image in Cross-modal metaphors**, *in Design conference, Spain (2010)*

**Computational Model of Pictorial Metaphors** *(in collaboration with University of Osnabrueck, Germany) in the proceedings of ICAART, Portugal, 2009*

2009

**Perceptual Vs Conceptual metaphors and emergence of features in visual metaphors**, *in the proceedings of Second Analogy conference, Sofia, Bulgaria, 2009*

**Reversibility in visual metaphors**, *RaAM conference, 2009, Amsterdam, The Netherlands, 2009*

**Role of perceptual similarity in visual metaphor comprehension**, *European conference for visual perception, Regensburg, Germany, 2009*

**Influence of source image on target image**, *International conference on Language and cognition, Allahabad, India, 2009*

**A Semantic Interference Effects of Text and Images in Stories Presented on Web** *In the journal of design principle and practices, 2009*

### **Personal Information**

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| <i>Date of Birth</i>  | 29 April, 1980  |
| <i>Nationality</i>    | Indian  |
| <i>Address</i>        | 305, NBH<br>International Institute of Information Technology<br>Gachibowli, Hyderabad-32, INDIA                                    |
| <i>Office Address</i> | Cognitive Science lab<br>B5-102, Vindhya C4<br>International Institute of Information Technology<br>Gachibowli, Hyderabad-32, INDIA |
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