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Spring 10-1-2022

Aesthetics, Cognition, Emotion, and Multi-Modal Communication.

Dyutiman Mukhopadhyay Dr

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Curriculum Vitae:
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Career summary:

I am a cognitive scientist, artist, and writer working on art psychology, emotion, and multi-modal communication. I am a faculty in Information Arts, Design and Visual Communication at Srishti Manipal Institute of Art, Design & Technology, Bangalore, India and an adjunct professor in the Consciousness Studies Programme (CSP) at the National Institute of Advanced Studies, India. I work at the confluence of the arts and sciences and am a practitioner of fine arts. I was a former British Academy Newton International Fellow at University College London (Experimental Psychology, Faculty of Brain Sciences, School of Life Sciences) as well as DST and ICMR Fellows in Govt. of India-funded research programmes. As a researcher, I study human emotions using art as an investigative tool and develop multi-modal communication strategies for the betterment of mental health. As a professional extension of my research involvements, I also gained experience as the Creative Director of a UCL Innovation and Enterprise-supported interactive academic engagement Company (AcademiaOne, UK).

As a Newton International Fellow at UCL, I worked on the psychological basis of cross-cultural emotion transfer using complex naturalistic stimuli, especially films. I proposed the '[culture-appraisal-interaction model](#)' of emotion reactivity which combines the social appraisal theories of emotions and cultural models of self. My commentary on the neuropsychology of 'aesthetic paradox' where I proposed the '[dual-phase-oscillation hypothesis](#)' (Mukhopadhyay, 2014 at *Rev Gen Psychol.*) has been highlighted in literary theory and emotion research by authorities in the field like G. Gabrielle Starr, Louise Sundararajan, Zachary Simpson, and Maria Korusiewicz.

I have a PhD in Biomedical Sciences, post-doctoral experience in Cognitive Sciences and an Advanced Diploma in fine arts. I wrote and have been granted projects funded by the [British Academy](#) (UK), [Dept. of Science & Technology \(Govt. of India\)](#) and [Indian Council of Medical Research \(Govt. of India\)](#). I have authored peer-reviewed journal articles, essays, and conference papers in cognitive and empirical aesthetics, aesthetic philosophy, philosophy of science and religion, and biomedical sciences ([publications](#)).

Parallel to my academic career, I pursue my passion for [poetry](#) besides being deeply involved with the visual and performing arts—primarily photography, digital art, and filmmaking (work portfolio:dyutimanmukhopadhyay.com). I have also been awarded the T1 Exceptional Talent Work VISA endorsed by the British Academy. My photography received official selections and recognition at the Venice International Photo Contest, in Italy, at the International Photography Awards, in the USA, at Prix de la Photographie, Paris and on the National Geographic website. I am one of the founding artist contributors of the art subscription and sales company (Chadart.global.UK). Currently, as an artist, I am developing a visual-effect experiment to evolve a new art form which I define as '[Cinegraphic Impressionism](#)'.

Research Tools:

Indian texts on Philosophy of Science, Religion, and Aesthetics (c. 1500 BC - c.1000 AD), Experimental Psychology, Eye-tracking, Electroencephalography (EEG), Functional Magnetic Resonance Imaging (fMRI), Digital Art, Painting, Photography, and Cinema. (Also well versed in Diagnostic Andrology and Assisted Conception technologies).

Industry Experience:

[Creative Director](#)—AcademiaOne, UK (UCL-Innovation & Enterprise supported). I have given useful ideas starting from the design of the website, ideas on audiovisual resources, introducing new ideas for designing articles, introducing a creative workflow monitoring workstation, preparing the script for animation, suggesting ideas on the company mission and vision besides supervising all the creative works that had been produced from the point I joined and distributing creative tasks among the staff.

Teaching Responsibilities:

I am currently a Full-time Faculty in Information Art & Visual Communication at Srishti Manipal Institute of Art, Design & Technology, Bangalore, India and an Adjunct Professor for the Consciousness Studies Programme (CSP) at the National Institute of Advanced Studies (NIAS), India. I was a Course Lecturer for Cognitive Psychology Module (Emotion & Cognition) for MSc Psychological Sciences (2021-) at University College London. I taught '[neuroaesthetics](#)' as a full-semester special elective course at the Centre for Cognitive Science, IIT Gandhinagar, India. I also offered a course lecture at the Virtual Winter Festival of Learning, University of Cambridge, Institute of Continuing Education.

Positions and General Academic Proficiency:

Positions/Qualifications	Departments/Institutions/Governing Bodies
Faculty in Information Art & Visual Communication at Srishti Manipal Institute of Art, Design & Technology, Bangalore, India, October 2022-present.	Divisions: Information Art and Information Design Practices; Visual Communication (Cluster: Law, Environment and Planning), Srishti Manipal Institute of Art, Design & Technology, Bangalore, India [Manipal Academy of Higher education (MAHE)].
Adjunct Professor & Research Consultant of NIAS Consciousness Studies Programme. April 2022-present.	National Institute of Advanced Studies, Bengaluru, India.
British Academy Newton International Fellow & Honorary Research Associate. Jan.2018-Oct. 2021.	University College London—Department of Experimental Psychology, Division of Psychology and Language Sciences (in Faculty of Brain Sciences, School of Life Sciences), London, UK
Creative Director—'AcademiaOne', UK. June -October 2020.	Supported by University College London Innovation and Enterprise, UK
Course Lecturer, Cognitive Psychology Module (Emotion & Cognition) for MSc Psychological Sciences Programme, 2021).	University College London, Division of Psychology and Language Sciences, London, United Kingdom.
Worked as an assistant fMRI operator, 2018-2020.	Birkbeck-UCL Centre for NeuroImaging (BUCNI), UK.
Tier-1-Exceptional-Talent-VISA awardee in the 'Exceptional-Promise' category by UK Immigration) 2019-2024.	Awarded by the British Academy and UK Home Office.
DST Govt. of India Post-Doctoral Fellow & PI in Cognitive Science Research Initiative Project 2014-2016.	Centre for Cognitive Science (with Humanities and Social Sciences) Indian Institute of Technology Gandhinagar (IIT GN) , Gujarat, India.
Adjunct Teaching Experience:2015-2016.	Centre for Cognitive Science, IIT Gandhinagar.
Qualified West Bengal College Service Commission counselling for Lecturership. (Turned down offer to continue research);2015.	West Bengal College Service Commission. Called for the interview at City College, Kolkata.
ICMR Research Associate (Biomedical genetics): Indian Council of Medical Research, Govt. of India; 2010-2013.	Department of Zoology, University of Calcutta , India.
PhD (Biomedical science),2005-2009.	Departments of Biochemistry & Zoology, University of Calcutta , India.
MSc-First Class in Zoology& 3rd Prize in Seminar; 2002-2004; Seminar title: 'Analysing Happiness -reward centre of the brain.'	Banaras Hindu University(BHU) , India
BSc-Honours(in Zoology; Physiology & Chemistry) 1999-2002.	Presidency College (under the University of Calcutta), Calcutta, India.
Advanced Diploma in Fine Arts—First Division, Distinction in Practical; 2005-2010.	Pracheen Kala Kendra - Indian Classical Art Organisation, Chandigarh, India, Calcutta Study Centre - <i>Chitrakala</i> , Kolkata-700060.
Clinical-Trial Research Coordinator, 2009-2010.	Alimera Sc., USA, SIRO Clinpharm, India, Calcutta Medical College, India.

Other Qualifications:

Certificate Course in Video and Audio Editing and Interactive Multimedia, 2007	Arena Multimedia India.
Post-Graduate Diploma in Bio-Informatics; 2005	Sikkim Manipal University, India.
Passed University College London GDPR training course with a score of 90%.	2018
Qualified JOINT CSIR-UGC(Council of Scientific & Industrial Research & The University Grants Commission of India)National Eligibility Test (NET) for Lectureship in Life Sciences, India.	2005
Qualified Graduate Aptitude Test for Engineering (GATE: Life Sciences) twice, Dept. of Higher Education, Ministry of Education (MoE), Government of India.	2005, 2004

Journal Papers / Essays / Conference papers: Cognitive& Empirical Aesthetics / Philosophy:

- [Dataset] Mukhopadhyay, D; Miyapuram, K.P.; Pandey, P.; Tripathi, R. (2022). Movie Watching—Nine Emotions EEG Dataset, DOI 10.17605/OSF.IO/85N9U, <https://osf.io/85n9u/>
- [Concept-Note] Mukhopadhyay, D. (2022) (Musings) Why I study aesthetics: an unwritten essay. *PhilPapers*, <https://philpapers.org/rec/MUKMWI> [Link]
- Sonawane D., Pandey P., Mukopadhyay D., Miyapuram K.P. (2021). Movie Identification from Electroencephalography Response Using Convolutional Neural Network. In: Mahmud M., Kaiser M.S., Vassanelli S., Dai Q., Zhong N. (eds) *Brain Informatics*. BI 2021. Lecture Notes in Computer Science, vol 12960. Springer, Cham. https://doi.org/10.1007/978-3-030-86993-9_25
- Mukhopadhyay, D. (2021). Rethinking the psychology of film melodrama: A theoretical framework integrating social appraisal and cultural psychology. *PsychArchives*. <https://doi.org/10.23668/psycharchives.5282> [Full paper link]
- Mukhopadhyay, D. (2021) Dancing with Nine Colours: The Nine emotional states of Indian Rasa theory. *PhilPapers*, <https://philarchive.org/rec/MUKDWN> [Full paper link]
- Mukhopadhyay, D. (2021). Contradictions in Rabindranath Tagore and Swami Vivekananda's idea of *Karma Yoga* (detached 'witness-consciousness' through action) *PhilPapers*. <https://philarchive.org/rec/MUKCIR> [Full paper link]
- Mukhopadhyay, D. (2021). Science and the Elephant. *PhilPapers*. <https://philarchive.org/rec/MUKSAT> [Full paper link]
- Tripathi R., Mukhopadhyay D., Singh C.K., Miyapuram K.P., Jolad S. (2020). Characterization of Functional Brain Networks and Emotional Centers Using the Complex Networks Techniques, *Complex Networks 2019, SCI 882*, pp. 854-867, 2020, in H. Cherifi et al. (Eds.): *Complex Networks and Their Applications VIII*. © Springer Nature Switzerland AG, https://doi.org/10.1007/978-3-030-36683-4_68
- Nath, S. S., Mukhopadhyay, D., & Miyapuram, K. P. (2019). Emotive Stimuli-triggered Participant-based Clustering Using a Novel Split-and-Merge Algorithm. *Proceedings of the ACM India Joint International Conference on Data Science and Management of Data*, 277-280. ISBN: 978-1-4503-6341-9. The Association for Computing Machinery. <https://dl.acm.org/doi/10.1145/3297001.3297040>
- Мухопадхьяй, Д. (2019). Нейрофилософия архетипа в визуальной эстетике: от Платона до Зеки и далее. [Russian translation and print publication of Mukhopadhyay, D. (2014). The neuro-philosophy of archetype in visual aesthetics: from Plato to Zeki and beyond (PsyArt, USA)], *Jungian Analysis Journal (Moscow)* - journal of the *Moscow Association of Analytical Psychology* N 3, pp.153-192. ISSN 22259651
- Mukhopadhyay, D., and Miyapuram K.P. (2016). EEG-based study on nine emotional states of Indian Rasa theory from popular Bollywood and Hollywood film segments. The talk was given at the 14th Conference of the International Association of Empirical Aesthetics at the University of Vienna (August 29 to September 1, 2016).
- Mukhopadhyay, D., and Miyapuram K.P. (2016). An eye-tracking study of nine facial emotional states (Nava Rasa) in the Indian classical dance genre of Bharatanatyam. The talk was given at the 3rd Annual Conference on Cognitive Science (ACCS-2016), 3rd to 5th October 2016, Indian Institute of Technology, Gandhinagar.
- Mukhopadhyay, D., and Miyapuram K.P. (2015). An eye-tracking study of nine emotional states (Rasas) from visual scans of facial close-ups of Indian mural paintings: presented at International Conference on Emotion and Cognition, 14th to 16th December 2015, Centre of Behavioural and Cognitive Sciences, Allahabad, India.
- Mukhopadhyay, D., and Miyapuram K.P. (2015). Visual scan-paths of faces with happy and sad facial expressions support the Hemispheric Lateralization Hypothesis and zonal preference: an eye-tracking study: oral presentation in the 2nd Annual Conference on Cognitive Science (ACCS-2015), 5th to 8th July 2015, Indian Institute of Technology, Kanpur.
- Mukhopadhyay, D. (2014). Understanding the neuropsychology of aesthetic paradox: the *dual-phase oscillation* hypothesis. *Review of General Psychology (USA)*, 18(3), 237-248. ISSN: 1089- 2680. <https://doi.org/10.1037%2Fgpr0000009> (Full paper link).
- Mukhopadhyay, D. (2015). The dual-phase oscillation hypothesis and the neuropsychology of docu-fiction film. *Consciousness, Literature*

and the Arts (UK), 16 (1). ISSN: 1470-5648. [Online: <http://www.dmd27.org/mukhopadhyay.pdf>]

- Mukhopadhyay, D. (2014). The neuro-philosophy of archetype in visual aesthetics: from Plato to Zeki and beyond. *PsyArt (USA)*, 18, pp. 340-369. ISSN: 2123-4434. [Online: <https://psyart.org/article/the-neuro-philosophy-of-archetype-in-visual-aesthetics-from-plato-to-zeki-and-beyond/>].

Journal Papers: Biomedical Sciences

- Mitra, A., Chakraborty, B., Mukhopadhyay, D., Pal, M., Mukherjee, S., Banerjee, S., & Chaudhuri, K. (2012). Effect of smoking on semen quality, FSH, testosterone level, and CAG repeat length in androgen receptor gene of infertile men in an Indian city. *Systems Biology in Reproductive Medicine (USA)*, 58(5), 255-262. DOI: 10.3109/19396368.2012.684195
- Mukhopadhyay, D., Nandi, P., Varghese, A., Gutgutia, R., Banerjee, S., & Bhattacharyya, A. (2010). The in vitro effect of benzo [a] pyrene on human sperm hyperactivation and acrosome reaction. *Fertility and Sterility (USA)*, 94(2), 595-598. DOI:10.1016/j.fertnstert.2009.02.031
- Mukhopadhyay, D., Varghese, A., Pal, M., Banerjee, S., Bhattacharyya, A., Sharma, R., & Agarwal, A. (2010). Semen quality and age-specific changes: a study between two decades on 3,729 male partners of couples with normal sperm count and attending an andrology laboratory for infertility-related problems in an Indian city. *Fertility and Sterility (USA)*, 93(7), 2247-2254. DOI:10.1016/j.fertnstert.2009.01.135
- Mukhopadhyay, D., Varghese, A., Nandi, P., Banerjee, S., & Bhattacharyya, A. (2010). CASA-based sperm kinematics of environmental risk factor-exposed human semen samples designated as normozoospermic in conventional analysis. *Andrologia (Germany)*, 42(4), 242-246. DOI: 10.1111/j.1439-0272.2009.00984.x
- Mukhopadhyay, D., Mitra, A., Nandi, P., Varghese, A., Murmu, N., & Chowdhury, R. et al. (2009). Expression of metallothionein-1 (MT-1) mRNA in the rat testes and liver after cadmium injection. *Systems Biology in Reproductive Medicine (USA)*, 55(0), 188-192. DOI: 10.3109/19396360903114429
- Varghese, A., Bragais, F., Mukhopadhyay, D., Kundu, S., Pal, M., Bhattacharyya, A., & Agarwal, A. (2009). Human sperm DNA integrity in normal and abnormal semen samples and its correlation with sperm characteristics. *Andrologia (Germany)*, 41(4), 207-215. PMID: 19601931, Online ISSN: 1439-0272, DOI: 10.1111/j.1439-0272.2009.00917.x

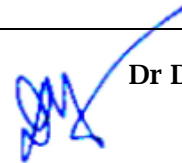
Projects Awarded:

- Newton International Fellowship (British Academy, UK): Mukhopadhyay, D. & Skipper, J. (2017). CEE-through-Film: a neurobehavioural paradigm to test culture-appraisal-interaction model of emotion (2017). Fellowship awarded to conduct research at University College London, the UK, Division of Psychology and Language Sciences (NF170643, Dated: 11 October 2017).
- Principal Investigator: Mukhopadhyay, D. & Skipper, J. (2019). Eye-tracking of 72 Masterpiece paintings. University College London - B.Sc. 2nd Year Mini-project.
- Principal Investigator: Mukhopadhyay, D. (PI) and Miyapuram K.P. (2014 - 2016). The relevance of 9th *Rasa* in the generation of aesthetic delight: a neuroaesthetic approach using EEG and Eyetracking; Project sanctioned by Department of Science and Technology, Govt. of India to work as Post-Doctoral Scientist at Indian Institute of Technology, Gandhinagar, India (SR/CSI/PDF-08/2013, dated: 30.10.2014).
- Post-doctoral Research Associateship project: Mukhopadhyay, D. (2010-2013). A study on the gene and protein expression pattern of stress proteins in liver and testicular cells of rat treated with heavy metals; Project sanctioned by Indian Council of Medical Research, Govt. of India, to work as Research Associate at Department of Zoology, University of Calcutta, India (3/1/2/10 (Env) NCD-I, dated: 17.08.2010).
- Research Collaborator (2010-2012) with Dr Sujata De Chaudhuri (Barrackpore RastraguruSurenranath College, West Bengal) in UGC project: "Effects of heavy metal toxicity on testicular tissue and reproductive function in male rats" (F. PSW-113/10-11 dated: 20.10.2010).

Contribution to the field of Film, Video, Photography, and Digital Media:

- [Media Coverage, Times of India, Oct 5, 2022] Brainwaves to box office: IIT-Gandhinagar gets ticket to viewers' minds ([Link](#)).
- [Documentary Short \(2022\): '3 Long Takes Dedicated to Abbas Kiarostami'](#) (Produced, Directed, Shot, & Edited).
- One of the founding artist contributors of the art subscription and sales company, [Chadart.global, UK](#) (2021-present).
- [Short Film \(2019\): 'Moving Brushstrokes: Cinegraphic painting'](#)— a new art form (Conceived, Produced, Directed, Shot, & Edited).
- [Documentary \(2012\): 'Looking Back: Dialogues with Grandpa'](#) (Directed, Shot, & Edited).

- [Travel Documentary \(2011\): 'To the Land of Sleeping Buddha'](#) (Produced, Directed, Shot, & Edited).
- Asst. Producer for a film on 'Power Dynamics' (2020) in collaboration with Head of communications at UCL PALS.
- [4th position and High Score Accepted Entries at Venice International Photo Contest, Italy, 2007.](#)
- Picture showcased by <https://twitter.com/NatGeoPhotos> for their ['Faith' assignment advertisement](#) on 26-Sep, 2015.
- [Honourable Mention at the International Photography Awards, Los Angeles, USA, 2018.](#)
- [Honourable Mention at the International Photography Awards, Los Angeles, USA, 2017.](#)
- Honourable Mention in two categories at the International Photography Awards, Los Angeles, USA, 2006.
- Image published in *Daily Dozen* category (Oct. 31st, 2013: *"The Fire Ritualists of Banaras, India 3"*), National Geographic Your Shot.
- Twelve photographs (including two series) were accepted as '2011 Px3 Official Selections' at Prix de la Photographie, Paris, 2011.
- Work accepted as Official Selection of the International Photography Awards, Los Angeles, USA, 2009.
- Image accepted in the Daily Gallery (Nov 4th, 2008; "people") in the National Geographic International Photography Contest, 2008.
- Work exhibited as one of the "Highest Rated Accepted Pictures" at Venice International Photo Contest, Italy, 2006.
- At Standard V, received Special Prize of Jury in "Film Appreciation Contest" by Children-Cine-Institute, Calcutta, India, 1992.



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