Faculty Details proforma for DU Web-site

Title	Dr.	First Name	David M.	Last Name	Kothamasi	Photograph
Designation		**Assistant Professor (Reader)**				
Address		**Department of Environmental Studies University of Delhi Delhi 110007, INDIA**				
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Educational Qualifications

Degree	Institution	Year
Ph.D.	**Department of Microbiology, University of Delhi**	**2000**
M.Sc..	**Department of Environmental Biology, University of Delhi**	**1993**
LL.B.	**Faculty of Law, University of Delhi**	**2010**
B.Sc. (Honours)	**Deshbandhu College, University of Delhi**	**1991**
Any other qualification		

Career Profile

1. **Assistant Professor (Reader), 1 July 2012 – Present**
   University of Delhi
   Department of Environmental Studies
   Delhi 110007, India

2. **Assistant Professor (Senior Scale), 1 July 2007 – 30 June 2012**
   University of Delhi
   Department of Environmental Studies
   Delhi 110007, India
3. **Assistant Professor, 2 January 2003 – 30 June 2007**
   University of Delhi
   Department of Environmental Studies and Centre for Environmental Management of Degraded Ecosystems
   Delhi 110007, India

4. **UNDP-GEF Environment Consultant (1 September 2001 – 31 December 2002)**
   Ministry of Environment and Forests
   Government of India, CGO Complex
   Lodhi Road, New Delhi 110003, India

Administrative Assignments

Coordinator of Ph.D. Course-work, Department of Environmental Studies, University of Delhi

Member, Bio-safety Committee of the University

Member, Admissions Grievance Committee

Areas of Interest / Specialization

My current research focuses on ecology and conservation. My team studies the diversity and ecological interactions among soil microorganisms and their interactions with plants. Our research programmes investigate how the diversity of symbiotic micro-organisms, such as arbuscular mycorrhizal fungi (AMF), ectomycorrhizas and free living plant growth promoting bacteria influence the diversity and productivity of managed and native ecosystems. We analyse the regulatory influences of biotic and abiotic stresses on rhizospheric microbial communities and its consequences for the plant communities. We are screening the indigenous AMF species of India for strains that will provide suitable biological inputs for use in restoration measures to be adopted for degraded ecosystems.

We also investigate the potential of soil microorganisms for use as bio-control agents against agricultural pests. Our primary focus in biological control of agricultural pests has been on use of hydrogen cyanide producing bacteria against insect pests.

In addition to scientific research I also study the legal regimes and policy frameworks existing in India and other countries to tackle conflicts and barriers in conservation programmes.

Subjects Taught

1998–2001: Environmental Microbiology
2003– present: Restoration ecology, Soil biology, Environmental Biotechnology, Indian and International Environmental Law, Urban Ecosystems, Natural Resources conservation and Management, Natural Resources conflicts and choices, Environmental Policies and Politics

Research Guidance

1. *Ms. K. Kanchana Devi,* Ph.D. awarded
2. *Ms. Deepika Sharma* Ph.D. awarded

Publications Profile

Key Publication

Kothamasi, D., Spurlock, M., Kiers, E.T. 2011. Agricultural microbial resources: private property or global commons. Nature Biotechnology 29:1091–1093.

1. *Book Chapters*
   - **Kothamasi, D.**, Kiers, E.T., van der Heijden, M.G.A. 2009. Community ecology, processes, models and applications. Ed. H. Verhoef and P.J. Morin. Oxford University Press, UK.
   - Kuhad, R.C., **Kothamasi, D.M.**, Singh, A., Tripathi, K.K. 2004. Plant surface microbiology. Ed. A. Verma, L. Abbott, D. Werner and R. Hampp. Springer-Verlag, Germany.
   - **Kothamasi, D.M.**, Bhattacharyya, A., Babu, C.R. 1998. Biosphere reserves and management in India. Ed. R.K. Maikhuri, K.S. Rao and R.K. Rai. GB Pant Institute of Himalayan Environment and Development. Ministry of Environment and Forests, Government of India.
2. *Research papers published in Refereed/Peer Reviewed Journals*
   - Martinez-García LB, De Deyn GB, Pugnaire FI, **Kothamasi D**, van der Heijden MGA. 2017. Symbiotic soil fungi enhance ecosystem resilience to climate change. Global Change Biology https://doi.org/10.1111/gcb.13785.

- **Kothamasi D**, Wannijn J, van Hees et al. 2016. *Rhizophagus irregularis* MUCL 41833 can colonize and improve P uptake of *Plantago lanceolata* after exposure to ionizing gamma radiation in root organ culture. Mycorrhiza 26: 257-262.

- Deepika, S., **Kothamasi, D.** 2015. Soil moisture– a regulator of arbuscular mycorrhizal fungal community assembly and symbiotic phosphorous uptake. Mycorrhiza 25: 67- 75.

- Devi, K.K., Sharma, D., Bhaduri, A., **Kothamasi, D.** 2013. Polymorphism in *hcnAB* gene in *Pseudomonas* species reveals ecologically distinct hydrogen cyanide producing populations. Geomicrobiology Journal 30:131–139.

- **Kothamasi, D**., Spurlock, M., Kiers, E.T. 2011. Agricultural microbial resources: private property or global commons. Nature Biotechnology 29:1091–1093.

- **Kothamasi, D.**, Vermeylen, S. 2011. Genetically modified organisms in agriculture: can regulations work? Environment, Development and Sustainability 13:535–546.

- **Kothamasi, D.**, Kiers, E.T. 2009. Emerging conflicts between biodiversity conservation laws and scientific Research: the case of the Czech entomologists in India. Conservation Biology 23:1328–1330.

- Devi, K.K., **Kothamasi. D.** 2009. *Pseudomonas fluorescens* CHA0 can kill subterranean termite *Odontotermes obesus* by inhibiting cytochrome c oxidase of the termite respiratory chain. FEMS Microbiology Letters 300:195–200.

- Devi, K.K., Seth, N., Kothamasi, S., **Kothamasi, D.** 2007. Hydrogen cyanide producing rhizobacteria kill subterranean termites *Odontotermes obesus* (Rambur) by cyanide poisoning under *in-vitro* conditions. Current Microbiology 54:74–78.

- **Kothamasi, D.**, Kothamasi, S., Bhattacharyya, A., Kuhad, R.C., Babu, C.R. 2006. Arbuscular mycorrhizae and phosphate solubilizing bacteria of the mangrove ecosystem of Great Nicobar island, India. Biology and Fertility of Soils 42:358–361.

- **Kothamasi, D.**, Kothamasi, S. 2004. Cobalt interference in iron uptake could inhibit growth in *Pseudomonas aeruginosa*. World Journal of Microbiology and Biotechnology 20:755–758.

- **Kothamasi, D.**, Kuhad, R.C., Babu, C.R. 2001. Arbuscular mycorrhizae in plant survival strategies. Tropical Ecology 42:1–14.

- **Kothamasi, D.M.**, Agrawal, A. 1998. Effects of lead in *Utricularia aurea* Lour. grown *in vitro*. Indian Journal of Plant Physiology 3 (NS):55–57.

- **Kothamasi, D.M.**, Bhattacharyya, A., Babu, C.R. 1995. Diversity of Great Nicobar plant communities. Journal of Andaman Science Association 11:62–64.

Conference Organization/ Presentations

List against each head(If applicable)

1. *Organization of a Conference*
   Convener, of the following capacity building workshops

   - Workshop on Biosystematics of Species Complexes (2 – 11 February 2012).
   - Workshop on systematics and evolution (9 – 15 March 2011).

- International Workshop on Biosystematics (6 – 15 September 2010).
- Workshop on taxonomy, theory and practice (3 – 9 March 2010).
- Workshop on taxonomy, ecology and conservation (29 December 2009 – 7 January 2010).

- Workshop on application of taxonomy in prospecting genes and their products beneficial to humans (17 – 26 March 2009).
- Workshop on taxonomy, reproductive biology and conservation (18^{h} – 27 February 2009).
- Taxonomy and Bioprospecting (28 January – 6 Feb 2008).
- Taxonomy, Reproductive biology and Conservation (18 – 27 February 2009).
- Workshop on application of taxonomy in prospecting genes and their products beneficial to humans (17– 26 March 2009).
- Workshop on Taxonomy, Ecology and Conservation (28 December 2009 – 1 January 2010).
- Workshop on Taxonomy, Theory and Practice (3 – 9 March 2010).

2. *Conference Presentations*

- **Kothamasi, D.** 2006. Evaluation of AM fungi for glomalin production and its potential application in biotechnologies for management of soil erosion in arid and semi-arid ecosystems. In 93rd Indian Science Congress held at Hyderabad, India.

- Babu, C.R., …. **Kothamasi, D.M.**, (and others). 2003. Restoration technologies in sustainable development. In Indo-Canadian **''Workshop on Biotechnology for Environmental protection and Sustainable Development''** on February 5-6, 2003 at New Delhi.

- **Kothamasi, D.,** Kuhad, R.C., Babu, C.R. 2001. Arbuscular mycorrhizal population of the rhizosphere ecosystem of Great Nicobar island, India. 14th Annual meeting of the German Society for Tropical Ecology (gtö), 13-16 February, 2001. University of Bremen, Bremen, Germany. (Abstract Accepted)

Research Projects (Major Grants/Research Collaboration)

- Principal Investigator, DU-DST Purse Grant for research on mycorrhizas (on-going)

- Principal Investigator, MoEF project entitled "Taxonomic investigations on the indigenous arbuscular mycorrhizal fungal species of the arid and semi-arid regions of north India." 2007– 2010

- Principal Investigator, DST project entitled "Evaluation of native species of Arbuscular Mycorrhizal Fungi (AMF) for *hyper*– plant growth promoting strains in the arid and semi-arid regions of India for potential application in restoration measures for degraded ecosystems". 2005– 08

Awards and Distinctions

- Belgian Science fellowship to work at the Belgian Nuclear Research Center (SCK•CEN)

- DST BOYSCAST fellowship to visit an overseas University (Vrije Universiteit Amsterdam, The Netherlands).

- DST Young Scientist Award.

- University Medal for first position in M.Sc. Environmental Biology.

Association With Professional Bodies

1. *Reviewing*
   Referee for the Journals: Ecology Letters, Mycorrhiza, Microbial Ecology, Plant and Soil, Journal of Hazardous Materials, Journal of Plant Ecology, Applied Soil Ecology, PLoS One, Journal of Environmental Quality

2. *Memberships*
    - Association of Microbiologists of India
    - Andaman Science Association