Dr. Mathimaran Natarajan PhD *(Dr. sc. nat. ETH Zürich, Switzerland)*

Senior Scientist | Coordinator Indo-Swiss Research Projects on Sustainable Agriculture
Department of Environmental Sciences - Botany | University of Basel
Schönbeinstrasse 6 | 4056 Basel | Switzerland
+41 61 20 72 337 | mathimaran.natarajan@unibas.ch

Education

2002-2005	PhD (Natural Sciences)	Swiss Federal Institute of Technology (ETH), Zurich, Switzerland
1999-2001	MSc (Agricultural Microbiology)	University of Agricultural Sciences, GKVK, Bangalore, India
1994-1998	BSc (Agriculture)	Agricultural College & Research Institute, Tiruchirappalli, India

Core competence/professional experience

12+ years professional experience in public and private institution on coordinating Indo-Swiss research projects on sustainable agriculture with accountability which includes identifying competent collaborators, team building, developing innovative concepts and project proposals, project monitoring, designing and setting-up lab and field experiments, implementing and supervision of research projects and thesis, interim-evaluations, data management, reporting, organizing project meetings and conferences, facilitating transparent communication among the stakeholders. Invitee as a delegate/guest speaker in various Indo-Swiss forums/events on Research & Development, Education and Business and widely appreciated for contributions for facilitating Indo-Swiss Collaboration, particularly on sustainable agriculture research, education and business.

Research interest

My current research focus includes developing innovative tools based on participatory interdisciplinary (life-sciences, environmental sciences, agroecology and socio-economics) research, for resilient food production system particularly for arid-and-semi-arid resource-poor farmers. My specific interest is to develop a regenerative crop production system, such as organic farming, through holistic research methods consisting of plant, water and nutrient uptake via the beneficial soil microbes, such as mycorrhiza and plant growth-promoting rhizobacteria, drought mitigation and soil fertility restoration through optimizing below-and-above-ground biotic and abiotic interactions. My future interest includes developing a sustainable and precision farming system through greater understanding of carbon, water and nutrient cycles at the molecular, cellular, ecosystem and trophic levels, using cutting-edge next-generation tools such as plant & soil microbiome analysis, stable isotope and DNA tracers, deploying precision farming tools such as internet of things (IoT) and terrestrial self-driving and aerial drones and imaging system, optimized allocation of farm inputs through application of sustainability models & traceability system at farm and ecosystem levels.

Research & Development Vision

Building an "iCLUB" - a state-of-the-art international multi-stakeholder platform for developing innovative solutions for addressing current and future challenges in food, nutrition and health using indigenous and scientific knowledge on soil, water, plants and environment; need-based application of interdisciplinary scientific research tools that would allow the stakeholders, particularly the farmers, to self-sustain; to conserve earth's natural resources and protect the environment for next-generation to live in peace and harmony across culture and religions of the world.

Recent invitations as a delegate/panelist/guest

- **Millets, Mixed-cropping and Microbes. Dialogue on Millets, Monsoon and Market**. April 2018. Venue: MSSRF, Chennai, India. (Scheduled).
- **Indo-Swiss Education and Business Forum**. Embassy of India, Berne, Switzerland. September 2017. Venue: Mattenhofsaal, Gümligen, Berne, Switzerland.
- **Indo-Swiss R&D Accelerator Meeting**. Embassy of India, Berne, Switzerland. September 2017. Venue: Residence of Indian Ambassador, Berne, Switzerland.
- **Indo-Swiss investment & innovation forum**. Embassy of India, Berne, Switzerland. March 2017. Venue: IMD, Lausanne, Switzerland.
- **Indo-Swiss initiative for R&D, Innovation and Investment**. Embassy of India, Berne, Switzerland. November 2016. Venue: Event-Lounge Foyer, Berne, Switzerland.

Publications in international peer-reviewed journals

1. Tracing an inoculated arbuscular mycorrhizal fungus, Funneliformis mosseae, in a field experiment using molecular tools. Thilagar G, Anshu BR, Bagyaraj DJ, **Mathimaran N** and Jawali N. Current Research in Environmental & Applied Mycology. 2018. 8(2). 183-193.
2. Improving Crop Yield and Nutrient Use Efficiency via Biofertilization–A Global Meta-analysis. Schütz L, Gattinger A, Meier M, Müller A, Boller T, Mäder P and **Mathimaran N**. Frontiers in Plant Sciences. 2018. 8. Article 2204.
3. Arbuscular mycorrhizal symbiosis and drought tolerance in crop plants. **Mathimaran N**, Sharma MP, Raju M and Bagyaraj DJ. Mycosphere. 2017. 8(3). 361-376.
4. Non-target effects of bioinoculants on rhizospheric microbial communities of Cajanus cajan. Gupta R, **Mathimaran N**, Wiemken A, Boller T, Bisaria VS and Sharma S. Applied Soil Ecology. 2014. 76. 26-33.
5. Mycorrhizal networks: Common goods of plants shared under unequal terms of trade. Walder F, Niemann H, **Mathimaran N**, Lehmann MF, Boller T and Wiemken A. Plant Physiology. 2012. 159. 789-797.
6. Genome sequences of two plant growth promoting fluorescent pseudomonas strains R62 and R81. **Mathimaran N**, Srivastava, Wiemken A, Sharma A K and Boller T. Journal of Bacteriology. 2012. 194. 3272-3273.
7. Unexpected vagaries of microsatellite loci in Glomus intraradices: Length polymorphisms are rarely caused by variation in repeat number only. **Mathimaran N**, Falquet L, Ineichen K, Picard C, Redecker D, Wiemken A and Boller T. New Phytologist. 2008. 180. 568-570.
8. Genetic diversity and host plant preferences revealed by simple sequence repeat and mitochondrial markers in a population of the arbuscular mycorrhizal fungus Glomus intraradices. Croll D, Wille L, Gamper HA, **Mathimaran N**, Lammers PJ, Corradi N and Sanders IR. New Phytologist. 2008. 178. 672-687.
9. Microsatellites for disentangling underground networks: Strain-specific identification of Glomus intraradices, an arbuscular mycorrhizal fungus. **Mathimaran N**, Falquet L, Ineichen K, Picard C, Redecker D, Wiemken A and Boller T. Fungal Genetics and Biology. 2008. 45. 812- 817.
10. Impact of agricultural management on arbuscular mycorrhizal fungal communities in Kenyan ferralsol. **Mathimaran N**, Ruh R, Jama B, Verchot L, Frossard E and Jansa J. Agriculture Ecosystems & Environment. 2007. 119. 22-32.
11. Glomus intraradices dominates arbuscular mycorrhizal communities in a heavy textured agricultural soil. **Mathimaran N**, Ruh R, Vullioud P, Frossard E and Jansa J. Mycorrhiza. 2005. 16. 61-66.

Invited Talks/Oral Presentations

12. Biofertilizer and bioirrigation: Tools for sustainable pigeon pea and finger millet production in India. Organics & Millets. 2018. **Mathimaran N**. International Trade Fair. January 19-21. Bengaluru, India.
13. Functions of Fungi in Agroecosystem. National Conference on "Challenges and Opportunities in Mycological Research (NCCOMR-2016). **Mathimaran N**. 11-12 February 2016. Chennai, India.
14. Plant growth promoting rhizobacteria and arbuscular mycorrhizal fungi as below ground microbial resources for improving plant growth in biotic and abiotic stress environments. **Mathimaran N**. Annamalai University. 2014. 08, Jan. Tamil Nadu, India.
15. Biofertilization and bioirrigation (BIOFI) network of the Indo-Swiss programme (ISCB): objectives and current state-of-the-art. **Mathimaran N.** Plant Science Centre Summer School. 2014. 11, Sep. Einsiedeln, Switzerland.
16. Biofertilization and bioirrigation for sustainable agriculture (BIOFI). **Mathimaran N.** Pondicherry University. 2014. 31, Jul. Puducherry, India.
17. Microsatellite genotyping as a new tool for tracing Glomus intraradices, an arbuscular mycorrhizal fungus. **Mathimaran N**. Cost 8.70 meeting: New scientific perspectives and technological approaches for mycorrhizal application. Working groups 1,2, 3 and 4 and Management Committee meeting.. 2009. 24-26, Mar. Barcelona, Spain.

Conferences

18. Biofertilizer and bioirrigation: Tools for sustainable pigeon pea and finger millet production in India. **Mathimaran N** , Kahmen K, Gurubasappa AE , Nanjundegowda TM, Ayappa S, Chikkegowda BN, Chikkathamegowda SG, Narayanswamy MB, Ramalingam PV, Sekar J, Perisamy Y, Bagyaraj DJ , Boller T and Mäder P. November 9-11, 2017. Organized by ISOFAR, NCOF and TIPI. Innovative Research for Organic Agriculture 3.0. 19th Organic World Congress, New Delhi, India.
19. How reliable are microbial inoculants in agriculture for improving yield and nutrient use efficiency? a meta-analysis of field studies from 1981 to 2015. Schütz L, Gattinger A, Meier M, Müller A, Boller T, Mäder P and **Mathimaran N**. November 9-11, 2017. Organized by ISOFAR, NCOF and TIPI. Innovative Research for Organic Agriculture 3.0. 19th Organic World Congress, New Delhi, India.
20. Bioirrigation" and biofertilizer based legume-millet intercropping as a tool to mitigate drought-induced crop yield loss in arid and semi-arid tropics. Devesh S, **Mathimaran N**, Boller T and Kahmen A. 9th International Conference on Mycorrhiza. 2017. 30th July - 4th August.Prague, Czech Republic.
21. Bioirrigation and Biofertilisation for Sustainable Intercropping of Pigeon Pea and Finger Millet. Devesh S, **Mathimaran N**, Boller T and Kahmen A. Tropentag 2017, September 20 - 22, Bonn, Germany. Future Agriculture: Social-ecological transitions and bio-cultural shifts.
22. Biofertilization and "bioirrigation" for sustainable mixed cropping of pigeon pea and finger millet (The BIOFI project). **Mathimaran N**, Mäder P, Kahmen A, Singh D, Muthukumar T, Sakthivel N, Varshney RK, Saxena R, Prabavathy VR, Sekar J, Ashok EG, Schader C, Meier M, Blättler D, Rengalakshmi R and Boller T. The 5th World Sustainability Forum. 2015. 7-9, Sep. Basel, Switzerland.
23. How reliable are microbial inoculants in agriculture for improving nutrient use efficiency and yield? – a meta-analysis of field studies from 1981 to 2015. Schütz L, Gattinger A, Meier M, Müller A, Boller T, Mäder P and **Mathimaran N**. Tropentag 2016: Solidarity in a competing world – fair use of resources. September 18 - 21, 2016, organised by the University of Natural Resources and Life Sciences (BOKU Vienna), Austria.
24. Microbial inoculants for sustainable agriculture - Growth promotion of pigeon pea (Cajanus cajan) and finger millet (Eleusine coracana) by arbuscular mycorrhizal fungi and its hyphal spread. Lukas S, **Mathimaran N**, Krishna S and Boller T. TROPENTAG 2015:Management of land use systems for enhanced food security – conflicts, controversies and resolutions. 2015. 16-18, Sep. Berlin, Germany.
25. Bioirrigation and biofertilization for sustainable intercropping of pigeon pea and finger millet. Devesh S, **Mathimaran N**, Boller T and Kahmen A. TROPENTAG 2015:Management of land use systems for enhanced food security – conflicts, controversies and resolutions. 2015. 16- 18, Sep. Berlin, Germany.
26. Pigeon pea and finger millet profit from each other via arbuscular mycorrhizal fungi (AMF) and plant growth promoting bacteria (PGPR) under conditions of "bioirrigation". Krishna S, Schütz L, Wiemken A, Boller T and **Mathimaran N**. Eighth International Conference of Mycorrhiza (ICOM 8) . 2015. 3-7, Aug. Arizona, USA.
27. Non-target effects of biocontrol agents on rhizospheric microbial diversity. Gupta R, **Mathimaran N**, Wiemken A, Boller T, Bisaria VS and Sharma S. The 10th International Mycological Congress. 2014. 3-8, Aug. Bangkok, Thailand.
28. The use of PGPRs and mycorrhizae as biofertilizers on marginal lands in India. Schuetz L, Boller T and **Mathimaran N**. Green Revolution Reloaded: Emerging Technologies for Sustainable Crop Production. 2014. 7-12, Sep . Einsiedeln, Switzerland.
29. Microbe Associated Molecular Patterns (MAMPs) in two plant growth promoting rhizobacteria, R62 and R81. **Mathimaran N**, Saharan K, Wiemken A and Boller T. Asian Congress in Biotechnology. 2013. 15-19, Dec . New Delhi, India.
30. Impact of bioinoculants on microbial diversity in Cajanus cajan rhizosphere. Gupta R, **Mathimaran N**, Wiemken A, Boller T, Bisaria VS and Sharma S. The 5th Congress of European Microbiologists (FEMS 2013). 2013. 21-25, Jul . Leipzig, Germany.
31. Non target effects of bioinoculants on rhizospheric microbial community structure of Cajanus cajan. Gupta R, **Mathimaran N**, Wiemken A, Boller T, Bisaria VS and Sharma S. 2nd International Conference on Microbial Diversity: Microbial Interactions in Complex Ecosystems. 2013. 23-25, Oct. Turin, Italy.
32. Genomic insights into two plant growth-promoting rhizobacteria, R62 and R81. **Mathimaran N**, Srivastava R, , Wiemken A, , Sharma AK and Boller T. 7th International Conference on Mycorrhiza (ICOM7). 2013. 6-11, Jan . New Delhi, India.

33. Application of bioinoculants in Cajanus cajan: The larger picture. Gupta R, **Mathimaran N**, Wiemken A, Boller T, Bisaria VS and Sharma S. IX convention of the biotech research society of india. 2012. 21-23, Nov . Patiala, India.
34. Molecular tools for tracing arbuscular mycorrhizal fungi (AMF) and plant growth-promoting rhizobacteria (PGPR). **Mathimaran N**, Sashidhar B, Srivastava R, Adholeya A, Sharma AK, , Aragno M, Wiemken A and Boller T. Integrated Soil Fertility Management in Africa: From Microbes to Markets. 2012. 22-26, Oct. Nairobi, Kenya.
35. Sorghum and Linum joined by a common hyphal network of arbuscular mycorrhizal fungi: Differential carbon investments and nutrient benefits. International Mycological Congress. Walder F, Courty P, Mathimaran N, Boller T and Wiemken A. 2010. Edinburgh. UK.
36. Plant growth-promoting pseudomonad produce elicitors which induce ethylene production in host plants. Saharan K, Sarma MVRK, **Mathimaran N**, Bisaria VS, Sahai V, Dominguez A, Wiemken A and Boller T. Journal of Biotechnology. 2010. 150. S538-S538.
37. Population dynamics of arbuscular mycorrhizal fungi under transgenic strawberries and their wild relatives. **Mathimaran N**, Akhtar MS, Boller T and Wiemken A. Benefits and Risks of the Deliberate Release of Genetically Modified Plants: National Research Programme NRP 59 Scientific Conference. 2010. 20-21, Sep. Muntelier, Switzerland.
38. Saharan, K., M. V. R. K. Sarma, **N. Mathimaran**, V. S. Bisaria, V. Sahai, A. Dominguez, A. Wiemken, and T. Boller. 2010. Plant growth-promoting pseudomonad produce elicitors which induce ethylene production in host plants. Journal of Biotechnology. 150:S538-S538
39. Uneven return on investments of two plants into a common hyphal network of arbuscular mycorrhizal fungi. Walder F, **Mathimaran N**, Boller T and Wiemken A. 6th ISS Congress. 2009. 9-15, Aug. Madison, USA.
40. Microsatellite markers for an arbuscular mycorrhizal fungus. **Mathimaran N**, Falquet L, Ineichen K, Boller T and Wiemken A. Plant- microbial interactions. 2008. 2-6, Jul. Krakow, Poland.
41. Arbuscular mycorrhizal fungi functionally adapt to Phosphorus fertilization of soil. **Mathimaran N**, Ruh R, Jama B, Vullioud P, Verchot L, Frossard E and Jansa J. International conference on Mycorrhiza: Systems Research from Genes to Communities. 2006. 4-9th, Mar. Ascona, Switzerland.
42. Response of arbuscular mycorrhizal fungi to phosphorus fertilization of soils as affected by soil conditions. **Mathimaran N**, Ruh R, Jansa J and Frossard E. Future Challenges in P Fertilization and the Environment: 18th World Congress of Soil Science. 2006. 9-15, Jul. Pennsylvania, USA.
43. Arbuscular mycorrhizal fungi functionally adapt to phosphorus fertilization of soil. **Mathimaran N**, Ruh R, Jama B, Vullioud P, Frossard E and Jansa J. COST 8.38 meeting. 2005. 2-4, Jun . Dijon, France.
44. Multispecies AMF communities-what do they all do in there?. Jansa J, **Mathimaran N**, Smith S and Frossard E. COST 8.38 meeting. 2005. 2-4, Jun . Dijon, France.
45. Do soil management practices affect arbuscular mycorrhizas and their phosphorus (P) uptake efficiency?. **Mathimaran N**, Jansa J and Frossard E. ZIL Annual Conference. 2004. 11, Jun . Zürich, Switzerland.
46. Mycorrhizal P uptake by maize from tropical soil depends on agricultural management. **Mathimaran N**, Ruh R, Frossard E and Jansa J. The 34th Annual Conference of the Ecological Society of GfOE. 2004. 13-17, Sep. Giessen, Germany.
47. Do agricultural management practices affect arbuscular mycorrhizal community?. **Mathimaran N**, Frossard E and Jansa J. ZOeK PhD conference. 2004. 15-16, Oct . Davos, Switzerland.
48. Arbuscular mycorrhizal diversity in low and high phosphorus fertilized soils. **Mathimaran N**, Jansa J and Frossard E. COST 8.38 meeting. 2002. 10-12, Oct. Pisa, Italy.

Workshops, symposiums & colloquium

49. The Potential of Sustainable Farming Systems to Promote Adaptation to Climate Change Scientific results, knowledge transfer and application. Project Workshop. Stiftung Mercartor Schweiz. 2017. Thursday, November 3. FiBL, Frick.
50. Biofertilization and "bioirrigation" for sustainable mixed cropping of pigeon pea and finger millet (The BIOFI project). **Mathimaran N**. Swiss Mycorrhiza Symposium. 21 September, 2016. Agroscope Reckenholz, Switzerland.
51. Biofertilization and "bioirrigation" for sustainable mixed cropping of pigeon pea and finger millet. **Mathimaran N**, Maeder P, Kahmen A, Muthukumar T, Sakthivel N, Varshney RK, Prabavathy VR,

Ashok EG, Schader C, Blaettler D, Rengalakshmi R and Boller T. Symposium cum Workshop on Participatory Research to foster Innovation in Agriculture. 2014. 28, Aug . Zürich, Switzerland.

52. Molecular tools for monitoring arbuscular mycorrhizal fungi (AMF) and plant growth promoting rhizobacteria (PGPR). **Mathimaran N**, Wiemken A and Boller T. ISCB International Symposium. 2011. 10-11, Mar. New Delhi, India.
53. Uneven return on investments of two plants joined by a common hyphal network of arbuscular mycorrhizal fungi. Walder F, **Mathimaran N**, Boller T and Wiemken A. ISCB International Symposium. 2011. 10-11, Mar. New Delhi, India.
54. Microsatellites as a tool for tracing specific strains of Glomus irregulare, a widespread arbuscular mycorrhizal fungus, in an environmental sample. **Mathimaran N**, Koegel S, Akhtar MS, Boller T and Wiemken A. International workshop on Rhizosphere Biology of Agriculture, Horticulture & Forestry: Present & Future. 2010. 25-27, Feb. Pantnagar, India.
55. Microsatellites as a tool for tracing specific strains of Glomus irregulare, a widespread arbuscular mycorrhizal fungus, in an environmental sample. **Mathimaran N**, Koegel S, Akhtar MS, Boller T and Wiemken A. Plant-Microbe Interactions symposium of the Zurich-Basel Plant Science Center. 2009. 13, Nov . Basel, Switzerland.
56. Strawberry ecotypes respond differentially to three arbuscular mycorrhizal fungal strains when inoculated singly or in combinations of two or three. Akhtar MS, **Mathimaran N**, Boller T and Wiemken A. Plant-Microbe Interactions symposium of the Zurich-Basel Plant Science Center. 2009. 13, Nov . Basel, Switzerland.
57. Plant growth-promoting pseudomonads produce elicitors which induce ethylene production in host plants. Saharan K, Sarma MVRK, **Mathimaran N**, Bisaria VS, Sahai V, Dominguez A, Wiemken A and Boller T. Plant-Microbe Interactions symposium of the Zurich-Basel Plant Science Center. 2009. 13, Nov . Basel, Switzerland.
58. Influence of arbuscular mycorrhizal fungal diversity on plant growth and phosphorus uptake: implications for crop management on African Soil. **Mathimaran N**. The Network for International Development and Cooperation (NIDECO) colloquium. 2003. 12, Jun. Zürich, Switzerland.
59. Do crop rotation and phosphorus fertilization affect AMF function?. **Mathimaran N**, Jansa J and Frossard E. British Ecological Society, Annual Symposium, Soil Biodiversity and Function. 2003. 25-27, Mar. Lancaster, United Kingdom.
60. Screening efficient VAM fungi for Adathoda vesica Nees. Thanuja BP , **Mathimaran, N** and Suresh CK. National symposium on relevance of plant biochemistry and biotechnology- modern trends. 2001. 1-3, Mar. Madurai, India.
61. Response of Datura metel Linn to inoculation of VAM and plant growth promoting rhizomicroorganisms (PGPR). Thanuja BP, Earanna N, **Mathimaran N** and Suresh CK. National symposium on relevance of plant biochemistry and biotechnology- modern trends. 2001. 1-3, Mar. Madurai, India.
62. Molecular Phylogeny of few arbuscular mycorrhizal fungi using RAPD-PCR analysis. **Mathimaran N**, Chakravorty A, Shivayogi MS, Suresh CK, Shankeer UR and Bagyaraj DJ. VII National symposium of soil biology and ecology. 2001. 7-9, Nov . Bangalore, India.

Specific research skills

- **Agroecology**: Design and evaluation of field experiments, application of inter-disciplinary sciences for sustainable crop production, on-farm trials and participatory research methods.
- **Greenhouse experiments**: Setting-up greenhouse experiments, installation of automatic time controlled or siphoning (Tropf-Blumat™) watering system, working experience in Conviron™ plant growth chambers, soil and plant analysis.
- **Microbial Ecology**: Isolation, cultivation and storage of bacteria and fungi, particularly of soil microbes, stereo and compound microscopy, staining techniques for bacteria and fungi, calculating diversity indices.
- **Molecular Biology**: PCR based genetic analysis, high-resolution gel electrophoresis, sanger and next-generation sequencing (Roche 454 and Ion-Torrent PGM), real-time PCR, TaqMan assay, genotyping, molecular marker development.
- **Bioinformatics**: Sanger and next-generation sequence analysis, phylogenetic analysis, comparative genomics, working knowledge in bioinformatics softwares such as Geneious, Vector NTI, Bio-Edit, PAUP, MEGAN, QIIME.
- **Tracing**: Radioactive phosphorus tracer labeling of soil and measurement using liquid scintillation counter

Computing/Sofware skills

- Professional experience with statistical softwares such as JMP®, SPSS®, Sigmaplot® ; Documentation softwares including Microsoft Office 365®, Microsoft Excel® Microsoft PowerPoint®, and imaging softwares such as Adobe® CS6 components such as Illustrator, Photoshop, Lightroom CC; project management tools such as Microsoft® Project, X-Mind & xPlan.
- In-depth knowledge on both Mac and PC environment, including network and VPN client configuration, remote access setup using Apple Remote Desktop® (Mac) and Symantec PC anywhere® (PC) and setting up data backup system using Apple TimeMachine® (Mac) and Retrospect® (PC).

Fellowships & Awards

- Post-Doctoral Fellowship, Indo-Swiss Collaboration in Biotechnology (ISCB)
- PhD Fellowship, Swiss Federal Institute of Technology (ETH, Zürich), Switzerland
- Junior Research Fellowship, Indian Council for Agricultural Research, India
- Merit Scholarship, Tamil Nadu Agricultural University, India
- Best Student award for ranking first in Anglo-Indian school public examination, India

Teaching experience

- Plant physiology, University of Basel, Switzerland
- Molecular Ecology, University of Basel, Switzerland

Training conducted

- Microsatellite genotyping: The Energy and Resources Institute (TERI), Delhi, India
- Mycorrhizal spore identification & DNA extraction: Indian Institute of Technology (IIT), Delhi, India
- Microsatellite genotyping: G.B. Pant University of Agriculture & Technology, Pantnagar, India

Training undergone

- **CTI Entrepreneurship Training**. 19th September to 21st November 2017. Commission for Technology & Innovation (CTI). Venue: Swiss Innovation Park. Basel, Switzerland.
- **First Steps with R in Life Sciences** : 19th & 20th September 2016. Swiss Institute of Bioinformatics. Venue: University of Basel, Switzerland.
- **Comparative Genomics**: 29th October - 2nd November 2012. Swiss Institute of Bioinformatics. Venue: Lausanne, Switzerland.
- **Host-Associated Microbiota Workshop**. 11th - 14th September 2012. Department of Zoology. Venue: University of Basel, Switzerland.
- **Next-Generation sequencing for model and non-model organism**. 25th May 2011. Institute of Plant Biology, Venue: University of Zurich, Switzerland.
- **Real-Time PCR training course** : 2nd & 3rd April 2008. Applied Biosystems. Venue: Rotkreuz, Switzerland.

Research guidance/co-supervision (including ongoing projects)

- PhD - 3
- MSc - 6

Additional career experience/activities/responsibilities

- Experience in purchase process of research equipments involving comparative cost analysis, price-negotiation, purchase and installation. Specific experience includes purchase of ABI & Roche Real-Time PCR, Thermocyclers from Biometra & SensoQuest Labcyclers, Nano-Drop, ABI 3130 & 3500 Sequencer at Botanical Institute, Basel, University of Basel, Switzerland.
- Experience in creating and maintaining websites for the plant nutrition group, ETH, Zürich and at Botanical Institute, Basel, Switzerland.
- IT consultant/support for the Mac OS installation & trouble shooting at the Botanical Institute Basel during 2006 - 2017.
- Curator – microbial and pathogen collection at Botanical Institute, University of Basel, Switzerland.
- Former member, American Society for Microbiology.
- Member, Organizing Committee, Organic P 2003 workshop, Ascona, Switzerland.

Private

- **Residential address since 2006**: Basel, Switzerland.
- **Family**: Married, family with one son and one daughter.
- **Citizen**: Indian with Swiss permanent residence permit (C).
- **Hobbies**: Cooking, Photography, Hiking, Traveling, Networking, Philanthropy, Music, etc.,