Pierre-André JACINTHE

Department of Earth Sciences, Indiana University Purdue University Indianapolis (IUPUI)
723 W. Michigan St., SL 122, Indianapolis, IN 46202
Tel. 317-274-7969; email: pjacinth@iupui.edu

EDUCATION

Ph.D., Agronomy / Soil Biochemistry, Ohio State University, Columbus, Ohio, 1995.
M.Sc., Natural Resources / Soil Chemistry, Ball State University, Indiana, 1991.
B.S., Agronomy / Soils, State University of Haiti, 1985.

RESEARCH INTERESTS

Soil-atmosphere exchange of trace gases; Nitrogen dynamics and water quality; Carbon transport in overland flows and fates of eroded carbon; Carbon sequestration in terrestrial ecosystems; Biogeochemistry of disturbed landscapes; Conservation tillage

ACADEMIC APPOINTMENTS:

Assistant Professor, Department of Geology/Earth Sciences, IUPUI, 2004-date
Postdoctoral Researcher and Research Scientist, Ohio State University, 1999-2004.
Lecturer and Laboratory Manager, State University of Haiti, 1997-1999
Postdoctoral Researcher, Institute of Ecosystem Studies, Millbrook, NY, 1995-1997
Graduate Research Associate, Ohio State University, 1991-1995

OTHER APPOINTMENTS:

- National Consultant, UN Food and Agriculture Organization (FAO), 1997-1999.
- Consultant, AGRER, S.A.-N.V., Formulation of the "Trans-boundary environmental project, Haiti-Dominican Republic, 1998. Study commissioned by the European Union.
- Consultant, Ministry of Environment, Haiti (1998-1999), Coordination of the national greenhouse gases (GHG) inventory for agricultural and forestry sectors.
- Consultant, Mission Française de Développement, Elaboration of a national watershed management policy, support to the Ministry of Agriculture of Haiti, 1998-1999
- Soil/Water Conservation, Centre de Formation en Aménagement Intégré des Mornes, Limbé, Haiti (FAO), 1988-1989.
- Agro-Chemist, State University of Haiti, Faculté d'Agronomie et de Medecine Veterinaire (FAMV), State University of Haiti, 1986-1987.

PROFESSIONAL SERVICE

Membership: American Society of Agronomy (1991-date); Soil Science Society of America, (1991-date); Ecological Society of America (2005-date); The Geochemical Society (2005-date)

Committees: Member, Early Career Committee (2006-2009), Soil Science Society of America; NSF's Denitrification Research Coordination Network.

Editorial Board: Associate Editor, Journal of Environmental Quality

Panelist: USDA-NRI Air Quality Program

Reviewer**:** Agriculture, Ecosystems and Environment; Applied Geochemistry; Biogeochemistry; Climatic Change; Canadian Journal of Soil Science; Journal of Geoscience Education; Journal of Environmental Quality; Journal of Range Management; Soil and Tillage Research; Soil Biology and Biochemistry; Soil Science Society of America Journal; National Science Foundation; National Research Initiative (USDA-NRI); US Geological Survey (NCGP); Expert Reviewer, Inter Governmental Panel on Climate Change (IPCC), Fourth Assessment Report, Latin America

HONORS and AWARDS

- Fulbright/LASPAU Scholarship Award, 1989-1991;
- Outstanding Graduate Student Award, Natural Resources, Ball State University, 1991;
- Trustees Teaching Award, Indiana University, 2008;
- 2009 Outstanding Faculty Mentor Award, LSAMP-Indiana (Louis Stokes Alliance for Minority Participation)

GRANTS AND FELLOWSHIPS:

External Research Grants- Active

Greenhouse gas budget and methane dynamics in a no-tillage chronosequence. PI: P.A. Jacinthe, Co-PI: W.A. Dick and R. Lal. USDA-NRI, Air Quality Program, $399,986, 5/09 – 04/12.

Greenhouse gas emissions from riparian zones across a regional hydrogeomorphic gradient. PI: P. Vidon, Co-PI: P.A. Jacinthe and M.E. Baker. USDA-NRI, Air Quality Program, $399,689 4/09 – 03/12.

Performance analysis of selected mitigation systems used to attenuate diffuse pollution occurring during baseflow and high flow events from agricultural fields (Aquisafe 2). PI: L. P. Tedesco, Co-PI: P.A. Jacinthe and M. Babbar-Sebens, KompetenzZentrum Wasser Berlin €150,000, 05/09 – 04/12.

External Research Grants- Completed

Trace gas fluxes in riparian buffers along an urban-rural gradient. PI: P.A. Jacinthe, USGS, Indiana Water Resources Research Center, 2006 104 (b) grants, $20,000, 03/06 – 03/07.

Carbon sequestration in reclaimed minesoils: a stable carbon isotope approach. PI: P.A. Jacinthe, Sub-contract with Ohio State University Research Foundation (OSURF Grant 60000477), National Energy Research Laboratory, $10,000, 11/06 – 11/07.

Internal Research Grants:

Acquisition of a dissolved carbon and nitrogen analyzer for Earth Science research and teaching PI: P.A. Jacinthe, Research Support Funds Grant (RSFG IUPUI), $26,916, 12/08 – 12/09.

Sustaining water resources: Environmental impacts of chemical loadings and transport during floods. PI: K. Clay (PI); Co-PI: M. Babbar-Sebens, S. Hall, P.A. Jacinthe, H. Reynolds, T. Royer, L. Tedesco, Indiana University Intercampus Collaboration in Environmental Research, $50,333, 01/09 – 06/10.

Alternating oxic/anoxic conditions and nutrient flux from eutrophic freshwater sediment: A mesocosm study. PI: P.A. Jacinthe, Purdue Research Foundation Summer Faculty Grant, $7,000. 05/07 - 08/07.

Impact of algaecide treatment on nitrogen cycling processes in Eagle Creek reservoir sediment. PI: P.A. Jacinthe, Office of Professional Development, Grant in Aid Program, IUPUI, : $3,000, 04/05 - 04/06.

Organic carbon dynamics and greenhouse gas fluxes in a Central Indiana water reservoir, PI: P.A. Jacinthe, Research Support Funds Grant (RSFG IUPUI), $20,857, 05/05 – 05/07.

PUBLICATIONS

38. Jacinthe, P.A., G.M. Filippelli, Tedesco, L.P., Licht, K. 2010. Distribution of copper in sediments from fluvial reservoirs treated with cutrine. Water, Air and Soil Pollution DOIi:10.1007/s11270-009-0278-3.

37. Jacinthe, P.A., J.S. Bills, L.P. Tedesco. 2010. Size, activity and catabolic diversity of the soil microbial biomass in a wetland complex invaded by reed canary grass. Plant Soil DOI: 10.1007/s11104-009-0147-2.

36. Jacinthe, P.A., R. Lal, and L.B. Owens. 2009. Application of stable isotope analysis to quantify the retention of eroded carbon in grass filters at the North Appalachian experimental watersheds. Geoderma 148: 405-412.

35. Jacinthe, P.A., and L. Tedesco. 2009. Impact of elevated copper on the rate and gaseous products of denitrification in freshwater sediments. Journal of Environmental Quality 38: 1183-1192.

34. Jacinthe, P.A., and R. Lal. 2009. Tillage effects on carbon sequestration and microbial biomass in reclaimed farmland soils of southwestern Indiana. Soil Science Society of America Journal 73: 605-613.

33. Shrestha RK, Lal R, Jacinthe PA. 2009. Enhancing carbon and nitrogen sequestration in reclaimed soils through organic amendments and chiseling. Soil Science Society of America Journal 73: 1004-1011.

32. Harrison, J., Maranger, R., Alexander, R., Giblin A., Jacinthe, P.A., Mayorga, E., Seitzinger, S., Sobota, D., Wollheim, W. 2009. The regional and global significance of nitrogen removal in lakes and reservoirs. Biogeochemistry 93:143-157.

31. Jacinthe, P.A., Barton, C.D., Maharaj, S. and Lal, R. 2009. An evaluation of methodologies for assessing geogenic carbon in minesoils of the Eastern US. *In*: Soil Carbon Sequestration and the Greenhouse Effect, Soil Science Society of America, Publication 57, 2nd edition, Madison, WI.

30. Jacinthe, P.A., and R. Lal. 2007. Carbon storage and minesoil properties in relation to topsoil application techniques. Soil Science Society of America Journal 71: 1788-1795.

29. Jacinthe, P.A., and P.M. Groffman. 2006. Microbial nitrogen cycling processes in a sulfidic coastal marsh. Wetlands Ecology and Management 14:123-131.

28. Jacinthe, P.A., and R. Lal. 2006a. Spatial variability of soil properties and trace gas fluxes in reclaimed mineland. Geoderma 136: 598-608.

27. Jacinthe, P.A., and R. Lal. 2006b. Methane oxidation potential of reclaimed grassland soils as affected by management. Soil Science 171: 772-783.

26. Ussiri, D.A., R. Lal, and P.A. Jacinthe. 2006. Soil properties and carbon sequestration of afforested pastures in reclaimed minesoils of Ohio. Soil Science Society of America Journal 70: 1797-1806.

25. Ussiri, D.A., R. Lal, and P.A. Jacinthe. 2006. Effects of post-reclamation land use on properties and carbon sequestration in minesoils of Southeastern Ohio. Soil Science 171: 261-271.

24. Jacinthe, P.A., and R. Lal. 2005. Labile carbon and methane uptake as affected by tillage intensity in a Mollisol. Soil and Tillage Research 80:35-45.

Prior to appointment at IUPUI

23. Jacinthe, P.A., and R. Lal. 2004. Effects of soil cover on fluxes and depth concentration of trace gases. Soil Science 169: 243-259.

22. Jacinthe, P.A., R. Lal, L.B. Owens, and D.L. Hothem. 2004. Transport of labile carbon in runoff as affected by land-use and rainfall characteristics. Soil and Tillage Research 77: 11-23.

21. Jacinthe, P.A., and R. Lal. 2003. Soil Respiration. In Encyclopedia of Soil Science. R. Lal, editor. Marcel Dekker Inc., New York.

20. Jacinthe, P.A., P.M. Groffman and A.J. Gold. 2003. Carbon dioxide production and dissolved organic carbon dynamics in a riparian aquifer: Effects of hydrology and nitrate enrichment. Journal of Environmental Quality 32: 1365-1374.

19. Jacinthe, P.A., and R. Lal. 2003. Nitrogen fertilization of wheat residue affecting nitrous oxide and methane emission from a central Ohio Luvisol. Biology and Fertility of Soils 37: 338-347.

18. Jacinthe, P.A., and R. Lal. 2002. Erosion and carbon dioxide. In Encyclopedia of Soil Science. R. Lal, editor. Marcel Dekker Inc., New York.

17. Jacinthe, P.A., W.A. Dick, and L.B. Owens. 2002. Overwinter soil denitrification

activity and nitrogen cycling as affected by management practices. Biology and Fertility of Soils 36: 1-9.

16. Jacinthe, P.A., R. Lal, and J. Kimble. 2002a. A simulation study of carbon dioxide evolution in runoff from long-term no-till and plowed soils. Soil and Tillage Research 66: 23-33.

15. Jacinthe, P.A., R. Lal, and J. Kimble. 2002b. Carbon budget and seasonal carbon dioxide emission from a central Ohio Luvisol as influenced by wheat residue amendment. Soil and Tillage Research 67: 147-157.

14. Jacinthe, P.A., R. Lal, and J. Kimble. 2002c. Influence of crop residue fertilization on accumulation and quality of organic carbon in a central Ohio Luvisol. Soil Science 167:750-758.

13. Jacinthe, P.A., and P.M. Groffman. 2001. Silicone rubber sampler to measure dissolved gases in saturated soils and waters. Soil Biology & Biochemistry 33:907-912.

12. Jacinthe, P.A., R. Lal, and J. Kimble. 2001. Assessing water erosion impacts on soil carbon pools and fluxes. In Assessment Methods for Soil Carbon Pools, R. Lal, J. Kimble, R.F Follett and B. Stewart, editors. CRC Press Publishers, Boca Raton, Fl., pp. 427-450.

11. Jacinthe, P.A., R. Lal, and J. Kimble. 2001. Organic carbon storage and dynamics in croplands and terrestrial deposits as influenced by subsurface tile-drainage. Soil Science 166: 322-335.

10. Jacinthe, P.A., and R. Lal. 2001. A mass balance approach to assess carbon dioxide evolution during erosional events. Land Degradation and Development 12: 329-339.

9. Jacinthe, P.A., W.A. Dick, and L.C. Brown. 2000. Bioremediation of nitrate-contaminated shallow soils and waters using water table management techniques: Evolution and release of nitrous oxide. Soil Biology & Biochemistry 32: 371-382.

8. Jacinthe, P.A., W.A. Dick, and L.C. Brown. 1999. Bioremediation of nitrate-contaminated shallow soils and waters using water table management techniques: Nitrate removal efficiency. Transactions of the American Society of Agricultural Engineering 42: 1251-1259.

7. Addy, K., A.J. Gold, P.M. Groffman, and P.A. Jacinthe. 1999. Groundwater nitrate removal in subsoil of forested and mowed riparian buffer zones. Journal of Environmental Quality. Journal of Environmental Quality 28: 962-970.

6. Groffman, P.M., A.J. Gold, and P.A. Jacinthe. 1998. Nitrous oxide production in riparian zones and groundwater. Nutrient Cycling in Agroecosystems 52:179-186.

5. Jacinthe, P.A., P.M. Groffman, A.J. Gold, and A. Mosier. 1998. Patchiness in microbial

nitrogen transformations in groundwater in a riparian forest. Journal of Environmental Quality 27:156-164.

4. Gold, A.J., P.A. Jacinthe, P.M. Groffman, and R.H. Puffer. 1998. Patchiness in groundwater nitrate removal in a riparian forest. Journal of Environmental Quality 27:146-155.

3. Jacinthe, P.A. and W.A. Dick. 1997. Soil management and nitrous oxide emissions from cultivated fields in Southern Ohio. Soil and Tillage Research 41:221-235.

2. Jacinthe, P.A. and W.A. Dick. 1996. Use of silicone tubing to sample nitrous oxide in the soil atmosphere. Soil Biology and Biochemistry 28: 721-726.

1. Jacinthe, P.A. and J.R. Pichtel. 1992. Interactions of the nitrification inhibitors nitrapyrin and dicyandiamide with soil humic compounds. Soil Science Society America Journal 56:465-470.