

### 1. PUBLICATIONS with Undergraduate Students at Nazareth College

#### 1.1. Journal Articles

\* marks undergraduate students or alumni from Nazareth College.

1. **Das, P.**, Zamule S. M., Bolduc, D. R. \*, Patton, M. J. \*, Mendola, M. L. \*, Penoyer, J. M. \*, Lyon, B.L. \*, Chittenden, H. M. \*, Hoyt, A. C. \*, Dupre, C. E. \*, Wessel, J. J. \*, Gergi, I. \*, Buechi C. V. \*, Shebert J. A. \*, Chauhan, M. \*, Giacherio, D. \*, and Phouthavong-Murphy J. C. \* (2020). Primary Prevention of Outdoor Lead (Pb) Exposure on Residential Properties in Rochester, NY, and Potential of a Sustainable Remediation Solution Involving the Reuse of Drinking Water Treatment Residual (WTR), a Waste Generated Daily by the City. (Submitted to Environmental Health Perspectives)  
Preprint available at ChemRxiv – doi: <https://doi.org/10.26434/chemrxiv.12780482.v1>
2. Zamule S. M., Dupre, C. V. \*, Mendola, M. L. \*, Widmer, J. \*, Shebert J. A. \*, Roote, C. E., and **Das, P.** (2020). Bioremediation Potential of Select Bacterial Species for the Neonicotinoid Insecticides, Thiamethoxam and Imidacloprid. (Submitted to Ecotoxicology and Environmental Safety).  
Preprint available at BioRxiv - doi: <https://doi.org/10.1101/2020.07.26.221945>
3. Phouthavong-Murphy, J.C. \*, Merrill, A.K. \*, Zamule, S., Giacherio, D., Brown, B., Roote, C., and **Das, P.** (2020). Phytoremediation potential of switchgrass (*Panicum virgatum*), two United States native varieties, to remove bisphenol-A (BPA) from aqueous media. *Scientific Reports (Nature research)* 10:835 doi.org/10.1038/s41598-019-56655-w.

#### 1.2. Technical Abstracts/ Paper-Presentations at Professional Meetings

\* marks undergraduate students and alumni from Nazareth College.

1. **Das, P.**, Zamule, S.M., Bolduc, D. \*, Patton, M. \*, Mendola, M. \*, Buechi, C. \* (2020). A Field Assessment on The Safety of Urban Gardening on Residential Properties Built Prior to 1978 in City Neighborhoods of Rochester, NY. *Society of Environmental Toxicology and Chemistry Abstract.*
2. **Das, P.**, Zamule, S.M., Patton, M. \*, Mendola, M. \* (2020). A Potential Sustainable Remediation Technology for Point-source Contributions of Wastewater Treatment Plants to Eutrophication in the Great Lakes. *Society of Environmental Toxicology and Chemistry Abstract.*
3. Bolduc, D. \*, Willet M.A. \*, Doupe, J. A. \*, Bargabos, M. \*, Daily, A.D. \*, Griffin, T. D. \*, Kelley, E. \*, Pitcher L. M. \*, Shuron, G. L. \*, Thompson, K. Z. \*, Zamule, S.M., **Das, P.** (2020). A Field Assessment on The Safety of Urban Gardening on Residential Properties Built Prior to 1978 in City Neighborhoods of Rochester, NY. *Society of Environmental Toxicology and Chemistry Abstract.*

## Dr. Das's List of Publications

4. Zamule, S.M., Dupre, C.\*, Mendola, M.\*, Widmer, J.\*, Shebert, J., Roote, C., and **Das, P.** (2020). Bacterial Biodegradation of the Neonicotinoid Insecticides, Thiamethoxam and Imidacloprid. *Society of Environmental Toxicology and Chemistry Abstract*.
5. **Das, P.**, Zamule, S., Bolduc, D.\*, Patton, M.\* (2020). Is urban gardening safe in residential properties built prior to 1978? Field-assessment in the city neighborhoods of Rochester, NY. *American Chemical Society Abstract*.
6. Dupre, C.\*, Mendola, M.\*, Widmer, J.\*, Zamule, S., Shebert, J., Roote, C., and **Das, P.** (2020). Transformation of the neonicotinoid insecticide, thiamethoxam, by select bacterial species. *American Chemical Society Abstract*.
7. **Das, P.**, Zamule, S.M., Bolduc, D.\*, Patton, M.\*, Mendola, M.\*, Buechi, C.\* (2020). A Field Assessment on The Safety of Urban Gardening on Residential Properties Built Prior to 1978 in City Neighborhoods of Rochester, NY. *Society of Environmental Toxicology and Chemistry Abstract*.
8. **Das, P.**, Zamule, S.M., Patton, M.\*, Mendola, M.\* (2020). A Potential Sustainable Remediation Technology for Point-source Contributions of Wastewater Treatment Plants to Eutrophication in the Great Lakes. *Society of Environmental Toxicology and Chemistry Abstract*.
9. Bolduc, D.\*, Willet M.A.\*, Doupe, J. A.\*, Bargabos, M.\*, Daily, A.D.\*, Griffin, T. D.\*, Kelley, E. \*, Pitcher L. M.\*, Shuron, G. L.\*, Thompson, K. Z.\*, Zamule, S.M., **Das, P.** (2020). A Field Assessment on The Safety of Urban Gardening on Residential Properties Built Prior to 1978 in City Neighborhoods of Rochester, NY. *Society of Environmental Toxicology and Chemistry Abstract* (Submitted).
10. Zamule, S.M., Dupre, C.\*, Mendola, M.\*, Widmer, J.\*, Shebert, J., Roote, C., and **Das, P.** (2020). Bacterial Biodegradation of the Neonicotinoid Insecticides, Thiamethoxam and Imidacloprid. *Society of Environmental Toxicology and Chemistry Abstract*.
11. **Das, P.**, Zamule, S., Bolduc, D.\*, Patton, M.\* (2020). Is urban gardening safe in residential properties built prior to 1978? Field-assessment in the city neighborhoods of Rochester, NY. *American Chemical Society Abstract*.
12. Dupre, C.\*, Mendola, M.\*, Widmer, J.\*, Zamule, S., Shebert, J., Roote, C., and **Das, P.** (2020). Transformation of the neonicotinoid insecticide, thiamethoxam, by select bacterial species. *American Chemical Society Abstract*.
13. Penoyer, J.\*, Moyles, R.\*, Harrington, H.\*, Hoyt, A.\*, Groth, B.\*, Corona, M.\*, Wessel, J.\*, Gergi, I.\*, Zamule, S., Giacherio, D. and **Das, P.** (2019). The Potential of Reusing WTR, A Water Treatment By-Product, to Design Sustainable Remediation Techniques for Rochester NY, Communities. *American Chemical Society Abstract*.
14. Moyles, R. \*, Wessel, J. \*, Penoyer, J. \*, Harrington, H. \*, Hoyt, A. \*, Groth, B. \*, Corona, M. \*, Gergi, I. \*, Zamule, S., Giacherio, D. and **Das, P.** (2019). Developing a sustainable zero-waste multi-process remediation technology involving chemical immobilization and phytoremediation to remove excess nutrients (nitrate and phosphate) from a sewage treatment plant (STP) effluent. *American Chemical Society Abstract*.
15. Gimler, A. \*, Vazquez-Szendrey, L. \*, Zamule, S., Giacherio, D. and **Das, P.** (2019). Lead levels in ocean water near Culebra Island in Puerto Rico are substantially above EPA permissible limits for coastal and estuarine water. *American Chemical Society Abstract*.

## Dr. Das's List of Publications

16. Corona, M. \*, Pacella, R. \*, Groth, B. \*, Giacherio, D. and **Das, P.** (2019). Analysis of Orthophosphate, Total Phosphate, and Various Water Characteristics in the Genesee River Watershed. *American Chemical Society (Regional) Abstract*.
17. **Das, P.**, Wessel, J. \*, Penoyer, J. \*, Gergi, I. \*, Zamule, S., and Giacherio, D. (2018). Developing a sustainable zero-waste multi-process remediation technology involving chemical immobilization and phytoremediation to remove excess nutrients (nitrate and phosphate) from a sewage treatment plant (STP) effluent. *Geological Society of America Abstract*.
18. **Das, P.**, Wessel, J. \*, Penoyer, J. \*, Gergi, I. \*, Zamule, S., and Giacherio, D. (2018). Trophic profiling of Lake Ontario at the mouth of the Genesee River in the summers of 2016, 2017, and 2018 and its correlation with algae blooms and weather conditions. *Geological Society of America Abstract*.
19. Harford, A. \*, Stryker, E. \*, Arena, L. \*, Murphy, J. \*, Merrill, A. \*, Joseph, S. \* **Das, P.**, Giacherio, D., and Zamule, S. (2018). Biochemical and metabolomic profiling of switchgrass (*P. virgatum*) for potential as a phytoremediation agent to clean-up BPA contaminated systems. *American Chemical Society Abstract*.
20. Downes, F. \*, Murphy, J. \*, Wessel, J. \*, Gergi, I. \*, Connors, G. \*, Painter, D. \*, Moyles, R. \*, Losse, J. \*, **Das, P.**, Zamule, S., Giacherio, D. (2018). Developing a sustainable zero-waste multi-process remediation Technology, involving chemical immobilization and phytoremediation to remove excess nutrients from a sewage treatment plant (STP) effluent. *American Chemical Society Abstract*.
21. Widmer, J. \*, Merrill, A. \*, Pacella, R. \*, Hyde, E. \*, Biwsa, B. \*, Murphy, J. \*, **Das, P.**, Zamule, S. (2018). Characterization of Thiamethoxam Removal from Aqueous Solution by Select Bacterial Species Under Laboratory Conditions. *American Chemical Society Abstract*.
22. Widmer, J. \*, Murphy, J. \*, Merrill, A. \*, Modeen, E. \*, Biswa, B. \*, Devolgado, M. \*, Oteme, G. \*, Muuse, J. \*, Taylor, C. \*, Zamule, S., and **Das, P.** (2017). Bioremediation of two neonicotinoid insecticides, thiamethoxam, and imidacloprid, using select bacterial species. *Geological Society of America Abstract*.
23. Murphy, J. \*, **Das, P.**, Giacherio, D., Izzo, S. \*, Connors, G. \*, Merrill, A. \*, Loy, D. \*, Fuentes, S. \*, Hyde, E. \*, Gergi, I. \*, Pelkey, E. \*, Ahern, A., Ahmed, M., Brooks, D., Cavacos, S., Hornack, E., Justiniano, J., Kokkoris, G., Kwok, M., Martinez, A., Narang, C., O'hern, N., Ribeiro, R., Ryder, C., Schmitz, C., Seshadri, A., Seshadri, A., Stein, R., Stolberg, S., Sushko, O., Tangirala, A., Vinton, A., Wu, C., Zaft, A., Zhang, S., Shebert, J., and Zamule, S. (2017). Point-source contribution of wastewater treatment plants in increasing the nutrient profiles of the waterways in the lower genesee river watershed as function of seasonality. *Geological Society of America Abstract*.
24. Connors, G. \*, **Das, P.**, Giacherio, D., Izzo, S. \*, Murphy, J. \*, Merrill, A. \*, Loy, D. \*, Fuentes, Shane. \*, Hyde, E. \*, Vodacek, A., Ford, R., Raqueno, N., Gergi, I. \*, Pelkey, E. \*, Hornack, E., Ahern, A., Ahmed, M., Brooks, D., Cavacos, S., Justiniano, J., Kokkoris, G., Kwok, M., Martinez, A., Narang, C., O'hern, N., Ribeiro, R., Ryder, C., Schmitz, C., Seshadri, A., Seshadri, A., Stein, R., Stolberg, S., Sushko, O., Tangirala, A., Vinton, A., Wu, C., Zaft, A., Zhang, S., Shebert, J., and Zamule, S. (2017). Trophic profiling of the mouth of the genesee river at lake ontario as function of seasonality and determination of

## Dr. Das's List of Publications

- green algae and blue green algae using the landsat images. *Geological Society of America Abstract*.
25. Downes, F. \*, Gergi, I. \*, Murphy, J. \*, Connors, G. \*, Moyles, R. \*, Doan-Nguyen, N. \*, Painter, D. \*, Losse, J. \*, Wessel, J. \*, Izzo, S. \*, Brooke, Z. \*, Pacella, R. \*, Joseph, S. \*, Harford, A. \*, Biswa, B. \*, Merrill, A. K. \*, Widmer, J. \*, **Das, P.**, Giacherio, D., Zamule, S. M. (2017). Potential eutrophication of Buck Pond, Greece, NY; A trophic profiling and water quality to address the concerns of the local community. *Rochester Academy of Sciences*.
  26. Merrill, A. \*, Murphy, J. \*, Widmer, J. \*, Harford, A. \*, Ruiz, E. \*, Roote, C., Brown, B., Giacherio, D., Zamule, S. and **Das, P.** (2017). The fate and toxicity of Bis-Phenol A (BPA) in switchgrass (*Panicum virgatum*), a native plant, to explore the phytoremediation potential. *Geological Society of America Abstract*.
  27. Murphy, J.C. \*, Merrill, A.K. \*, Pysnik, A. \*, Brown, B., Roote, C., Zamule, S., **Das, P.** (2016). Phytoremediation potential of blue bush lake beans (*Phaseolus vulgaris*), a native plant, to clean-up of bisphenol-a (BPA) contaminated aquatic systems. *Ecological Society of America Abstract*.
  28. Loy, D.M. \*, Brown, B., Roote, C., Zamule, S., **Das, P.** (2016). Potential of a phytoengineering technique to reduce the trophic levels of New York State water using native wetland plants. *Ecological Society of America Abstract*.
  29. **Das, P.**, Audet, A. \*, Caraher, T.K. \*, Denny, M.E. \*, Diekvoss, C.L. \*, Downes, F.E. \*, Eddington, M.L. \*, Glazer M.M. \*, Loy, D.M. \*, MacPherson, A.M. \*, Pelkey, E.E. \*, Randolph, M.W. \*, and Tofil, D. J. \* (2015). Diverse water quality and nutrient profile in geologically variant surface water and wetlands at Mendon Ponds Park. Rochester Academy of Sciences. (Students authors were awarded 1<sup>st</sup> prize in the CARS poster session in Nazareth College, 2016).

## 2. Other Faculty Publications

### 2.1. Journal Articles

1. Datta, R., **Das, P.**, Tappero, R., Punamiya, P., Elzinga, E., Sahi, S., Feng, H., Kiskila, J., and Sarkar, D., (2017). Evidence for exocellular Arsenic in Fronds of *Pteris vittata*. *Scientific Reports (Nature research)* Jun 6;7(1):2839. doi: 10.1038/s41598-017-03194-x.
2. **Das, P.**, D. Sarkar, and R. Datta (2017). Proteomic profiling of vetiver grass (*Chrysopogon zizanioides*) under 2,4,6-trinitrotoluene (TNT) stress. *GeoHealth*, 1, 66–74. doi:10.1002/2017GH000063.
3. **Das, P.**, D. Sarkar, and R. Datta (2017). Kinetics of nitroreductase-mediated phytotransformation of TNT in vetiver grass. *International Journal of Environmental Science and Technology*. January 2017, 14: 1: 187–192.
4. Sengupta, A., Sarkar, D., **Das, P.**, Panja, S., Parikh, C., Ramanathan, D., Bagley, S., and Datta, R. (2016). Tetracycline uptake and metabolism by vetiver grass (*Chrysopogon zizanioides* L. Nash). *Environ Sci Pollut Res Int*. 2016 Dec; 23(24):24880-24889. doi: 10.1007/s11356-016-7688-8. Epub 2016 Sep 23.
5. Kiiskila, J. D., **Das, P.**, Sarkar, D., and Datta, R. (2015). Phytoremediation of Explosive-Contaminated Soils, *Curr. Pollution Rep.* (In press; doi: 10.1007/s40726-015-0003-3).

## Dr. Das's List of Publications

6. **Das, P., Sarkar, D., Makris, K.C., and Datta, R.** (2015). Urea-facilitated uptake and nitroreductase-mediated transformation of 2,4,6-trinitrotoluene in soil using vetiver Grass, *Journal of Environmental and Chemical Engineering*, 3: 445 – 452.
7. **Das, P., Sarkar, D., Makris, K.C., Punamiya, P., and Datta, R.** (2013). Effectiveness of urea in enhancing the extractability of 2,4,6-trinitrotoluene from chemically variant soils, *Chemosphere*, 93:9: 1811-1817.
8. **Datta, R., Das, P., Smith, S., Punamiya, P., Ramanathan, D., Reddy, R., and Sarkar, D.** (2013). Phytoremediation of tetracycline from aqueous media by vetiver grass [*Chrysopogon zizanioides* (L.)], *Intern. Jour. of Phytoremediation*, 15: 4: 343-351.
9. **Das, P., Datta, R., Makris, K.C., and Sarkar, D.** (2010). Vetiver grass is capable of removing TNT from soil in the presence of urea. *Environmental Pollution* 158: 1980-1983.
10. **Punamiya, P., Datta, R., Sarkar, D., Barber, S., Patel, M., and Das, P.** (2010). Symbiotic role of *Glomus mosseae* in phytoextraction of lead in vetiver grass [*Chrysopogon zizanioides* (L.)]. *Journal of Hazardous Materials* 177: 465–474.
11. **Makris, K.C., Datta, R., Sarkar, D., Sakaya, K., Pachanoor, D., and Das, P.** (2007). Chaotropic effects on 2,4,6-trinitrotoluene uptake by wheat (*Triticum aestivum*) *Plant and Soil* 295: 1-2.