REMEGIO "REM" CONFESOR JR.
Forsker/Researcher
Miljø og naturressurser / Environment and natural resources
Norsk institutt for bioøkonomi / Norwegian Institute of Bioeconomy Research
Office: Oluf Thesens vei 43, 1433 Ås, Norway
Phone/WhatsApp: +15672076497; +4741308567
Email: rconfesor@gmail.com; remegio.confesor@nibio.no
URL: www.nibio.no/en/employees/remegio-confesor
ORCID#:0000-0002-7306-1432; Scopus: 17343438300
ResearchGate; Web of Science/Publons; Google Scholar

EXECUTIVE SUMMARY

- I have more than 25 years of experience in hydrological research and environmental management focusing on nonpoint source pollution, agricultural best management practices, water resources management, water quality, and climate change impacts.
- I have at least 15 years' experience in field- and watershed-scale hydrologic modeling (e.g. Soil and Water Assessment Tool (SWAT), Hydrological Predictions for the Environment (HYPE), Agricultural Policy/Environmental eXtender (APEX), Nutrient Tracking Tool (NTT), Generalized Watershed Loading Functions (GLWF), etc.) for agricultural management, hydrology, and water quality.
- I have successful in collaborating with different sectors of society: from federal, state, and local policymakers and regulators to farmers, private industries, non-government organizations (NGOs), and general stakeholders.
- I have a trrack record in securing project funding as project director, principal investigator, and co-principal investigator in numerous collaborative and interdisciplinary scientific projects totaling at least US$8M.

AREAS OF INTEREST

Field/watershed hydrology and management, water quality, nitrogen and phosphorus movement, erosion, runoff and sediment transport processes, integrated hydrologic-watershed-economic modeling, climate impact indicators, soil-water-plant relationships, Pareto optimization, automatic parameter estimation, multi-criteria/systems analysis, GIS resource applications.

ACADEMIC QUALIFICATION

Ph.D. in Agricultural and Biological Engineering, 2004. The Pennsylvania State University, University Park, PA.

M.S. in Agricultural Engineering, 1997. University of the Philippines Los Baños, Laguna, Philippines.

B.S. in Agricultural Engineering, 1989. University of the Philippines Los Baños, Laguna, Philippines.

PROFESSIONAL EXPERIENCE

Watershed hydrology and water quality Research

Scientist (Soil Hydrologist), Feb 2021 - present; Division of Environment and Natural Resources/Department of Soil and Landuse. Norwegian Institute of Bioeconomy Research (NIBIO), Ås, Norway.

Senior Consultant, *Feb 2017-Jan 2021,* Civ*il and Environmental Consultants, Inc.* Toledo, OH.

Senior Research Scientist. Jan 2016 – 2021; *Research Scientist.* Oct 2008 – Dec. 2015. National Center for Water Quality Research. (NCWQR), Heidelberg University, 310 E Market St., Tiffin, OH.

- Developed and established the NCWQR's modeling program on agricultural management, hydrology, and water quality at field- to watershed-scales. Models used are the Agricultural Policy/Environmental eXtender (APEX), the Soil and Water Assessment Tool (SWAT), and the Nutrient Tracking Tool (NTT).
- Explored the effects of climate change and agricultural practices (e.g., tillage, nutrient management, crop management) on nitrogen, phosphorus, and sediment exports from Lake Erie watersheds using field-scale and large basin-scale models.
- Developed climate impact indicators for the Western Lake Erie Basin, OH, USA.
- Collaborated with other researchers in the region in developing and implementing research projects related to agricultural nutrient export mitigation.
- Developed and wrote grant proposal projects to various federal, state, and local agencies (U.S. EPA, USDA, NSF, Ohio Sea Grant, Lake Erie Commission, etc.) for funding.
- Published peer reviewed articles related to agronomy, hydrology, watershed management, and interpretation of the chemistry of flowing waters and estimation of pollutant loadings and their impacts on Lake Erie and its tributaries.

Post-doctoral Research Associate, Dec. 2004 - Sep. 2008. Department of Agricultural Economics, Oregon State University / USDA-ARS, National Forage Seed Production Research Center, 3450 SW Campus Way, Corvallis, Oregon.

- Helped develop a method that dynamically links a distributed hydrologic model to an economic model using a multi-objective evolutionary/genetic algorithm for Pareto optimization.
- Tasks included: 1) hydrologic modeling (e.g., automatic parameter estimation/calibration and inverse modeling, uncertainty and sensitivity analysis, and multi-criteria/systems analysis), 2) computer programming, 3) development and writing of project proposals for funding, 4) database management, and 5) Published peer reviewed articles.

Graduate Research Assistant, Jan 2000 - May 2004, Department of Agricultural and Biological Engineering, Penn State University, University Park, PA, USA.

- Conceptualized, planned, and implemented research in potential pollutant movement from a compost site and operation.
- Wrote research proposals for funding on watershed management and modeling projects.

Fellowship grant award, Spring 2003, Department of Agricultural and Biological Engineering, Penn State University, University Park, PA, USA.

- Identified existing and emerging potential water quality problems in the watershed.
- Recommended actions to help mitigate these problems.

Study Leader, 1999, University of the Philippines Mindanao (UP Mindanao), “Sediment quantification of Davao River and its effect on Davao gulf” research project. I conceptualized, planned, and implemented research experiments on monitoring and measuring nutrient and suspended solids loads in Davao River and Davao Gulf, Philippines.

Study Leader, 1999, UP Mindanao "Ground water assessment of Davao City, Philippines" research project. I conceptualized, planned, and implemented research experiments and surveys related ground water supply of Davao City, Philippines.

Water resources and management / Soil-Water-Plant relationships Research

Study Leader and University of the Philippines Mindanao Coordinator, Oct 1998-Dec 1999, "Comprehensive Irrigation Research and Development Umbrella Program," in collaboration with the Department of Agriculture Region XIII.

- I conceptualized, planned, and implemented research experiments and surveys related to irrigation water supply and management.

Research Assistant, Apr 1992 - Jun 1997, The International Rice Research Institute (IRRI), Los Banos, Philippines.

- I conceptualized, planned, and implemented research experiments in soil-water-plant relationships and water management.
- I supervised field experiments and data gathering, analyzed data, and interpreted results. I also wrote research findings for reporting at IRRI, seminars, workshops, and journal publications.

Research Assistant, Oct 1988 - Jan 1989, University of the Philippines Los Baños (UP Los Baños).

- Implemented research in the survey and evaluation of the domestic water supply system of the University of the Philippines Los Baños.

Solid Waste Management/Composting Research

Graduate Research Assistant, Jan 2000 - May 2004.

- I conceptualized, planned, and implemented research on potential pollutant movement from a compost site and operation.
- I also helped write research proposals for funding.

Research Assistant, Oct 1988 - Jun 1989, UP Los Banos, Philippines.

- I planned and designed biodegradable solid-waste digester.
- Surveyed the solid waste disposal system of selected major Philippine cities through ocular site inspection and interviews.

Academic Teaching and Mentoring

Adjunct Professor, College of Engineering and Agro-Industrial Technology. University of the Philippines Los Baños. 2022-present. Co-advising 2 PhD and 1 MS students.

Affiliate Faculty. Department of Earth Sciences. Kent State University. 2017-2019. PhD Dissertation Committee member of Israel A Olaoye.

Asst Professor, Heidelberg University, Tiffin, OH. I developed and taught a 3-unit Geographic Information Systems (GIS) course. This course became a requirement in the Environmental Science curriculum major at Heidelberg University.

Instructor, University of the Philippines Mindanao. Jun 1997 - Dec 1999. Lecturer in Natural Sciences I (Physics), Natural Sciences II (Geology), and Fortran Programming.

Instructor, University of the Philippines Los Baños. Jun 1989 - Mar 1992. Lecturer in Basic Engineering Graphics, Engineering Mechanics, Basic Engineering Thermodynamics and Heat Transfer, Fluid Mechanics, and Computer Applications for Engineers.

Extension and outreach Activities

I organized and formed a joint board of supervisors of five (Crawford, Erie, Sandusky, Seneca, Wyandot) Soil and Water Conservation Districts (SWCDs) in the Sandusky watershed. This group facilitated uniform and efficient implementation of the CIG project tasks. I also organized and facilitated a successful training workshop for the Nutrient Tracking Tool (NTT).

Trained the Soil & Water Conservation Districts staff about Nutrient Tracking Tool and I provided technical help and trouble-shooting.

I organized and hosted the "How Clean is Our Water" public forum. 21 October 2016. I also organized and hosted the "Web-based Tools Training for 516(e) Great Lakes Sediment Transport Program" conducted by the U.S. Army Corps of Engineers. 06 March 2014.

I also gave research presentations and acted as resource person to conferences, symposiums, and stakeholders' meetings.

CURRENT AND PAST EXTERNAL FUNDING/RESEARCH GRANTS

Norwegian (NIBIO) Coordinator. "Demonstrating innovative pathways addressing water and soil pollution in the Mediterranean Agro-Hydro-System (**Path4Med, Project lead: Agricultural University of Athens**)." 2024-2028. EU-Horizon Project ID: 101156867.

Work Package deputy lead and project task lead. "Innovative concepts and technologies for ECOlogically sustainable NUTRIent management in agriculture aiming to prevent, mitigate and eliminate pollution in soils, water and air (**ECONUTRI**, **Project lead: Agricultural University of Athens**)." 2023-2027. EU-Horizon Project ID: 101081858.

Project task lead. Food security through better sanitation: the case of urine recycling. Research Council of Norway Project No. 335008

Project team member. Ekstreme avrenningsepisoder I norske jordbruksområder (Extreme runoff episodes in Norwegian agricultural areas). The Norwegian Directorate of Agriculture, Climate and Environment Program (KMP). Project no. 2021/39779.

Co-Principal Investigator. "Phosphorus load reduction trading program". Funding Source: U.S. EPA Great Lakes National Program Office- Great Lakes Restoration Initiative (Prime: Conservation Technology Information Center (CTIC), $479,782; Subaward: $130,637). March 2020 – February 2023. (0.5 mo/yr).

Co-Principal Investigator. "Conservation Kick, Connecting Communities". Funding Source: U.S. EPA Great Lakes National Program Office- Great Lakes Restoration Initiative (Prime: Great Lakes Commission (GLC), $290, 000; Subaward: $60,000). March 2020 – February 2023. (1 mo/yr).

Co-Principal Investigator. "Innovative Use of the Nutrient Tracking Tool in the Lower Riley Creek watershed". Funding Source: Great Lakes Commission (Prime: Blanchard River Watershed Partnership, $199,362; Subaward: $17,000). February 2020 – January 2022. (0.5 mo/yr).

Principal Investigator: Linking watersheds, lakes, and climate change: a multi-model approach in reducing nutrient exports and algal blooms. Funding Source: European Centre for Medium-Range Weather Forecasts (ECMWF) (Prime: Swedish Meteorological and Hydrological Institute, SMHI). October 2017 – February 28, 2019. Eur 61,404.00

Co-Principal Investigator: Evaluating the 4R Nutrient Stewardship Concept and Certification Program in the Western Lake Erie Basin (http://4rcertified.org/research/). Funding Source: International Plant

Nutrition Institute (IPNI), The Fertilizer Institute (TFI), Canadian Fertilizer Institute (CFI)-4R Research Fund (Prime: USDA-ARS, $1,250,000). July 2014 – October 2019. (1.5 mo/yr).

Co-Principal Investigator: How quickly can target phosphorus reductions be met? Robust predictions from multiple watershed and lake models. Funding Source: Ohio Board of Regents, (Prime: Ohio State University, $255,757). June 2016-May 2018. (1 mo/yr).

Co-Principal Investigator/Lead Technical Scientist: Model-at-the-Farm, Measure-at-the-Watershed Pay-for-Performance Conservation. Funding Source: U.S. EPA Great Lakes National Program Office-Great Lakes Restoration Initiative (Prime: Winrock International, $500,000). June 2016 – May 2019. (2 mo/yr).

Principal Investigator/Project Director: Verification and Enhancement of NRCS-USDA Nutrient Tracking Tool with a Suite of Best Management Practices (BMPs). Funding Source: USDA-NRCS-CIG, (Federal: $591,655; Non-federal match: $591,655). October 1, 2013 – September 30, 2017 (1-yr no cost-extension). (2 mo/yr federal; 2 mo/yr non-federal match).

Co-Principal Investigator: Expanding Ag Retailer Roles in Resource Management. Funding Source: Great lakes Protection Fund (Prime: IPM Institute of North America, Inc, $795,000). December 2014 – September 2018. (1.5 mo/yr).

Co-Principal Investigator: Support for Scioto River monitoring station at Chillicothe with water quality analyses and calculation of NPDES inputs. Funding Source: City of Columbus, Division of Sewerage and Drainage, $40,000. December 2016. (0.5 mo/yr).

Co-Principal Investigator: Assessment of Nutrient/Eutrophication Dynamics in Western Lake Erie. Funding Source: U.S. EPA Great Lakes National Program Office- Great Lakes Restoration Initiative (Prime: Ohio Lake Erie Commission, $500,000). December 1, 2013 – May 31, 2016. (2 mo/yr).

Sub-award Project Director (took over when Pete Richards retired): Extreme events impacts on water quality in the Great Lakes: Prediction and management of nutrient loading in a changing climate. Funding Source: NSF-WSC2 Initiative (Prime: University of Michigan), Heidelberg University sub-award: $243,448.65 until June 30, 2016. (1 mo/yr).

Co-Principal Investigator: Identifying the best strategy to reduce phosphorus loads to Lake Erie from agricultural watersheds. Funding Source: Ohio Board of Regents (Prime: Heidelberg University, $251,565). June 2015-May 2016. (1 mo/yr).

Co-Principal Investigator: WBLE Multi-Model Comparison Funding Source: Erb Family Foundation (Prime: University of Michigan Water Center). Subaward: $17, 670.00. July 2015-May 2016. (2 mo/yr).

PROFESSIONAL/HONOR SOCIETY AFFILIATIONS (PAST and PRESENT)

IAHS, International Association of Hydrological Sciences (Vice-President: International Commission on Water Quality, IAHS-ICWQ)
ERB, Euro-Mediterranean Network of Experimental and Representative Basins (country representative, Norway)
ESSC, European Society for Soil Conservation
AWRA, The American Water Resources Association.
SWCS, Soil and Water Conservation Society.
ASABE, The American Society of Agricultural and Biological Engineering (past).
IAGLR. International Association for Great Lakes Research (past).
SSSA, Soil Science Society of America(past).
PSAE, Philippine Society of Agricultural Engineers(past).

CSSP, Crop Science Society of the Philippines(past).
Gamma Sigma Delta, The Honor Society of Agriculture.
Alpha Epsilon, The Honor Society of Agricultural, Food, and Biological Engineering.

FELLOWSHIPS, AWARDS, AND HONORS

Competitive Grants Program of the College of Agricultural Sciences, Penn State University. 2003.

Fellowship Award, Trout Unlimited, Inc. and the Spring Creek Monitoring Project, State College, PA. 2003.

17th Annual Graduate Exhibition, Penn State University. 3rd Place in Engineering Category, 2002.

Best Paper Award, 26th Annual Scientific Conference of the Pest Management Council of the Philippines, La Trinidad, Benguet, Philippines, 1995.

Highest Score, Philippine Professional Agricultural Engineering Licensure Exam, 1991.

OTHER PROFESSIONAL AND RELATED ACTIVITIES

Journal Manuscript Reviewer (current and past)

Journal of Environmental Management
Science of the Total Environment
Hydrology (MPDI)
Journal of Hydrology
European Journal of Operational Research
Applied Engineering in Agriculture
Journal of Irrigation and Drainage Engineering
Computers and Electronics in Agriculture
Journal of the American Water Resources Association
Journal of Environmental Quality
Transactions of the ASABE
Soil Science
CATENA
Compost Science and Utilization

Judge

Pennsylvania Junior Academy of Science State Meet, May 2002 and May 2003.
Annual Graduate Exhibition, Pennsylvania State University, April 2003 and April 2004.

OTHER SYNERGISTIC ACTIVITIES

1. Vice-President, International Commission on Water Quality (ICWQ), International Association of the Hydrological Sciences (IAHS), 2023 – present.
2. Country representative (Norway) and Steering Committee member, Euro-Mediterranean Network of Experimental and Representative Basins (ERB), 2023 – present.
3. Invited Work Group member, Nutrients in Lake Erie and Lake Ontario: Synthesis of International Joint Commission Recommendations and Assessment of Domestic Action Plans, 2022 -2023. https://www.ijc.org/sites/default/files/SAB_WQB_NutrientSynthesisReport_2023.pdf

4. Member, Diversity, Equity, and Inclusion Committee (DEIC), Heidelberg University. November, 2019-2021.
5. Member, Modelling working group. November, 2019-present. (https://phosphorusalliance.org/modeling-group/). Modelling working group. November 2019-2021. (https://phosphorusalliance.org/modeling-group/).
6. Member, Rotary Club, Tiffin, OH, USA. May 2019-present.
7. Invited Participant, Phosphorus Field to Watershed Modeling Workshop. Sponsored by the Sustainable Phosphorus Alliance. August 23-24, 2018. Columbus OH.
8. Invited Participant, Improving Models of Nutrient Loading and Harmful Algal Blooms though a Watershed-scale Approach that Emphasizes Soil Health and Upland Farming Practices. Sponsored by the Cooperative Institute for Great Lakes Research (CIGLR). July 16-18, 2018. University of Michigan, Ann Arbor, MI.
9. Vice-President, Board of Trustees, Franciscan Earth Literacy Center, Tiffin, OH.
10. Member, Steering Committee, Sandusky River Watershed Coalition. 2013-2016.
11. Invited speaker, Great Lakes SWAT Modeling Workshop, sponsored by the University of Michigan, the International Joint Commission, and LimnoTech, May 18-19, 2013, Ann Arbor, MI.
12. Invited speaker Bi-national Workshop on Sharing Agricultural Science, Technology and Data to Improve Great Lakes Water Quality. Ontario Ministry of Agriculture and Food and Ontario Ministry of Rural Affairs, June 13-14, 2013, Ivey Spencer Leadership Center, London, ON, Canada.
13. Invited speaker at the Great Lakes Sedimentation Workshop sponsored by the Great Lakes Commission and the US Army Corps of Engineers, May 14, 2013, Ann Arbor, MI.
14. Invited speaker at the Lake Erie Ecosystem Priority Workshop hosted by the International Joint Commission, Windsor Canada, February 2013.

PUBLICATIONS

Peer reviewed journal

Yong Q Tian, Qian Yu, Hunter J Carrick, Brian L Becker, Remegio Confesor, Mark Francek, Olivia C Anderson. 2023. Analysis of spatiotemporal variation in dissolved organic carbon concentrations for streams with cropland-dominated watersheds. The Science of Total Environment. https://doi.org/10.1016/j.scitotenv.2022.160744

Randika K. Makumbura, Miyuru B. Gunathilake, Jayanga T. Samarasinghe, Remegio Confesor, Nitin Muttil, andUpaka Rathnayake. 2022. Comparison of Calibration Approaches of the Soil and Water Assessment Tool (SWAT) Model in a Tropical Watershed. Hydrology 2022, 9(10), 183; https://doi.org/10.3390/hydrology9100183

Haley Kujawa, Margaret Kalcic, Jay Martin, Anna Apostel, Jeffrey Kast, Asmita Murumkar, Grey Evenson, Noel Aloysius, Richard Becker, Chelsie Boles, Remegio Confesor, Awoke Dagnew, Tian Guo, Rebecca Logsdon Muenich, Todd Redder, Yu-Chen Wang, Donald Scavia. 2022. Using a Multi-Institutional Ensemble of Watershed Models to Assess Agricultural Conservation Effectiveness in a Future Climate. Journal of the American Water Resources Association. https://doi.org/10.1111/1752-1688.13023

Olaoye IA, RB Confesor, JD Ortiz. 2021. Effect of Projected Land Use and Climate Change on Water Quality of Old Woman Creek Watershed, Ohio. Hydrology 8(2):62. https://doi.org/10.3390/hydrology8020062

Olaoye IA, RB Confesor, JD Ortiz. 2021. Impact of Agricultural Practices on Water Quality of Old Woman Creek Watershed, Ohio. Agriculture 11(5):426. https://doi.org/10.3390/agriculture11050426

Olaoye IA, RB Confesor, JD Ortiz. 2021. Impact of Seasonal Variation in Climate on Water Quality of Old Woman Creek Watershed Ohio Using SWAT. Climate 9(3):50. https://doi.org/10.3390/cli9030050

Evenson Grey R, Margaret Kalcic, Yu-Chen Wang, Dale Robertson, Donald Scavia, Jay Martin, Noel Aloysius, Anna Apostel, Chelsie Boles, Michael Brooker, Remegio Confesor, Awoke Teshager Dagnew, Tian Guo, Jeffrey Kast, Haley Kujawa, Rebecca Logsdon Muenich, Asmita Murumkar, Todd Redder. 2021. Uncertainty in critical source area predictions from watershed-scale hydrologic models. Journal of Environmental Management 279: 111506. https://doi.org/10.1016/j.jenvman.2020.111506

Martin Jay F, Margaret M Kalcic, Noel Aloysius, Anna M Apostel, Michael R Brooker, Grey Evenson, Jeffrey B Kast, Haley Kujawa, Asmita Murumkar, Richard Becker, Chelsie Boles, Remegio Confesor, Awoke Dagnew, Tian Guo, Colleen M Long, Rebecca L Muenich, Donald Scavia, Todd Redder, Dale M Robertson, Yu-Chen Wang. 2021. Evaluating Management Options to Reduce Lake Erie Algal Blooms Using an Ensemble of Watershed Models. Journal of Environmental Management 280:111710. https://doi.org/10.1016/j.jenvman.2020.111710

Kujawa, H., M. Kalcic, J. Martin, N. Aloysius, A. Apostel, J. Kast, A. Murumkar, G. Evenson, R. Becker, C. Boles, R. Confesor, A. Dagnew, T. Guo, R. L. Muenich, T. Redder, D. Scavia, Y.C. Wang 10. 2020. The hydrologic model as a source of nutrient loading uncertainty in a future climate. The Science of Total Environment. https://doi.org/10.1016/j.scitotenv.2020.138004

Guo, T., R. Confesor, A. Saleh, and K. King. 2020. Crop growth, hydrology, and water quality dynamics in agricultural fields across the Western Lake Erie Basin: Multi-site verification of the Nutrient Tracking Tool (NTT). Science of the Total Environment. https://doi.org/10.1016/j.scitotenv.2020.13848

D.B. Baker, L.T. Johnson, R.B. Confesor, J.P. Crumrine, T. Guo, N.F. Manning. 2019. Needed: Early-term adjustments for Lake Erie phosphorus target loads toaddress western basin cyanobacterial blooms, Journal of Great Lakes Research, https://doi.org/10.1016/j.jglr.2019.01.011

Choquette, A.F., R.M. Hirsch, J.C. Murphy, L.T. Johnson, and R.B. Confesor, Jr. 2019.Tracking changes in nutrient delivery to western Lake Erie: approaches to compensate for variability and trends in streamflow. Journal of Great Lakes Research 45(1):21-39.

Amanda M. Nelson, Daniel N. Moriasi, Mansour Talebizadeh, Jean L. Steiner, Remegio B. Confesor, Prasanna H. Gowda, Patrick J. Starks, Haile Tadesse. 2017. Impact of length of dataset on streamflow calibration parameters and performance of APEX model. Journal of the American Water Resources Association 53(5): 1164-1177. DOI: 10.1111/1752-1688.12564

Scavia D, M Kalcic, R L Muenich, J Read, N Aloysius, J Arnold, C Boles, R Confesor, M Gildow, J Martin, T Redder, S Sowa, H Yen. 2017. Multiple models guide strategies for agricultural nutrient load reductions. Frontiers on Ecology and the Environment 15(3): 126-132. doi:10.1002/fee.1472.

Baker, D.B, L.T Johnson, R. B. Confesor, J. Crumrine. 2017. Vertical Stratification of Soil Phosphorus as a Concern for Dissolved Phosphorus Runoff in the Lake Erie Basin. Journal of Environmental Quality. doi: 10.2134/jeq2016.09.0337

Helen Jarvie, Laura Johnson, Andrew Sharpley, Douglas Smith, David Baker, Tom Bruulsema, Remegio Confesor. 2017. Increased soluble phosphorus loads to Lake Erie: unintended consequences of conservation practices? Journal of Environmental Quality. doi: 10.2134/jeq2016.07.0248

Ford W., K. King, M. Williams, R. Confesor. 2016. Modified APEX model for Simulating Macropore Phosphorus Contributions to Tile Drains. Journal of Environmental Quality. doi:10.2134/jeq2016.06.0218

Mark R. Williams, Kevin W. King, Gregory A. LaBarge, Remegio B. Confesor and Norman R. Fausey. 2016. Edge-Of-Field Evaluation of the Ohio Phosphorus Risk Index. Journal of Environmental Quality. doi:10.2134/jeq2016.05.0198

Watson, S., C. Miller, G. Arhonditsis, G. Boyer, M. Charlton, **R. Confesor**, D. Depew, T. Höök, S. Ludsin, G. Matisoff, S. McElmurry, M. Murray, P. Richards, Y. Rao, M. Steffen, S. Wilhelm. 2016. Harmful algal blooms and the re-eutrophication of Lake Erie: past, present and future management scenarios. Harmful Algae 56:44-66. DOI: 10.1016/j.hal.2016.04.010.

Stow, C.A., Y. Cha, L.T. Johnson, **R. Confesor**, R.P. Richards. 2015. Long-Term and Seasonal Trend Decomposition of Maumee River Nutrient Inputs to Western Lake Erie. Environmental Science & Technology 49(6):3392-3400.

D.B. Baker, **R. Confesor**, D.E. Ewing, L.T. Johnson, J.W. Kramer, B.J. Merryfield. 2014. Phosphorus loading to Lake Erie from the Maumee, Sandusky and Cuyahoga rivers: The importance of bioavailability. *Journal of Great Lakes Research* 40(3): 502–517.

D.B. Baker, D.E. Ewing, L. T. Johnson, J.W. Kramer, B. J. Merryfield, **R.B. Confesor Jr.**, R.P. Richards, A. A. Roerdink. 2014. Lagrangian analysis of the transport and processing of agricultural runoff in the lower Maumee River and Maumee Bay. *Journal of Great Lakes Research* 40(3): 479-495.

Johnson, L.T., D.B. Baker, **R.B. Confesor**, K.A. Krieger, and R.P. Richards. 2014. Research to help Lake Erie: Proceedings of the "Phosphorus along the land-river-lake continuum" research planning and coordination workshop. *Journal of Great Lakes Research* 40(3): 574-577.

Michalak, A.M., E.J. Anderson, D. Beletsky, S. Boland, N.S. Bosch, T.B. Bridgeman, J.D. Chaffin, K.Cho, **R. Confesor**, I. Daloglu, J.V. DePinto, M.A. Evans, G.L. Fahnenstiel, L. He, J.C. Ho, L. Jenkins, T. H. Johengen, K.C. Kuo, E. LaPorte, X. Liu, M.R. McWilliams, M.R. Moore, D.J. Posselt, R.P Richards, D. Scavia, A.L. Steiner, E. Verhamme, D.M. Wright, and M.A. Zagorski. 2013. Record-setting algal bloom in Lake Erie caused by agricultural and meteorological trends consistent with expected future conditions. Proceedings of the National Academy of Sciences of the United States of America, 110(16):6448-6452.

Gebremariam, S.Y., J.F. Martin, C. DeMarchi, N.S. Bosch**, R. Confesor**, S. A. Ludsin. 2014. A comprehensive approach to evaluating watershed models for predicting river flow regimes critical to downstream ecosystem services. *Environmental Modelling & Software* 61:121-134.

Richards, R.P., I. Alameddine, J.D. Allan, D.B. Baker, N.S. Bosch**, R. Confesor,** J.V. DePinto, D.M. Dolan, J.M. Reutter, and D. Scavia. 2013. DISCUSSION: "Nutrient Inputs to the Laurentian Great Lakes by Source and Watershed Estimated Using SPARROW Watershed Models" by Dale M. Robertson and David A. Saad. J. American Water Resources Association, 49(3):715-724

Smith, Michael B., Victor Koren, Ziya Zhang, Yu Zhang, Seann M. Reed, Zhengtao Cui, Fekadu Moreda, Brian A. Cosgrove, Naoki Mizukami, Eric A. Anderson, and **DMIP 2 Participants**. 2012. Results of the DMIP Oklahoma experiments. Journal of Hydrology 418-419:17-48.

Whittaker, G., **R. Confesor Jr.,** M. DiLuzio, J. G. Arnold. 2010. Detection of Over-parameterization and Overfitting in an Automatic Calibration of SWAT. Transactions of the American Society of Agricultural and Biological Engineers (ASABE) 53(5): 1487-1499.

Whittaker, G., **Confesor, R**, Griffith, S.M., Färe, R., Grosskopf, S., Steiner, J.J., Muller-Warrant, G.W., Banowetz, G.M. 2009. A hybrid genetic algorithm for multiobjective problems with activity analysis-based local search. European Journal of Operational Research 193(1): 195-203.

Confesor, R.B. Jr., J.M. Hamlett, R.D. Shannon, and R.E. Graves 2009. Potential Pollutants from Farm-, Food-, and Yard-Waste Composts at Differing Compost Ages. Part II. Potential Leaching of Nutrients Under Column Experiments. *Compost Science and Utilization 17(1):6-17.*

Confesor, R.B. Jr., J.M. Hamlett, R.D. Shannon, and R.E. Graves 2008. Potential Pollutants from Farm-, Food-, and Yard-Waste Composts at Differing Compost Ages. Part I: Change in Chemical Properties. *Compost Science and Utilization* 16(4):228-238.

Whittaker, G., **R. Confesor Jr.**, S.M. Griffith, R. Färe, S. Grosskopf, J.J. Steiner, G.W. Mueller-Warrant, G.M. Banowetz. 2007. A Hybrid Genetic Algorithm for Multiobjective Problems with Activity Analysis based Local Search. In press, European Journal of Operational Research *doi: 10.1016/j.ejor.2007.10.050*

Confesor, R.B. Jr. and G. Whittaker. 2007. Automatic calibration of hydrologic models with multi-objective evolutionary algorithm and Pareto optimization. *Journal of the American Water Resources Association* 43(4): 981-989. doi: 10.1111/j.1752-1688.2007.00080.x

Confesor, R.B. Jr., J.M. Hamlett, R.D. Shannon, and R.E. Graves 2007. Movement of Nitrogen and Phosphorus Downslope and Beneath a Manure and Organic-Waste Composting Site. *Compost Science and Utilization* 15(2):119-126.

Tuong, T.P., P.P. Pablico, M. Yamauchi, **R.B. Confesor Jr**., and K. Moody. 2000. Increasing water productivity and weed suppression of wet-seeded rice: effect of water management and rice genotypes. *Experimental Agriculture* 36:71-89.

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