

## CURRICULUM VITAE

### **Lorena Margarita Rios Mendoza**

Department of Natural Sciences  
University of Wisconsin Superior  
Superior, WI 54880  
[lriosmen@uwsuper.edu](mailto:lriosmen@uwsuper.edu)

### **Degrees:**

#### **Ph.D. 2001 Coastal Oceanographic Sciences**

(Marine Electrochemistry)

University Autonomous of Baja California. México.

#### **Master of Sciences. 1994 Coastal Oceanography**

(Marine Environmental Chemistry)

University Autonomous of Baja California. México.

#### **B.S. 1989 Chemist**

University National Autonomous of México.

### **Professional Experience:**

|                   |  |
|-------------------|--|
| <b>Nov-2019</b>   | <b>Professor of Chemistry</b><br>Department of Natural Sciences<br>University of Wisconsin-Superior                  |
| <b>2015-2019</b>  | <b>Associate Professor of Chemistry</b><br>Department of Natural Sciences<br>University of Wisconsin-Superior        |
| <b>2010- 2015</b> | <b>Assistant Professor of Chemistry</b><br>Department of Natural Sciences<br>University of Wisconsin-Superior        |
| <b>2002-2010</b>  | <b>Visiting Researcher</b><br>Department of Chemistry,<br>University of the Pacific.                                 |
| <b>1995-2002</b>  | <b>Research Assistant</b><br>Institute of Oceanological Investigations<br>(University Autonomous of Baja California) |
| <b>1995-2002</b>  | <b>Professor</b><br>Faculty of Marine Sciences<br>University Autonomous of Baja California                           |

### **Courses Taught:**

|  |                  |                    |
|--|------------------|--------------------|
| Quantitative Analysis                    | Lecture          | Chem 305           |
| Quantitative Analysis                    | Lab              | Chem 306           |
| General Chemistry II                     | (lecture and Lab | Chem 106           |
| Supplementary Problems in Gen Chem II    | Lecture          | Chem 107           |
| General Chemistry I                      | Lab              | Chem 105           |
| Instrumental Analysis                    | Lecture          | Chem 375           |
| Instrumental Analysis                    | Lab              | Chem 376           |
| Descriptive Inorganic                    | Lecture          | Chem 365           |
| Chemistry of Natural Waters              | Lecture and Lab  | Chem 300           |
| Chemistry of Everyday Phenomena          | Lecture and Lab  | Chem 102           |
| Our Chemical Environment                 | Lecture          | Chem 100           |
| First Year Seminar-NCIS Forensic Science | Lecture and Lab  | FYS 107            |
| Senior Research                          | Lecture and Lab  | Chem 491           |
| Special Topic                            | Lecture and Lab  | Chem 281, 381, 481 |
| Senior Seminar in Chemistry              | Lecture          | Chem 497           |

## Professional Service:

- 2020 - Current Planning and Budgetary Council (PBC)
- 2017 - 2020 Institutional Review Board (IRB)
- 2012 - 2019 Undergraduate Academic Affairs Council, UAAC (fall semesters)
- 2019 – 2020 Biology Search and Screen Committee (Assistant Professor of Biology)
- 2016 - 2017 University Technology Committee
- 2017 - 2018 Biology Search and Screen Committee (Assistant Professor of Biology)
- 2014 - 2016 Center for Excellence in Teaching and Learning (CETL) Advisory Committee
- 2011 - 2014 Student Services Advisory Affairs Committee

## Peer-Refereed Publications:

20. Xing Lu<sup>a,1</sup>, Dong-Fang Deng<sup>a\*</sup>, Fei Huang<sup>a,2</sup>, Fabio Casu<sup>b</sup>, Emma Kraco<sup>a</sup>, Ryan Newton<sup>a</sup>, Merry Zohn<sup>c</sup>, Swee J. Teh<sup>d</sup>, Aaron Watson<sup>c</sup>, Brian Shepherd<sup>3</sup>, Ying Ma<sup>a,3</sup>, Mahmoud Abdelhamid Omran Dawood<sup>a,4</sup>, **Lorena M. Rios Mendoza**<sup>e,5</sup>. **2021**. Chronic exposure to high-density polyethylene microplastic in feed disrupts nutrient utilization of juvenile yellow perch (*Perca flavescens*). *Animal Nutrition Journal*.
19. **Rios Mendoza L.M.**, Ontiveros-Cuadras J.F., Leon Vargas D., A.C. Ruiz-Fernandez A.C., Rangel-Garcia, Peraz-Berna L.H., Sanchez-Cabeza J.A. **2021**. Microplastic contamination and fluxes in a touristic area at the SE Gulf of California. *Marine Pollution Bulletin*, 170, 112638. (Sep 1, 2021)
18. **Rios Mendoza, L.M.**, Leon Vargas, D., Balcer, M. **2021**. Microplastics occurrence and fate in the environment. In *Current Opinion in Green and Sustainable Chemistry*, 32, 100523. (June 4, 2021)
17. Eduardo Antonio Lozano-Hernández, Nancy Ramírez-Álvarez, **Lorena Margarita Ríos Mendoza**, José Vinicio Macías-Zamora, José Luis Sánchez-Osorio, Félix Augusto Hernández-Guzmán. **2021**. Microplastic concentrations in cultured oyster in two seasons from two bays of Baja California, Mexico. *Environmental Pollution*, 290, 118031. (Dec 1, 2021)
16. Tania Pelamatti, **Lorena M. Rios-Mendoza**, Edgar M. Hoyos-Padilla, Felipe Galván-Magaña, Roberto De Camillis, Ana J. Marmolejo-Rodríguez, Rogelio González-Armas. **2021**. Contamination knows no borders: toxic organic compounds pollute plastics in the biodiversity hotspot of Revillagigedo Archipelago National Park. *Marine Pollution Bulletin*, 170, 112623. (Sep 1, 2021)
15. **Lorena M Rios Mendoza** and Mary Balcer. **2020**. Microplastics in freshwater environments. In: Goldstein, M.I., DellaSala, D.A. (Eds), *Encyclopedia of the World's Biomes*, vol 4. Elsevier, 325-353. (Jan 1, 2020)
14. Nancy Ramirez Alvarez, **Lorena M Rios Mendoza**, J. Vinicio Macias Zamora, Lucero Oregel Velazquez, Arturo Alvarez Aguilar, Feliz A. Hernandez Guzman, Jose Luis Sanchez Osorio, Luis Felipe Navarro Olachea, Hortencia Silvia Jimenez, Charlie Moore. **2020**. Microplastics: Sources and distribution in surface waters and sediments of Todos Santos Bay, Mexico. *Science of the Total Environment* 703, 134838. (Feb 10, 2020)  
<https://doi.org/10.1016/j.scitotenv.2019.134838>
13. **Lorena M Rios Mendoza**, Mary Balcer. 2019. Microplastics in freshwater environment: A review of quantification assessment. *Trends in Analytical Chemistry* 113, 402-408.  
<https://doi.org/10.1016/j.trac.2018.10.020> (April 1, 2019)
12. Tania Pelamatti, Iliana A. Fonseca-Ponce, **Lorena M Rios Mendoza**, Joshua D. Stewart, Emigdio Marin Enriquez, Ana J. Marmolejo-Rodríguez, Edgar M. Hoyos-Padilla, Felipe Galvan-Magaña, Rogelio Gonzalez-Armas. 2019. Seasonal variation in the abundance of

- marine plastic debris in Banderas Bay, Mexico. *Marine Pollution Bulletin*, 145, 604-610. <https://doi.org/10.1016/j.marpolbul.2019.06.062> (Oct 1, 2019)
11. **Lorena M. Rios Mendoza**, Hrissi Karapanagioti, Nancy Ramirez Alvarez. 2018. Micro(nanoplastics) in the marine environment: Current knowledge and gaps. *Current Opinion in Environmental Science & Health*, 1: 47-51  
<https://doi.org/10.1016/j.coesh.2017.11.004>
  10. Stephanie Avery-Gomm, Michelle Valliant, Carley R. Schacter, Katherine F. Robbins, Max Linoiron, Pierre-Yves Daoust, **Lorena M Rios**, Ian L. Jones. 2016. A study of wrecked Dovekies (*Alle alle*) in the western North Atlantic highlights the importance of using standardized methods to quantify plastic ingestion. *Marine Pollution Bulletin* 113, 75-80. <http://dx.doi.org/10.1016/j.marpolbul.2016.08.062>
  9. **Lorena M. Rios Mendoza** and Patrick R. Jones. 2015. Characterization of microplastics and toxic chemicals extracted from microplastic samples from the North Pacific Gyre. *Environmental chemistry*. <http://dx.doi.org/10.1071/EN14236>
  8. Chelsea M. Rochman, Mark Anthony Browne, Benjamin S. Halpern, Brian T. Hentschel, Eunha Hoh, Hrissi K. Karapanagioti, **Lorena M. Rios**, Hideshige Takada, Swee Teh, Richard C. Thompson. 2013. Classify plastic debris as hazardous. *Nature* Vol 494,169 – 171. <https://doi.org/10.1038/494169a>
  7. **Lorena M. Rios**, Patrick R. Jones Charles Moore, and Urja V. Narayan. 2010. Quantitation of Persistent Organic Pollutants Adsorbed on Plastic Debris from the Northern Pacific Gyre's "Eastern Garbage Patch." *J. Environ. Monit.* 12, 226-2236. <https://doi.org/10.1039/c0em00239a>
  6. Macías-Zamora, J. Vinicio., Sánchez-Osorio J. Luis, Ramírez-Alvarez, Nancy, and **Ríos-Mendoza Lorena**. 2008. PCBs and DDTs at the South of the Southern California Bight. Distribution and origin. *Organohalogen Compounds* 70:2372-2376.
  5. Macías-Zamora, J. V., Sánchez-Osorio J. L., **Ríos-Mendoza L.M.**, Ramírez-Alvarez, N., Huerta-Díaz M.A., and López-Sánchez, D. 2008. Trace Metals in Sediments and *Zostera marina* of San Ignacio and Ojo de Liebre Lagoons in Central Pacific Coast of Baja California, Mexico. *Environmental Contamination and Toxicology. In Archives of Environment Contamination and Toxicology.* 55(2):218-228.
  4. **Rios, Lorena M.**, Moore, Charles. Jones, Patrick R. 2007. Persistent organic pollutants carried by synthetic polymers in the ocean environment. *Mar. Pollut. Bull.* 54,1230-1237. <https://doi.org/10.1016/j.marpolbul.2007.03.022>
  3. **Rios-Mendoza Lorena M.**, J. Vinicio Macias-Zamora, Alberto, R. Zirino. 2003. Una opción para medir el potencial redox. *Ciencias Marinas*, 29(4):509-520.
  2. Gutierrez-Galindo, E.A., **Rios-Mendoza, L.M.**, Villaescusa-Celaya, J. 1998. Chlorinated Hydrocarbons in Marine Sediments of The Baja California (México)-California (USA) Border Zone. *Mar. Poll. Bull.*, 36[1]:27-31.
  1. Holm-Hansen O., Hewes, D. Ch., Maturana, J., **Rios-Mendoza, L.M.**, Gónzales-Rodas, G. 1997. AMLR program: Phytoplankton Distribution and its Relationship to Different Water Zones Characterized by Physical Oceanographic Parameters, January-February 1997. *Antarctic Journal of the United States*.

**Book Chapter (peer-refereed publication):**

6. Karapanagioti H., **Rios Mendoza L.M.** 2021. Sorption of pollutants on microplastics In: Handbook of Microplastics in the Environment. T. Rocha-Santos et al. (eds). Springer.
5. Pelamatti, T., Cardelli, L., **Rios Mendoza, L.M.** 2021. The tole of microplastics in bioaccumulation of pollutants. In: Handbook of Microplastics in the Environment. T. Rocha-Santos et al. (eds). Springer.

4. **Rios Mendoza L.M.** and Balcer M. **2021**. Analysis of Chemical Compounds Related to Microplastics. In: Handbook of Microplastics in the Environment. T. Rocha-Santos et al. (eds). Springer.
3. **Rios Mendoza Lorena M**, Mary Balcer. **2020**. Chapter 2. Association of hazardous compounds with microplastics in freshwater ecosystems. In: Microplastics in Water and Wastewater. Hrisi K. Karapanagioti and Ioannis K. Kalavrouziotis (Eds). International Water Association, IWA Publishing. London, UK. DOI: <https://doi.org/10.2166/9781789060034> (Publication date: Oct 15, 2020)
2. **L.M. Rios Mendoza**, S. Taniguchi, H.K. Karapanagiot. **2017**. Chapter 8. Advanced Analytical Technique for Assessing the Chemical Compounds Related to Microplastics. Comprehensive Analytical Chemistry, 75: 209-240. <https://doi.org/10.1016/bs.coac.2016.11.001>
1. Noam Van Der Hal, **Lorena M Rios**, Dror L Angel. Microplastics in Israeli Mediterranean Coastal Waters. MICRO 2016. Fate and Impacts of Microplastics in Marine Ecosystems. From the Coastline to the Open Sea. Eds. J. Baztan, B., Jorgensen, S., Pahl, R.C., Thompson, J.P., Vanderlinden. Elsevier **2017**. <https://doi.org/10.1016/C2016-0-03453-8>

#### Non-Peer Review Publications:

5. Scientist Spotlight. **Lorena M Rios Mendoza**, **2018**. Center for Great Lakes Literacy (CGLL) Sea Grant. <https://www.cgll.org/scientistspotlight/dr-lorena-m-rios-mendoza/>
4. **Lorena M Rios Mendoza**. **2017**. Macro and Microplastic Debris Pollution in the Oceans and the Great Lakes. In: Addressing Environmental Risks. 50 years of applied research, student experience, and community outreach. Albert B. D. and Mary D. Balcer (eds). UWS-LRSI. 228-229.
3. **Lorena M Rios Mendoza**. Council of Public Liberal Arts Colleges (COPLAC). May 5, 2016. Microplastic pollution in the Great Lakes and Oceans research at UWS. <https://coplac.org/current-events/microplastic-debris-pollution-in-the-great-lakes-and-oceans-research-at-uws/>
2. UpClose questions for Dr. **Lorena M Rios Mendoza**. December 15, 2015. Issue 10. Illinois Indiana Sea Grant. <https://iiseagrant.org/upclose-an-insiders-view-of-plastic-pollution-research/>
1. **Lorena M. Rios**, Mary Balcer, and Patrick Jones. 2014. Microplastic Pollution in the Great Lakes. Lake Superior Angler Magazine.

#### Exhibition Text:

1. **Dr. Lorena Rios** in conversation with Christina Battle. Proof of Performance at the Gallery TPW. **2017**. Toronto, Canada. <https://syntheticcollective.org/>

#### Manuscripts (in progress):

1. Lorena M Rios Mendoza and Callie Lier. 2021. Mask and Covid (in progress).
2. José Ángel Ortega-Borchardt<sup>a\*</sup>, Nancy Ramírez-Álvarez<sup>c</sup>, Lorena M Rios Mendoza<sup>d</sup>, Juan Pablo Gallo-Reynoso<sup>b</sup>, Isai David Barba-Acuña<sup>b</sup>, Jaqueline García-Hernández<sup>b</sup>, Janitzio Égido-Villarreal<sup>b</sup>, Trevor Kubenik<sup>d</sup>. First detection of potential plastic particles in scats from various populations of California sea lions (*Zalophus californianus*) in the Gulf of California, Mexico: A preliminary study. (in progress).

3. **Lorena M Rios Mendoza**. Analysis of chemical compounds related to microplastics (in progress).
4. **Rios Mendoza L. M.**, Evans C., Puthayangkul S., and Jones P. Assessment of plastic debris around to the Lake Superior (in progress)
5. Muñoz-Arriola, F, **L.M. Rios**, and V. Macias-Zamora. Vanadyl Etio Porphirins as Indices of Oil Pollution in Marine Sediment (in progress)
6. **Rios Mendoza L. M.**, Kristen Johnson. Plastic fibers in the air (in progress).

### Research Funding:

21. Finding, evaluating and adopting an Open Educational Resources (OER) and adapting the course for the use of the OER. **2021-2022** (\$600).
20. Superior Learning Experience (SLE). **2021** (\$1500) Course Design and Engagement Initiative.
19. Letter of Intent- New Frontier in Research Fund – Transformation **2021**. Kelly Jazvac-PI, Kirsty Robertson-Co-PI, Patricia Corcoran Co-PI, **Lorena M Rios Mendoza Co-Applicant**. Lake, Lab, Studio, and Museum. Ending Plastic Pollution in the Great Lakes Watershed. Concordia University.
18. Freshwater Collaborative of Wisconsin. **2021** (\$113, 254: UWS share \$33,814). In collaboration with UW-Madison (Dr. Pujara), LSNERR (Dr. Haines), and UW-Eau Claire (Dr. Welnitz). Microplastics-A multidisciplinary approach to the understanding sources, transport, adsorption of POPs, and fate in St. Louis River Estuary and Western Lake Superior.
17. Course Design and Engagement Initiative. 2020 (\$1500).
16. Wisconsin Space Grant Consortium. 2020 (\$10,000) (NASA). Microplastics in the Space Station: Undergraduate Research Collaboration.
15. UW System Water Research Collaborative. 2019 (\$10,000). Wisconsin System Undergraduate Water Fellow proposal. Impacts of Polyethylene on the Great Lakes Fish: Embryo Development and Larval Survival of Yellow Perch (*Perca flavescens*). In collaboration with Dr. Deng-Fang Deng, UW-Milwaukee.
14. Faculty Development Grant. 2019 (\$1000) to chair and present in the session: Microplastic pollution in Latin America: Current state and gaps knowledge. At the Society of Environmental Toxicology and Chemistry (SETAC) Latin America 13<sup>th</sup> Biennial Meeting in Cartagena, Colombia.
13. Letter of Intent to UW System Regent Scholar. 2019. Project title: Iridium: A new redox sensor. (Invited to submit a full proposal).
12. Investigacion Ciencia Basica. Secretaria de Educacion Publica. Consejo Nacional de Ciencia y Tecnologia. 2017. Project: Fuentes, concentraciones, impactos y destinos de microplásticos en dos bahías de Baja California, México (\$ 1,800,000 mexican currency). In collaboration with Dr. Nancy Ramírez Alvarez. Universidad Autónoma de Baja California, Ensenada, B.C., México.
11. PI Research grant Ecofootprint Enbridge 2017. \$41,330. Microplastics Pollution in Lake Superior: Undergraduate Research at UW-Superior.
10. Letter of Intent to WiSys Technology Foundation (December 2017) Project: New Redox Sensor: Iridium (invited to submit a full proposal)
9. Co-PI in a proposal to National Geographic (\$6,916). “Oceanic Manta Rays and Plastic Pollution in the Mexican Pacific” 2017 (granted)
8. Faculty Development Grant. 2017 (\$1000) to present “Microplastics and Microfibers in St. Louis River Estuary and Lake Superior” at the 6<sup>th</sup> International Marine Debris Conference on March 12-16, 2018.

7. Programa para el Desarrollo Profesional Docente (PRODEP-SEP, NPTC-2016: Grant No. 10166). 2016. Project: Microplásticos: una nueva fuente de compuestos tóxicos en la Bahía de Todos Santos, Ensenada, C.B. México. (\$300,000 Mexican currency). In collaboration with Dra. Nancy Ramírez Alvares, Universidad Autónoma de Baja California, Ensenada, B.C., México
6. PI Research grant Ecofootprint Enbridge 2016. \$85,000. Great Lakes Undergraduate Research Opportunities at UW-Superior.
5. PI Research Assistant Grant. 2015. \$3000. URSCA-Undergraduate Student. Plastic Research.
4. HIPs-URSCA Mini-grant. Undergraduate research on plastic debris contamination on the North Pacific Ocean (\$ 1500). 2015.
3. Co-PI University of Michigan. 2014-2015. \$26,670. Microplastics in the Great Lakes: Towards establishing a long-term multidisciplinary research platform to assess the impact of microplastics on Laurentian Great Lakes ecosystem health. Co-PI.
2. URSCA-UWS 2015. \$3,000. Analysis of plastic debris from the North Pacific Ocean collected during summer 2014.
1. Learning Technology Development. 2011. Grant \$7,498. Google MyMaps GPS and data mash-up to develop students' skills in chemical analysis data visualization and hypothesis testing on plastic debris along the Lake Superior shoreline.

#### Awards and Honors:

1. Max H. Lavine Award for scholarly contributions to contemporary concerns. **2018**
2. Outstanding Women of Color in Education Award. **2018**
3. Making a Difference. Three times nominated by three different students. 2014-2015.
4. Faculty Mentor of the Year. Mentoring two UWS McNair Scholars students. 2015.
5. Scholar Merit, Mérito Escolar, Universidad Autónoma de Baja California. 2001 México.
6. The Best PhD Students of México. Diario de México, A Los Mejores Estudiantes de México. 2001 México.

#### Mentorship:

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##### Capstone (Research. Since 2003-Current):

| No. | Date | Student Name         | Research  | Status   |
|-----|------|----------------------|---|----------|
| 32  | 2021 | Britta Larson        | Microplastics at the International Space Station  | Progress |
| 31  | 2021 | Karsyn Doughty       | Microplastics surface waters  | Progress |
| 30  | 2021 | Austin Dehn          | PPE plastic pollution   | Progress |
| 29  | 2021 | Tyler Broderius      | Microplastic from Mexican Beaches   | Done     |
| 28  | 2020 | Callie Lier          | PPE plastic pollution   | Done     |
| 27  | 2020 | Daniela Leon Vargas  | Microplastic fish ingestion   | Done     |
| 26  | 2020 | Ryan Herring         | Photodegradation virgin pellets   | Done     |
| 25  | 2019 | Chia-An Li           | PAHs in natural and synthetic debris  | Done     |
| 24  | 2019 | Giorgi Keppers       | Effect of Photodegradation on Plastic Fruit Labels  | Done     |
| 23  | 2019 | Mandy Tomlinson      | NNN: The silent Killer  | Done     |
| 22  | 2018 | Maryelle Nyeck Nyeck | Caffeine in effluent water from wastewater treatment plants: Two Harbors, MN, Superior, WI, Bayfield, WI, Ashland, WI, Washburn, WI | Done     |
| 21  | 2017 | Cera Johnson         | Effects of microplastics on the behavior of <i>Danio Rerio</i>  | Done     |
| 20  | 2017 | Tyler Jasper         | Determining the Composition and Surface Area of Microplastics and Microfibers   | Done     |
| 19  | 2017 | Felagot Abebe        | Microplastics in core sediments from Lake Superior  | Done     |
| 18  | 2017 | Ernesto Soto         | Prevalent Drug in Dollar Bills.   | Done     |
| 17  | 2017 | Lei Shi              | Inductively Coupled Plasma Optical Emission Spectrometry (ICP-OE) and Inductively Coupled Plasma Mass Spectrometry (ICP-MS).        | Done     |

### Undergraduate Research (lab skills and critical thinking. 2003- current):

| No. | Student Name          | Research  | Date/Status   |
|-----|-----------------------|---|---------------|
| 24  | Lucas Palomino        | Learning microplastic morphology, microscope      | 2021-progress |
| 23  | Addison Holck         | Red Nile dye for microplastics analysis           | 2021-progress |
| 22  | Katie Smith           | FTIR and Microscope analysis                      | 2021-progress |
| 21  | Trevor Kubenik        | FTIR-ATR Spectrometer                             | 2021-Done     |
| 20  | Austin Dehn           | Fiber analysis FTIR-ATR                           | 2021-Done     |
| 19  | Niyoocha Abdollahpour | Nanomaterials                                     | 2021-Done     |
| 17  | Alex Rice             | Spectrometry and fluorescence analysis            | 2021- Done    |
| 16  | Callie Lier           | COVID-19 and plastic pollution                    | 2020-2021     |
| 15  | Tyler Broderius       | Phthalates methodology                            | 2019-2020     |
| 14  | Kasryn Doughty        | Analytical Analysis (SURF)                        | 2019-2020     |
| 13  | Britta Larson         | Analytical chemistry methodologies                | 2019-2020     |
| 12  | Daniela Vargas Leon   | Microplastics analysis FTIR (SURF)                | 2018-2021     |
| 11  | Ryan Herring          | FTIR analysis                                     | 2018-2020     |
| 10  | Chia-An Lin           | Microfibers in the air (worldwide samples) (SURF) | 2018-2020     |
| 9   | Michael Moretto       | Heavy metals analysis                             | 2018-2019     |
| 8   | Katrina Cerrillo      | PAHs analysis (McNair)                            | 2018          |
| 7   | Naran Battulga        | Microplastics St Louis River Estuary              | 2018          |
| 6   | Valentin Salas        | Microplastics ingestion (birds)                   | 2018          |
| 5   | Cooper Osterling      | Analytical Instrumentation                        | 2017          |
| 4   | Alex Zoel             | Microplastics fibers rivers                       | 2017          |
| 3   | Kim Kobar             | Microplastics ingestion fish                      | 2017          |
| 2   | Shi Li                | Core sediments microplastics                      | 2017          |
| 1   | Natasha Singer        | Microplastics WWTPs                               | 2017          |

### Thesis Advisor. Director or Co-director and member of the Committees:

| No. | Grade/University   | Student                              | Advisor     | Thesis  | Status/Date            |
|-----|--|--------------------------------------|-------------|---|------------------------|
| 10  | Ph.D.<br>Universidad Autónoma de México  | Allan Rosales<br>Valencia            | Committee   | Determinación de plásticos como vectores de elementos potenciales tóxicos en la raya pinta <i>Urotrygon chilensis</i> en el Golfo de California                                 | In progress 2021       |
| 9   | Ph.D.<br>Universidad Autónoma de Baja California. México.  | Eduardo A.<br>Lozano<br>Hernández    | Co-Director | Presencia y variación temporal de microplásticos y ftalatos en 4 especies de peces en Bahía de Todos Santos, México   | In progress 2020       |
| 8   | Ph.D.<br>Instituto Politécnico Nacional. Centro Interdisciplinario de Ciencias Marinas. La Paz, Baja California, México. | Stephanie Itzel<br>Villagomez Velez  | Co-Director | Contaminantes orgánicos persistentes en Tiburón ballena ( <i>Rhincodon typus</i> ) y el zooplancton en el Caribe Mexicano   | In progress 2020       |
| 7   | Ph.D.<br>Instituto Politécnico Nacional. Centro Interdisciplinario de Ciencias Marinas. La Paz, Baja California, México. | Samantha<br>Ballesteros<br>Hernández | Co-Director | Análisis de microplásticos en dos especies de batoideos ( <i>Rhinoptera steindachneri</i> y <i>Pseudobatos glaucostigmus</i> ) en la zona de Santa Rosalía, Baja California Sur | In progress 2020       |
| 6   | M.C.<br>Instituto de Ciencias Marinas y Pesquerías. Universidad Veracruzana. México.                                     | Alexa Mendoza<br>Osio                | Director    | Caracterización de microplásticos asociados a arrecifes del Sistema Arrecifal Veracruzano, suroeste del Golfo de México   | In progress 2019       |
| 5   | M.C.<br>Instituto de Ciencias Marinas y Pesquerías. Universidad Veracruzana. México.                                     | Minerva Flores<br>Vargas             | Co-Director | Ocurrencia y distribución de microplásticos en el Sistema Arrecifal Veracruzano, suroeste del golfo de México   | In progress 2018       |
| 4   | MC<br>Universidad Autónoma de Baja California. México  | Eduardo A.<br>Lozano<br>Hernández    | Co-Director | Cuantificación y caracterización de microplásticos presentes en el ostión de cultivo <i>Crassostrea gigas</i> en Bahía Todo Santos y Bahía San Quintín                          | 2018-2020<br>Graduated |
| 3   | PhD<br>Instituto Politécnico   | Tania Pelamatti                      | Co-Director | El impacto de los plásticos flotantes en los vertebrados marinos del  | 2016-2019<br>Graduated |

Nacional. Centro  
Interdisciplinario de  
Ciencias Marinas. La Paz,  
Baja California, México

Océano Pacífico

|   |  |                     |             |  |                        |
|---|--|---------------------|-------------|--|------------------------|
| 2 | PhD<br>Department of Maritime<br>Civilizations, Charney<br>School for Marine<br>Science, University of<br>Haifa, Haifa, Israel | Noam van der<br>Hal | Co-Director | Adsorption of POPs onto<br>microplastics | 2014-2019<br>Graduated |
|---|--|---------------------|-------------|--|------------------------|

### **Academic Leadership and Service:**

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- **Associate Editor:**
  1. *Ciencias Marinas*. Since **2019- Current**. An international bilingual open-access peer-reviewed journal that contains original research findings in all areas of marine sciences. Published by the Universidad Autónoma de Baja California, México.
- **Guest Editor:**
  1. *Handbook of Microplastics in the Environment*. Section: Microplastics Degradation and Interactions with Chemical Pollutants. Published Springer. **(2019-2021)**
  2. *Special Issue "POPs in Water Environment"* of *Water*. MDPI (Molecular Diversity Preservation International) publisher.
- **Peer Reviewer of Journals (anonymous):**

Trends in Analytical Chemistry, Environmental Pollution, Marine Pollution Bulletin, International J. of Environmental Analytical Chemistry, Journal of Great Lakes Research, Environmental Science and Technology, Int. J. Environ. Res. Public Health, Science of the Total Environment, Archives of Environmental Contamination and Toxicology, Environmental Science and Pollution Research, Environmental Monitoring and Assessment, Analytical Chemistry, Environmental Pollution, Marine Technology, Environmental Chemistry.
- **Scientific Expert Participation:**
  1. International Atomic Energy Agency (**IAEA**). Marine plastic debris advisor for Latin America (Organismo Internacional de Energía Atómica-OIEA), since **2020- Current**
  2. *Great Lakes Marine Debris Action Plan*. **NOAA**. Over the next five years, this action plan will be completed. **2019-2024**
  3. **JPI Oceans Nanoplastic Review Panel** (Microplastic Call 2) for European Union (Brussels, Belgium) (The Joint Programming Initiative Healthy and Productive Seas and Oceans is a coordinating and integrating platform at European Union) **2019-2022**.
  4. **JPI Oceans Microplastic review panel** for European Union (Brussels, Belgium) (The Joint Programming Initiative Healthy and Productive Seas and Oceans is a coordinating and integrating platform at European Union) 2015-2019.
  5. **The Great Lakes Land-based Marine Debris Action Plan**. **NOAA**. This action plan consists of 53 actions to be completed within five years (2014-2019).
  6. **International Joint Commission (IJC)** Canada, 2016.
  7. **Academic Expert** in European Commission Environment. Plastic Waste in the Environment. August 2010
- **Report Reviewer:**

In: Honolulu Strategy: A Global Framework for the Prevention and Management of Marine Debris (2011).



In: Gordon Miriam, "Eliminating Land-Based Discharges of Marine Debris in California: A Plan of Action from the Plastic Debris Project." June 2006. California Coastal Commission, LARWQCB & SWRCB.

- **Organization member**
  1. American Chemical Society, ACS
  2. Lake Superior Section of the ACS
  3. International Association for the Great Lakes, IAGLR
  4. Society of Environmental Toxicology and Chemistry, SETAC
- **Board adviser** to the Algalita Marine Research and Education (since 2005)
- **Chair SETAC** Latin America 14th Biennial Meeting held 23- September **2021**. Valdivia, Chile.
- **Chair SETAC** Latin America 13th Biennial Meeting held 15-18 September 2019. Bogota, Colombia
- **Co-Chair IAGLR**. Session: Microplastics in freshwater systems: Advances in chemistry, biology, and physics. Brockport, NY. June 10-13, 2019.
- **Co-Chair 6<sup>th</sup> International Marine Debris Conference**. Session "Plastic Debris Pollution in Freshwater Environments of the World" March 12-16, 2018
- **American Chemical Society**, Lake Superior. Member 2012- present. Board position: Director (2019). Past positions: Elected Chair and Chair
- Women and Science Advisory **Board representing UW-Superior** (2011-2020).

#### **Participation Microbead Legislation:**

1. Wisconsin State
2. Minnesota State

#### **Experience (Field):**

- Participation in multiple oceanographic research cruises on the research vessel R/V Alguita (Algalita Marine Research Foundation from 1995 to 2017) on the North Pacific Ocean.
- Participation in multiple collections of plastic debris samples on the Great Lakes onboard Sea Dragon from Pangaea Exploration (summer-2013), Flagship Niagara (summer-2012), the U.S. EPA's R/V Lake Guardian (summer-2019).
- Participation in the Antarctic Marine Living Resources (AMLR) Program, funded by NOAA (National Oceanic and Atmospheric Administration) on the Russian Research Vessel *Yuzhmorgeologiya*. Antarctic (January-February 1997).
- Participation in several cruises on the oceanographic research vessel R/V Francisco de Ulloa (CICESE-Mexico, 1995 to 2002).

#### **Research Interests:**

- Microplastic debris pollution in freshwaters and oceans (persistent organic pollutants)
- Emergent contaminants in freshwater systems (phthalates, caffeine, vitamin B, etc.)
- Fiber plastics on aquatic organisms.
- Chemistry pollution in freshwater and oceans (POPs and heavy metals) in different matrices (sediments, water, tissues).

## Presentations (2005-2021)

| No. | Date                  | Conference  | Title  | Place                                  |
|-----|-----------------------|---|--|--|
| 122 | February 17, 2022     | Wisconsin Land and Water (GLC)  | Microplastic Debris Pollution  | Madison, WI (Virtual)                  |
| 121 | January 26, 2022      | Water Technology Accelerator (WaTA)   | Microplastics: How bad are they?   | Milwaukee, WI (Virtual)                |
| 120 | January 5, 2022       | Twin Ports Freshwater Folks   | Microplastic pollution: A challenge to study   | UM-Duluth, MN (Virtual)                |
| 119 | October 25, 2021      | Water Resources Seminar   | Plastic Debris: Seawater and Freshwater Environments   | UM-Duluth                              |
| 118 | October 14, 2021      | Ciclo de Seminarios ICML-UNAM   | Contaminación y flujos de microplásticos en un área turística al SE del Golfo de California                                  | México (Virtual)                       |
| 117 | October 12, 2021      | CICIMAR-IPN   | Contaminación por desechos de plástico   | La Paz, México (Virtual)               |
| 116 | September 26-29, 2021 | SETAC Latin America 14th Biennial Meeting.  | Microplastics: A Study Case in Mazatlán, Mexico  | Chile (Virtual)                        |
| 115 | September 26-29, 2021 | SETAC Latin America 14th Biennial Meeting.  | Microplastics: An Assessment Case of Two Bays in Baja California, Mexico   | Chile (Virtual)                        |
| 114 | September 26-29, 2021 | SETAC Latin America 14th Biennial Meeting.  | Microplastic Concentrations in Cultured Oyster in Two Seasons From Two Bays of Baja California, Mexico                       | Chile (Virtual)                        |
| 113 | September 26-29, 2021 | SETAC Latin America 14th Biennial Meeting.  | Microplastics in California Sea Lion ( <i>Zalophus californianus</i> ) Rookeries   | Chile (Virtual)                        |
| 112 | September 26-29, 2021 | SETAC Latin America 14th Biennial Meeting.  | Are all Micro Particles Plastics?  | Chile (Virtual)                        |
| 111 | September 26-29, 2021 | SETAC Latin America 14th Biennial Meeting.  | A New Environmental Problem: Coronavirus and Disposable Face Masks   | Chile (Virtual)                        |
| 110 | August 13, 2021       | 31st Annual Wisconsin Space Conference. WI Space Grant Consortium                                 | Microplastics Everywhere   | Milwaukee School of Engineering (MSOE) |
| 109 | May 18-19, 2021       | Simposium Internacional de Microplásticos y Contaminantes Ambientales que Afectan la Salud Humana | Macro y micro plásticos: son un problema ambiental?  | Bogota, Colombia (Virtual)             |
| 108 | April 12-14, 2021     | NCUR Conference   | Historical Concentrations of Polycyclic Aromatic Hydrocarbons and Persistent Organic Pollutants in Superior, WI              | Virtual                                |
| 107 | April 12-14, 2021     | NCUR Conference   | Collection, analysis, and comparison of microplastics from rural and urban areas   | Virtual                                |
| 106 | April 8, 2021         | Colectivo Ecologista Jalisco  | Contaminación por desechos de plásticos  | México (Virtual)                       |
| 105 | March 22, 2021        | Colecta Ecologista Jalisco, A.C. Dialogo Virtual  | La era de los early adopters y la controversia de los plásticos biobasados   | México (Virtual)                       |
| 104 | March 12, 2021        | Chemistry Seminars  | Macro and Micro Plastic Debris: Oceans and the Great Lakes   | UW-Oshkosh                             |
| 103 | March 5, 2021         | Harbor City   | Is Plastic Debris an Environmental Issue?  | Duluth, MN                             |
| 102 | March 4-5, 2021       | Texas Plastic Pollution Symposium   | Presence of microplastics in rivers that propagate within the Veracruz Reef System and in reefs exposed to their discharges. | South Padre Island, Texas              |
| 101 | February 4, 2021      | Civil and Environmental Engineering Seminars  | Is Plastic Debris an Environmental Issue?  | UW-Madison                             |
| 100 | January 13, 2021      | Enhancement Day Spring: Emerging Stronger   | "We did it"  | UW-Superior                            |
| 99  | December 17, 2020     | Mares Mexicanos   | Un Mar de Microplásticos   | Facebook Mares Mexicanos               |
| 98  | November 23-27, 2020  | Micro2020 International Conference  | Microplastics: A Study Case of St. Louis River Estuary and Lake Superior.  | Lanzarote, Spain (Zoom)                |
| 97  | August 5, 2020        | WI-Sea Grant (Workshop MPs)   | Microplastics: Oceans and the Great Lakes  | Zoom                                   |
| 96  | March 3-4, 2020       | St. Louis River Summit  | Microplastic and PAHs pollution in St. Louis River Estuary   | Duluth, MN                             |
| 95  | January 21, 2020      | Chemical Committee (Lake Superior Partnership USA-CANADA)   | Microplastics and the Great Lakes  | WebEx                                  |
| 94  | December 17,          | Seminar CICIMAR   | Microplásticos: cocontaminación química que  | La Paz, baja                           |

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|----|-----------------------|--|---|--|
|    | 2019                  |  | afecta los ecosistemas marinos y de agua dulce”   | California Sur, México                 |
| 93 | October 16-18, 2019   | European Elasmobranch Association 23th Annual Conference   | Comprehensive review of the reported interactions between marine litter and elasmobranchs around the world.           | Rende, Italy                           |
| 92 | September 15-18, 2019 | Society of Environmental Toxicology and Chemistry  | Microplastics: A case study in Todos Santos Bay (Mexico)  | Cartagena, Colombia                    |
| 91 | September 15-18, 2019 | Society of Environmental Toxicology and Chemistry  | Macro and microplastics in remote areas: the case of Revillagigedo Archipelago (Mexico)                               | Cartagena, Colombia                    |
| 90 | September 15-18, 2019 | Society of Environmental Toxicology and Chemistry  | Detection of Microplastics in Sediments Traps   | Cartagena, Colombia                    |
| 89 | August 12, 2019       | University of Haifa  | Macro and Micro Plastic Debris: Oceans and The Great Lakes  | Haifa, Israel                          |
| 88 | July 8 – 14, 2019     | Center for Great Lakes Literacy  | Microplastic: A new source of toxic compounds in the Oceans and the Great Lakes                                       | Lake Erie (R/V Lake Guardian)          |
| 87 | June 10-14, 2019      | 62nd Annual International Association for Great Lakes Research Conference                                    | Microplastics particles St. Louis River Estuary and Lake Superior   | Brockport, NY                          |
| 86 | June 10-14, 2019      | 62nd Annual International Association for Great Lakes Research Conference                                    | A Pan-Great Lakes Investigation of plastic pellet pollution   | Brockport, NY                          |
| 85 | June 10-14, 2019      | 62nd Annual International Association for Great Lakes Research Conference                                    | Microplastics: Environmental Forensic   | Brockport, NY                          |
| 84 | May 8, 2019           | The River Talks  | Newton Creek: Is there contamination after an explosion?  | Superior, WI                           |
| 83 | April 11-13, 2019     | National Conference on Undergraduate Research (NCUR)   | Polyaromatics as Forensic Evidence of Environmental Pollution   | Atlanta , GA                           |
| 82 | March 25-29, 2019     | Primer Congreso Latinoamericano de Tiburones, Rayas y Quimeras. VIII Simposio Nacional de Tiburones y Rayas. | Microplásticos y COPs en Tiburones del Golfo de California  | Playa del Carmen, Quintana Roo. Mexico |
| 81 | February 12, 2019     | Upper Peninsula Environmental Health Association   | Microplastic pollution: Chemical threat to freshwater and marine ecosystems   | Michigan                               |
| 80 | January 10, 2019      | University of Mazatlan, Mexico   | Microplásticos: Una nueva fuente de compuestos tóxicos  | Mazatlán, Mexico                       |
| 79 | October 9, 2018       | Northern Great Lakes Visitor Center  | Macro and microplastics: Great Lakes and Oceans.  | Ashland, WI                            |
| 78 | September 26, 2018    | Eco-Rotary Club  | Macro and microplastics emergent contaminants: a new source of toxic compounds in waters from Great Lakes and Oceans. | Duluth, MN                             |
| 77 | August 17, 2018       | Atlas de los Oceanos   | Microplásticos: Una nueva fuente de compuestos tóxicos en los Océanos y en los Grandes Lagos.                         | Ciudad de Mexico, Mexico               |
| 76 | June 28, 2018         | High School  | Plastic Debris Pollution  | Milwaukee, WI                          |
| 75 | Abril 25, 2018        | Earth Day  | Great Lakes and North Pacific Ocean. Plastic Debris Pollution   | Duluth, MN                             |
| 74 | March 12-16, 2018     | 6 <sup>th</sup> International Marine Debris  | Macro and Microplastics: St Louis River Estuary and Lake Superior   | San Diego, CA                          |
| 73 | March 12-16, 2018     | 6 <sup>th</sup> International Marine Debris  | Microplastic distribution in environmental matrices (water-sediment) in Todos Santos Bay, Mexico.                     | San Diego, CA                          |
| 72 | March 12-16, 2018     | 6 <sup>th</sup> International Marine Debris  | Oceanic manta rays and plastic pollution in the Mexican Pacific Ocean   | San Diego, CA                          |
| 71 | March 12-16, 2018     | 6 <sup>th</sup> International Marine Debris  | Microplastics in the St. Louis River Estuary from the WLSSD effluent water  | San Diego, CA                          |
| 70 | February 12, 2018     | College of St. Scholastica   | Plastic Debris Pollution  | Duluth, MN                             |
| 69 | August 18, 2017       | Museo del Caracol  | Microplásticos contaminantes emergentes: una nueva Fuente de compuestos tóxicos en agua de mar y en los Grande Lagos. | Ensenada, BC. Mexico                   |
| 68 | July 24-25, 2017      | 10 <sup>th</sup> Annual WSTS   | Macro and Micro Plastic Debris: Oceans and the Great Lakes.   | UW-Platteville                         |

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| 67 | May 31-June 1, <b>2017</b> | 2017 Emerging Contaminants in the Aquatic Environment Conference          | Microplastics: small particles with huge environmental impacts  | Champaign, IL             |
| 66 | May 15-19, <b>2017</b>     | 60th Annual International Association for Great Lakes Research Conference | Microplastic particles and their environmental impacts on our freshwater systems                            | Detroit, MI               |
| 65 | May 2, <b>2017</b>         | Harbor City High School   | Microplastics emergent contaminants: A new source of toxic compounds in waters from Great Lakes and Oceans. | Duluth, MN.               |
| 64 | March 14-15, <b>2017</b>   | St Louis River Summit   | Small plastic particles with huge environmental impacts on our freshwater systems                           | UW-Superior, Superior, WI |
| 63 | Feb 21, <b>2017</b>        | Science on Tap  | Microplastics emerging contaminants: A new source of toxic compound in waters from Great Lakes and Oceans.  | Ashland, WI               |
| 62 | Feb 16, <b>2017</b>        | "Bag it" community education event about plastic pollution                | Panel discussion on plastic pollution   | Duluth, MN                |
| 61 | Feb 16, <b>2017</b>        | Superior Public Library   | Plastics in the environment: sources, impacts, and solutions  | Superior, WI              |
| 60 | Jan 16, <b>2017</b>        | City of Superior Environmental Services event                             | Are you eating plastic fish?  | Superior, WI              |