

# Yi-Wen Chiu

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## EDUCATION

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| <b>Ph.D. in Water Resources Science</b> , University of Minnesota, Minneapolis, MN | 2010 |
| <b>M.S. in Water Resource Science</b> , University of Minnesota, Minneapolis, MN   | 2006 |
| <b>B.S. in Forestry</b> , National Taiwan University, Taipei, Taiwan               | 1996 |

## WORK EXPERIENCES

- 1. Postdoctoral Appointee**, Argonne Nation Lab, Lemont, IL 11/2010 – present
  - **Duties:** assess energy feedstock availability, distribution, water demand, and environmental implications in energy generation and consumption in order to integrate water-energy nexus in life cycle analysis.
  - **Accomplishments:**
    - Participated in 5 research projects as the primary modeler.
    - Participated in drafting 2 technical reports, and submitted 5 manuscripts (3 published).
    - Presented in 4 conferences, and accepted invitations to give speeches in 2 seminars.
    - Served as a reviewer in peer-reviewed journals.
    - Participated in international working groups under the United Nations and ISO.
- 2. Research Assistant**, University of Minnesota, Minneapolis, MN 05/2005 – 09/2010
  - **Duties:**
    - Create the core energy-water modeling framework, and analyze social and climate effects on regional water dynamics.
    - Study ditch buffer zone effects on water quality, ecological improvement, and erosion reduction.
    - Establish new long-term monitoring stations overseas, and measured soil respiration/moisture flux in various forested ecosystems.
  - **Accomplishments:**
    - Conducted 5 research projects as a primary modeler.
    - Published 1 top-accessed article in a peer-reviewed journal, and drafted 2 technical reports.
    - Organized 1 workshop, presented in 9 conferences, and lectured in 3 seminars.
    - Received 13 scholarships and awards, including an invitation to conduct a short-term research at the Swiss Federal Institute of Technology Zurich (ETH).
- 3. Research Associate & Executive Coordinator**, Water Environment Research Center (WERC), National Taipei University of Technology, Taiwan 01/2000 – 02/2004
  - **Duties:**
    - Initiate and coordinated multidisciplinary research projects in ecological engineering, watershed management, and public participation.
    - Coordinate and assisted in establishing the management and administrative structure of WERC which is one of the five designated institutes funded by the Taiwan government.
    - Engage in the synergistic activities to plan, organize, and chaired national and international conferences and workshops.
    - Provide consultation in ecological engineering planning, designing, and implementing for the government agencies and infrastructure firms.

- Supervise graduate and undergraduate students who studied in ecological engineering.
- **Accomplishments:**
  - Contributed in reforming the new framework of Taiwan’s current Regulation of Watershed Protection and Management.
  - Participated in drafting Taiwan’s national mandates on ecological engineering, watershed conservation, and land use planning.
  - Initiated and conducted over 12 research projects contributed to 80% of WERC’s annual research budget.
  - Provided consultation in over 10 projects for the government agencies and private firms.
  - Drafted and edited 9 technical reports, delivered 9 invited articles, and publish 3 books.
  - Carried out over 12 national and international conferences and workshops.
  - Taught one university-level course, lectured in 8 seminars/workshops, and received interviews by two Taiwan's national TV programs.

## SELECTED PUBLICATIONS

1. **Chiu, Y.-W.**; Wu, M., Considering water availability and wastewater resources in the development of algal bio-oil. *Biofuels, Bioproducts and Biorefining* 2013, DOI: 10.1002/bbb.1397.
2. **Chiu, Y.-W.**, Wu, M., Assessing county-level water footprints of different cellulosic-biofuel feedstock pathways. *Environmental Science & Technology* 2012, 46 (16), 9155-9162.
3. **Chiu, Y.-W.**; Wu, M., Assessing County-Level Water Footprints of Different Cellulosic-Biofuel Feedstock Pathways. *Environmental Science & Technology* 2012, 46 (16), 9155-9162.
4. Wu, M., **Y.-W. Chiu**, and Y. Demissie, Quantifying the regional water footprint of biofuel production by incorporating hydrologic modeling. *Water Resources Research* 2012, 48 (10), W10518.
5. **Chiu, Y.-W.**, S. Suh, S. Pfister, S. Hellweg, and A. Köhler. Measuring the ecological impact of water consumption by bioethanol: a case of Minnesota. *The International Journal of Life Cycle Analysis*, 17 (1): 16-24 (2011)
6. **Chiu, Y.-W.**, B. Walseth, and S. Suh. Water embodied in bioethanol in the US. *Environmental Science and Technology*, 43 (8), 2688-2692 (2009). *Top three most accessed articles in Sep. 2009.*
7. Wu, M., **Y.W. Chiu**. Consumptive water use in the production of ethanol and petroleum gasoline – update 2011 (ANL/ESD/09-1– Update). Argonne National Laboratory, Lemont, Illinois (2011)
8. Graham, R., M. Langholtz, L. Eaton, J. Jacobson, C. Wright, D. Muth, D. Inman, E. Tan, M. Wu, **Y.W. Chiu**, S. Jones, L. Snowden-Swan, D. Manley, L. Malczynski, A. Goss Eng, S. Moynihan, R. Chiang, and A. Argo. Biochemical biorefinery sizing and environmental sustainability impacts. *Biorefinery Capacity/Sustainability White Paper, DOE EERE OBP* (2011)
9. Suh, S., **Y.W. Chiu**, L.S. Olabisi. The future of energy and Minnesota’s water resources. Report to Legislative Citizen’s Commission on Minnesota Resources, Saint Paul, Minnesota (2010)
10. [Book] Lin, J.Y., and **Y.W. Chiu**. *Introduction to Ecological Engineering Methods*. Ming-Wen Books, Taipei, Taiwan. ISBN/9789577031037 (2003)

## SKILLS

1. **Numerical Analysis** / ArcGIS (spatial analysis), VENSIM (system dynamics), STELLA (system dynamics), Crystal Ball (stochastic and Monte Carlo simulation), SAWT (watershed simulation), CROPWA (agricultural irrigation scheduling and water demand), R (statistic programming).
2. **Internet and Image** / Dreamweaver (webpage design, HTML language), Photoshop (graphics editing and process), Illustrator (graphics editing and process), CorelDraw (graphics editing and process), Pagemaker (publication).