

# Darcy K. Molnar

Profession: Civil Engineer, Ph.D. in Hydraulic Engineering  
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## PERSONAL STATEMENT

My professional interests relate primarily to teaching, water resources, and sustainability. I have 14 years of experience in program coordination, teaching, and education at the university level, as well as 5 years of experience working with secondary schools in Ghana. Specific topics I specialize in are nature based solutions (for climate change and disaster risk reduction), sustainable water resources management (environmental, social, and economic), and capacity building (tertiary and secondary). Furthermore, I am actively engaged in enhancing opportunities for women in science and engineering, and in promoting youth-led projects for sustainable development in the Global South.

## EMPLOYMENT

- |             |  |                                  |
|-------------|--|----------------------------------|
| Since 2022  | <a href="#">Gender and Diversity Commission</a> , Department of Civil, Environmental and Geomatic Engineering, ETH Zurich<br><b>Coordinator and Team Leader</b> (20% position) <ul style="list-style-type: none"><li>• Establishment of a mentoring program for doctoral students in the department</li><li>• Support for gender, diversity, and inclusion initiatives at the department</li></ul>   | Switzerland                      |
| Since 2019  | <a href="#">Network for Water and Life</a> (NEWAL) in West Africa Project<br><b>Co-head (since 2021)</b> <ul style="list-style-type: none"><li>• Organization of winter schools in Ghana for Swiss and West African students</li><li>• Development of networking and scientific exchange between Swiss and West African universities</li><li>• Creation and support of student-led projects in West Africa</li><li>• Organization of e-learning activities open to partners in West African</li></ul>  | Switzerland<br>Ghana             |
| Since 2017  | <a href="#">Science Action in Schools for Sustainable Development</a> (SAS4SD) Project<br><b>Coordinator and Founder</b> <ul style="list-style-type: none"><li>• Led the development of teaching materials on climate change impacts in West Africa</li><li>• Organized workshops with secondary school teachers in Ghana and Cameroon</li><li>• Established <a href="#">Green Clubs in Schools in Ghana</a>, a project supported by the Leopold Bachmann foundation</li></ul>   | Switzerland<br>Ghana<br>Cameroon |
| Since 2008  | <a href="#">Master of Advanced Studies (MAS) in Sustainable Water Resources</a> , ETH Zurich<br><b>Coordinator and Lecturer</b> (60% position) <ul style="list-style-type: none"><li>• Developed and established the MAS as a continuing education program aimed especially at international participants from the Global South</li><li>• Teach courses on nature based solutions, sustainable water resources</li><li>• Supervise participants' research on water resources challenges in their home countries</li><li>• Support and guide MAS participants from initial application to graduation from program</li><li>• Co-developed the curricula for the ETH 2015 Winter School on "<i>Global Water Challenges</i>" and the 2016 ETH week on "<i>Challenging Water</i>"</li></ul> | Switzerland                      |
| 2015 - 2019 | <a href="#">Center for Development and Cooperation (NADEL)</a> , ETH Zurich<br><b>Research associate</b> <ul style="list-style-type: none"><li>• Contributed to the development of a strategic plan for NADEL's research, teaching, and outreach activities</li><li>• Elaborated and executed a tracer study of NADEL alumni</li><li>• Taught "<i>Disaster Risk Reduction</i>" and "<i>Sustainable Development Practice</i>" courses</li><li>• Organized public events, e.g. Book Launch: "How Change Happens" by Duncan Green</li></ul>   | Switzerland                      |

2014 -	<a href="#">Institute of Science, Technology, and Policy</a> , ETH Zurich	Switzerland
2015	<b>Research assistant</b> <ul style="list-style-type: none"> <li>• Supported the preparatory phase for the new institute</li> <li>• Finalized a business plan for the institute</li> <li>• Contributed to the development of a new curriculum in Science, Technology, and Policy</li> </ul>	
2005 -	<a href="#">Institute of Environmental Engineering</a> , ETH Zurich	Switzerland
2008	<b>SNF Marie Heim-Vögtlin grant recipient:</b> Research scientist <ul style="list-style-type: none"> <li>• Studied and modeled runoff regimes of Swiss Alpine research catchments using a distributed rainfall-runoff model.</li> </ul>	
1999 -	Slovak University of Technology, Bratislava	Slovakia
2001	<b>NSF-NATO post-doctoral fellow:</b> Visiting scientist <ul style="list-style-type: none"> <li>• Performed research and training on event-based runoff modeling</li> </ul>	
1997 -	Riverside Technology Inc., Fort Collins Colorado	USA
1998	<b>Water Resources Engineer</b> <ul style="list-style-type: none"> <li>• Assisted in development of river forecast tools for Mexican government using the National Weather Service River Forecast System (NWSRFS)</li> <li>• Provided training in Spanish for the Mexicans users of the forecast tools</li> </ul>	

## EDUCATION

1997	Colorado State University, Fort Collins Colorado Ph.D. in Hydraulic Engineering, Civil Engineering Department	USA
1994	Colorado State University Civil Engineering, Fort Collins Colorado M.Sc. in Water Resources Planning and Management, Civil Engineering Department	USA
1991	Middlebury College, Middlebury Vermont B.A. in Physics, with a concentration in Third World Development <ul style="list-style-type: none"> <li>• Semester abroad (1989), American University in Cairo</li> <li>• Graduated Cum Laude</li> </ul>	USA Egypt

## FOREIGN LANGUAGES

English	Mother tongue
French	Fluent
German	Very good spoken, good written
Spanish	Very good spoken, good written
Slovak	Good understanding

## COMPUTER SKILLS

ArcGIS, Webdesign (AEM, Wordpress, Wix), Excel, Adobe, Powerpoint, Matlab (basic)

## BOARDS AND MEMBERSHIPS

[Swiss Water Partnership](#): Co-chair since 2021 and steering board member since 2013

[500 Women Scientists Zurich pod](#): Founder and coordinator since 2018

[Oeuvre St Justin, Fribourg](#): Academic representative since 2016, founding member of the Foundation (2022)

## INTERNATIONAL EXPERIENCE

- Spent childhood and high school education in Cameroon and Nigeria, Africa
- University semester abroad and work in Cairo, Egypt (1.5 years)
- Professional experience working in the USA, Slovakia, and Switzerland

## PERSONAL INTERESTS

Hiking, reading, socializing with friends, traveling, gardening

## REFERENCES

Prof. Paolo Burlando, ETH Institute of Environmental Engineering, [burlando@ifu.baug.ethz.ch](mailto:burlando@ifu.baug.ethz.ch)

*Other references upon request*

## SELECTED PUBLICATIONS

- Wakjira MT, N. Peleg, D. Anghileri, D. Molnar, T. Alamirew, J. Six, and P. Molnar, 2021, "Rainfall seasonality and timing: implications for cereal crop production in Ethiopia," *Agricultural and Forest Meteorology* 310, 108633.
- Molnar, D., Molnar, P., Dawoe, E., and A.L. Rittner, 2019, "Science Action for Sustainable Development in Secondary Schools in Ghana," 27<sup>th</sup> IUGG General Assembly, Montreal, Canada, POSTER.
- Molnar, P., and Molnar, D., 2015, "Are female students less self-confident in their skills and what can we do about it?" IUGG-3317, IUGG-IAHS 2015 Assembly, Prague, Czech Republic, ORAL.
- Molnár, D., Pellicciotti, F., Helbing, J., Rimkus S., and F. Escobar, 2009, "Modelling the runoff regime of the Aconcagua River Basin using a distributed model: simulation of the glacier and snow melt contribution," POSTER at *MOCA Conference Our Warming Planet*, Montreal, July 19-29.
- Perona, P., Pasquale, N. and D. Molnár, 2008. "Mechanistic Interpretation of Alpine glacierized environments: Part 2. Hydrologic interpretation and model parameters identification on case study." *Advances in Water Resources*, Vol. 31, Issue 7, pp. 948-961.
- Molnár, D. and M. Zappa, 2007, "Towards a better understanding of Swiss mountain hydrology: a regional analysis using PREVAH." *Geophysical Research Abstracts*, Vol. 9, 03331.
- Perona, P., Pasquale, N., and D. Molnár, 2007, "Mechanistic modeling of glaciated alpine basins: case studies." *Geophysical Research Abstracts*, Vol. 9, 05202.
- Molnár, D., 2006, "Distributed rainfall-runoff modelling of Swiss mountainous basins: effects of scale on modeling parameters," *Geophysical Research Abstracts*, Vol. 8, 06411.