

# GREG VANDERBEEK

Boulder, Colorado | (303) 588.3380 | [coalescedesignfab@gmail.com](mailto:coalescedesignfab@gmail.com)

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## PROFILE

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Self-starter and proven leader with extensive experience in project management, design-build of various systems, and curriculum development. Skilled at complex problem-solving and adept at explaining detailed engineering systems and design in a clear and comprehensible manner to both professional and non-professional audiences. Committed and passionate about offering students knowledge and expertise to help them achieve academic and professional growth.

## EDUCATION

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- 2003 Colorado School of Mines ▪ Golden, CO, USA  
**MASTER OF SCIENCE (MS) IN GEOLOGICAL ENGINEERING**  
THESIS: *ESTIMATING RECHARGE AND STORAGE COEFFICIENT IN A FRACTURED ROCK AQUIFER, TURKEY CREEK BASIN, JEFFERSON COUNTRY, CO*
- 2001 University of Dayton ▪ Dayton, OH, USA  
**BACHELOR OF SCIENCE (BS) IN ENVIRONMENTAL GEOLOGY**

## PROFESSIONAL EXPERIENCE

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- 2008—current **Owner and Founder**  
Coalesce Design and Fabrication ▪ Boulder, CO, USA ▪ [coalescedesignfab.com](http://coalescedesignfab.com)
- **Built from the ground up one of the top Design and Build firms in Boulder, CO—focusing on the design and fabrication of large architectural steel structures**
  - **Developed a business model based on the need for a turn-key solution—our success as a company was driven by identifying a gap in the market between engineers, builders, architects, and clients**
  - Designed, built and fabricated over 500 structural and mechanically engineered systems integrating metal, glass, plastic and wood
  - Managed projects of varying degrees of complexity, budget, and timeline—having keen understanding of the unique needs of various clients and builds
  - Led design-build teams across multiple trade disciplines and skill levels for accurate implementation of projects, valued for clear communication and coordination adeptness
  - Created designs for a “turn-key” product—satisfying a market need
  - Developed 3D models and engineering packets for clients, architects, structural engineers and permitting
  - Recognized for exceptional quality, professionalism, and timeliness—leading to repeat clients, word-of-mouth referrals, and year-over-year business growth
  - Implemented builds featured in national and local magazines
- 2012–2014 **Owner and Founder**  
Coalesce Academy for the Manual Arts ▪ Boulder, CO, USA
- **Developed a building academy to teach middle-school to high-school aged students the basics of engineering theory and design-build techniques**
  - Developed curriculum and over a year’s worth of hands-on teaching modules
  - Teaching philosophy rooted in active learning and project based methods—each module introduced new engineering concepts through teaching and hands-on exercises giving students the skills to read and interpret schematics followed by implementation
  - Created project packets for active learning of technical concepts from designing, drawing and building to project planning and managing
  - Designed and built academy layout integrating teaching/instruction workspace with hands-on workshop suitable for running classes with 6–18 year olds

- 2004–2009     **Senior Engineering Hydrologist and Project Manager**  
 Geomega ▪ Boulder, CO, USA
- **Project Manager and liaison between clients, EPA and local regulators to meet clean-up and closure requirements**
  - Developed the model for a multi-million-dollar remediation system off the coast of Alaska—the advection dispersion model was used to aid in the design and development of the clean-up system
  - Created predictive models for the remediation and closure of pit mines
  - Developed strategic plans detailing site closure
  - Developed legal documentation and served as engineering expert in court cases
  - Held monthly meetings with the EPA
- 2003–2004     **Engineering Hydrologist**  
 GeoTrans Inc. ▪ Boulder, CO, USA
- **Developed a model for passive remediation of a creosote factory along the Hudson River**
  - Coordinated with EPA and local regulators on planning and implementation of remediation strategies
- 2002–2003     **Research Assistant**  
 Colorado School of Mines ▪ Golden, CO
- **Studied recharge/storage coefficients modeling population sustainability in Turkey Creek Basin**
  - Funded through a grant by Jefferson County
- 2001–2003     **Teaching Assistant**  
 Colorado School of Mines ▪ Golden, CO
- **Designed and taught Engineering Hydrology lab course**
  - Developed and implemented unique hands-on labs to build on established curriculum

## TEACHING

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**Principle Teaching Interests:** Mr. VanderBeek’s teaching interests include development of hands-on projects and active learning to reinforce design concepts taught to students. Mr. VanderBeek has extensive experience teaching design, management and build techniques to employees and students.

He has been involved at the university level holding welding workshops since 2012 for Colorado School of Mines students, advised senior design teams from Formula SAE to Mini Baja, and spoken as guest lecturer for classes ranging from Machine Design to Manufacturing Processes.

### Curriculum Development

Developed hands-on modules for students focusing on design, drawing, building to project planning and managing. Modules were active learning exercises to:

- Introduce design theory behind sketches and drawing of build schematics
- Instruct on how to create technical drawings and exploded views
- Taught project management skills and creative problem-solving
- Taught fundamentals of building, materials and tools

### Teaching Experience

- 2012–2015     MEGN 481: Machine Design (Guest Lecturer as part of semester curriculum)  
 2015–2016     MEGN 381: Manufacturing Processes (Guest Lecturer)  
 2001–2003     Engineering Hydrology Lab Course (developed and taught)

### University Mentoring

- 2013–2016     Welding workshops for students  
 2014–2016     Formula SAE (chassis design and build)  
 2014–2016     Mini Baja (chassis design and build)

## RESEARCH EXPERIENCE

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**Principle Research Interests:** Mr. VanderBeek's principle research interests have changed throughout his 15-year career and include educating young minds through hands-on and active learning techniques and modeling of complex groundwater systems.

### Publications

1. Blacklock, J. **VanderBeek, G.A.**, *Building confidence and creativity for the next generation of thinkers*, Boulder County Kids Health, (2014).
2. **VanderBeek, G.A.**, Poeter, E., Murray, K., *Estimating recharge and storage coefficient using MODFLOW, MODFLOW and More*, Conference Proceedings, Golden, CO. Vol. II, p. 510 (2003).
3. **VanderBeek, G.A.**, Poeter, E., Thyne, G., McCray, J, *Ground-water availability in the Turkey Creek basin, CO*, Geological Society of America Annual Meeting Abstracts with Programs, Cedar City, UT (2002).

## MENTORING AND FUNDRAISING

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- 2005–current     Raised over 100K through organizing and hosting private events for Habitat for Humanity, Colorado Survivor Center, Trips for Kids, Water for People and Comunidad Connect
- 2008                 Raised money for raw materials and traveled to Nicaragua to build a community center for Comunidad Connect

## PROFESSIONAL CERTIFICATES

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- 2014–current     American Welding Society (certified)

## SOFTWARE PROFICIENCY

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SolidWorks, eDrawings, Podio (Project Management Software), BuilderTrend (Project Management Software), QuickBooks, MODFLOW, FORTRAN, MATLAB, Groundwater VISTA, GMS Groundwater Modeling Systems