

WILLIAM “Trey” BATSON  
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published research: [goo.gl/REkthV](http://goo.gl/REkthV)  
email: [wbatson@gmail.com](mailto:wbatson@gmail.com)

## DESCRIPTION

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Analytical thinker with startup experience looking to design cutting-edge technological solutions.

## SKILLS & FIELDS

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interfacial fluid dynamics, heat & mass transfer, experimental design, applied mathematics, computational programming, technical writing & presentation, pedagogy, plant extraction & refinement, product development, reactor operation, lab management, SOP development

## EDUCATION

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- 2013**      **Ph.D., Chemical Engineering** (cotutelle dual degree)  
University of Florida, Gainesville, FL and Université Lille 1, Lille, France
- 2008**      **B.S., Chemical Engineering**, minor in mathematics  
Clemson University, Clemson, SC

## WORK EXPERIENCE

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- Hemp Harvest Innovations, Boulder, CO** **2019-2021**  
Director of Research & Development
- developed a safer, streamlined method to make concentrated plant extracts
  - developed an edible oil infusion process generating nearly \$400k in company sales
  - grew a laboratory for sample analysis and process development
- White Buffalo Hemp Co., Longmont, CO** **2018-2019**  
Director of Research & Development
- led process development and implementation for a startup hemp company
  - authored company SOPs, trained employees, guided equipment purchases
- New Jersey Institute of Technology, Newark, NJ** **2016-2018**  
Postdoctoral Researcher, Department of Mathematical Sciences
- modeled thermocapillary instability of liquid films heated by thick substrates
  - built continuation and optimization algorithms to pinpoint oscillatory instabilities
- Course Instructor, *Calculus III*, Fall 2017
- gave lectures and graded a class of 32 students
- Technion—Israel Institute of Technology, Haifa, Israel** **2014-2016**  
Postdoctoral Fellow, Faculties of Civil & Mechanical Engineering
- modeled the dynamics of liquid films subject to thermoacoustic excitations
  - uncovered novel physical phenomena driven by phase change and thermocapillarity
- Recitation Lecturer, *Fundamentals of Fluid Mechanics*, Spring 2016
- gave lectures and graded a recitation class of 20 students
- University of Florida, Gainesville, FL & Université Lille 1, Lille, France** **2008-2013**  
Graduate Research Assistant
- designed experiments on Faraday waves in small cylindrical cells
  - automated analysis of measurements obtained from high speed imaging
  - achieved experimental agreement with a first-principles mathematical model
  - participated in international collaboration on microgravity fluid dynamics research

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## WORK EXPERIENCE, cont.

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### **University of Florida, Gainesville, FL** **2010-2012**

Graduate Teaching Assistant

- *Process Thermodynamics* (Spring 2012) & *Separations* (Fall 2010)

### **Clemson University, Clemson, South Carolina** **2007-2008**

Undergraduate Research Assistant

- studied helical polymers using laboratory synthesis and molecular dynamics simulations

### **Cognis Corporation** **2005-2006**

Research and Development Intern (Dusseldorf, Germany)

- conducted a pilot plant study of high-temperature esterification

Chemical Manufacturing Co-op Engineer (Mauldin, South Carolina)

- optimized unit operations, reviewed safety, maintained drawings, and programmed sensors

## OVERSEAS EXPERIENCE

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- presented original research at numerous international conferences and academic institutions
- lived/worked/studied overseas for extended periods (Vienna, Germany, France, Israel)

## AWARDS

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- NJIT Department of Mathematical Sciences postdoctoral fellowship (2016)
- Technion Aly Kaufman postdoctoral fellowship (2014)
- cover image of *Journal of Fluid Mechanics* volume 729 (2013)
- French Embassy Chateaubriand Fellowship (2011)
- South Carolina Palmetto Fellows scholar (2003-2008)

## ACTIVITIES & SERVICE

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- ad-hoc reviewer for several academic journals
- organized Technion postdoc career event (2015)
- Graduate Assistants United steward (2009-2011)
- Graduate Student Council representative (2009-2011)
- AIChE treasurer (2007-2008)