



## Goldschmidt 2017 Workshop

# “Reactive Transport Modeling in Geochemical Systems”

Paris, France • 12-13 August 2017

Please join us in the heart of [Paris](#), the world's most visited – and certainly most cherished – city, for two days of hands-on training in reactive transport modeling using The Geochemist's Workbench®. Then stay on in the [City of Lights](#) for the [Goldschmidt 2017 conference](#).

While in Paris, [stroll](#) the historic neighborhoods, marvel at the [architecture](#) and [monuments](#), visit exquisite [museums](#), [shop](#) till you drop, come alive in the vibrant [nightlife](#), and of course savor the [food and drink](#) of the world's capital of gastronomy.



**SPECIAL OFFER:** Sign up for the Goldschmidt workshop for only €180 when you register for the [Goldschmidt 2017](#) conference!

Online registration for the Goldschmidt Conference closes *July 13, 2017*, so don't delay!

What you will learn. Following a fully hands-on format, you will learn to construct, trace, and interpret models of transport in reacting geochemical systems. Specific topics covered include:

- Introduction to geochemical modeling
- Transport in flowing groundwater
- Dual porosity models (stagnant zones)
- $K_d$ , Freundlich, and Langmuir sorption
- Surface complexation
- Colloid-facilitated transport
- Reaction kinetics
- Biodegradation
- Dissolution and precipitation
- Microbial catalysis and growth
- Effective graphical presentation
- Creating animation and video

The topics will be illustrated through a series of case studies.

More information? Contact [workshop support](#). Can't come? Consider an alternative from our [2017-2018 workshop lineup](#).

I thought the workshop was fantastic! The pacing and examples were very good and the course gave me a lot of ideas on how I can better use GWB.

– Morgan Warren, Golder Associates

I loved the [geochemical modeling] workshop! In the future I would really like to take the reactive transport course.

– Ryan Davis, Colorado State University

I really liked the course! You have the ability to explain things in an easy way, while pointing out the key issues.

## Instructors

The workshop will be presented by [Craig Bethke](#), Brian Farrell, [Kate Maher](#), and [Jenny Druhan](#). Prof. Bethke is the R.E. Grim Professor emeritus at the University of Illinois. He is the primary author of The Geochemist's Workbench® software package and author of the [Geochemical and Biogeochemical Reaction Modeling](#) text, published by Cambridge University Press.



Craig Bethke

Craig Bethke has been cited many times for excellence in teaching. He is a Fellow of the American Association for the Advancement of Science and recipient of a number of prizes in hydrogeology and geoscience, including the O.E. Meinzer Award and M.K. Hubbert Award.

Brian Farrell is the lead Geochemist at Aqueous Solutions LLC, makers of The Geochemist's Workbench®. Mr. Farrell is expert in aquifer microbiology, geochemical modeling, and reactive transport in geochemical systems. He has taught short courses in North and South America, Europe, Africa, Asia, and Australasia.



Brian Farrell



Kate Maher

Kate Maher teaches at Stanford University and is an authority on water-rock interaction, weathering, and isotope geochemistry. She teaches environmental geochemistry at the undergraduate and graduate levels. An experienced short course instructor, she is the 2012 Allan Cox medalist.

Jenny Druhan is an Assistant Professor of Geology at the University of Illinois. In her research, Jenny develops reactive transport models and constructs experiments to investigate chemical reactivity and stable isotope fractionation in groundwater flows. Jenny has led successful workshops at several previous Goldschmidt conferences.



Jenny Druhan

## Venue



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The workshop will be held at [Le Palais des Congrès de Paris](#), located in the 17<sup>th</sup> arrondissement near [Neuilly-sur-Seine](#), [Bois de Boulogne](#), and [l'Arc de Triomphe](#); Métro [Porte Maillot](#).

The workshop runs 8:30 am to 5:00 pm each day. We will wrap up the second day in time to attend the [Icebreaker Welcome Reception](#).

Register  
Now!

## Registration

Space is limited, so [sign up](#) early. You may join the workshop when you register for Goldschmidt 2017, or you may sign up directly with the

workshop organizers.

[Register Now](#)

The workshop fee is only €180 when you attend as part of the conference, which is the least expensive way to take part.

To take advantage of the Conference's early registration discount, be sure to sign up by June 13. Please note the Goldschmidt Conference cuts off registration for all workshops on July 13.

Alternatively, you may register directly with the workshop organizers, without attending the meeting, at the undiscounted price. In this case, the workshop fee is US\$599 until July 13, or \$699 after that date. Full-time students currently enrolled in a university degree program can register at the reduced rate of US\$499, or \$599 after July 13. Please bring current student identification to the workshop.

We are pleased to welcome back participants from our previous workshops at a special discount. For fastest verification, please sign up with the email address you used registering for the earlier course.

In either case, the workshop fee includes all course materials, coffee breaks, and lunch each day. Each registered participant will receive a free 60-day license to The Geochemist's Workbench® 11 Professional version. We will ask you to bring to the course a laptop with the software installed and running.

Fees paid through the Goldschmidt are subject to Conference policies. A registration made with the workshop organizers may be transferred to another participant at no charge, and is fully refundable until 30 days before the workshop. In either case, liability in the event of workshop cancellation or other eventuality is limited to refund of the registration fee.

## Travel

Paris is served by [high speed rail](#) lines terminating at [stations](#) within the city, as well as [Charles de Gaulle](#) (also known as Roissy) and [Orly](#) airports. Paris is famous for its mass transport system. Arriving at a train station, you can transfer to a [rapid bus](#) or the [Métro](#) and [RER](#) subways to conveniently reach a stop near your destination.

From Charles de Gaulle airport, the navette [Direct Bus line 2](#) takes you directly to Gare de Neuilly and the workshop venue at le Palais des Congrès in about 40 minutes. Alternatively, the [RER "B"](#) train takes you to the expansive [Châtelet Station](#) in central Paris, from which you can transfer to Métro or RER to reach any location in the city within about an hour. From Orly, the [RER "C"](#) train takes you without transfer to Gare de Neuilly in 50 minutes.

## Accommodations

A great many [hotels and apartments](#) are available to book in the vicinity of the workshop venue. In addition, the nearby [Porte Maillot Métro](#) and the [Gare de Neuilly RER](#) Stations are conveniently accessible from a large area of Paris.

The Goldschmidt 2017 organisers maintain a page of [suggested lodging](#) near the Conference venue.

## Environment and safety

Upon registration, you will be asked to provide an emergency contact name and telephone number, in the unlikely event of illness or accident, as well as list any special dietary requirements or medical needs.

Paris is a relatively safe city, but no stranger to petty theft and property crime. Visitors everywhere should [take precautions](#) to protect themselves and their belongings, such as closely securing wallets and purses, being alert to [pickpocket cons](#), and walking with a companion.

## Hosts and sponsors

The workshop is being held thanks to the generous efforts of our [hosts and sponsors](#):

