

## How to Apply

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See [www.isnature.org](http://www.isnature.org) for information. Application materials, along with a tentative schedule, are now online.

Also see website for schedule and photos from 2008.

Initial application deadline: Monday, February 23 for \$50 discount off tuition.

Final application deadline: Monday, March 16.

Application results announced by March 31.

## Some of Your Tutors

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Bernhardt Trout

Professor in the Department of Chemical Engineering at MIT, where he was an undergraduate before earning his Ph.D. from UC Berkeley in 1996.



Michael Augros

Philosopher of science who teaches at the Center for Higher Studies in Thornwood, New York; has written on Euclid's 5<sup>th</sup> postulate & the natural science that claims physics as a subset.



Lee Perlman

A graduate of St. John's, Annapolis, earned an M.A. in political philosophy at Georgetown, and his Ph.D. from MIT. Has taught 14 years in the Experimental Study Group at MIT.

## Ask the Tough Questions

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- Since all things are composed of atoms, hasn't Aristotle been resoundingly defeated in his old argument with the atomists?
- Newtonian physics and modern cosmology fundamentally contradict Aristotle's "appetitive physics" and the scholastic dictum that "all that moves is moved by another," don't they? What value is left in the outmoded "physics" of Aristotle?
- Living things are built of "living atoms" (cells) and their development and operations directed by "genetic program"; what's left for the anti-mechanistic notions of "formal cause" and "final cause" to explain?

The Institute for the Study of Nature invites you to join us in a Summer Seminar the week of June 15<sup>th</sup>, 2009 on the campus of MIT to begin considering these questions with the care they deserve.



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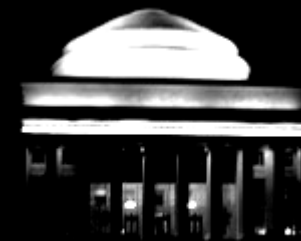
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ISN SUMMER SEMINAR

Institute for the Study of Nature



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Summer Seminar  
2009

June 15-19, 2009



The 2008 seminar, held in building 1.

## “Reduction, Emergence, and Essence”

is the theme for the 2009 Institute for the Study of Nature Summer Seminar.

### What

Four days of study and dialog to explore questions of science, natural philosophy, and their intersection: the efficacy of reduction, the appeal of emergence, and the necessity of postulating essences. The course spans from the beginnings of science in the ancient Greeks, through the early moderns like Descartes and Newton to more recent modern results that have signaled a rebirth of interest in the notion of emergence.

In order to maximize the value of the week, students will be expected to read and assimilate approximately 250 pages of materials from scientific, philosophical sources, both modern and classical in the months leading up to the Summer Seminar. Those readings will be available on our website by March 1, 2009. Careful reading of the materials in advance will vastly increase the value and quality of the Seminar for all concerned.

### Who

Approximately 20-40 graduate and advanced undergraduate students currently studying within a modern scientific discipline or related fields. Post-docs and young (at heart) scientists are also welcome. Applications from students in other disciplines with a deep interest in science, history and philosophy of science, and/or natural philosophy will be seriously considered.

### Tutors

ISN Fellows Michael Augros, Lee Perlman, Joseph Audie, James Barham, John Keck, Mark Ryland, and Bernhardt Trout, as well as James Navarro; other lecturers and guest speakers TBA.

### When

The Summer Seminar begins on Monday afternoon, June 15<sup>th</sup>, at 3:00pm, and ends on Friday afternoon at 3:30 pm. Students are encouraged to stay and participate in the Summer Conference, which will bring together a number of scientists and philosophers around a theme related to the Seminar. The Conference begins Friday afternoon and ends Saturday evening, and the Seminar board fee covers food through Saturday.

### Where

The Massachusetts Institute of Technology, Cambridge, Massachusetts

### How

The fee for the Summer Seminar and Conference is \$200. Board will cost \$175 and includes lunch and dinner for the week and at least one special group dinner at a nearby restaurant. Room rates are set by MIT and have not yet been posted. They are expected to approximate last year's



ISN Summer Fellows walking back after lunch.



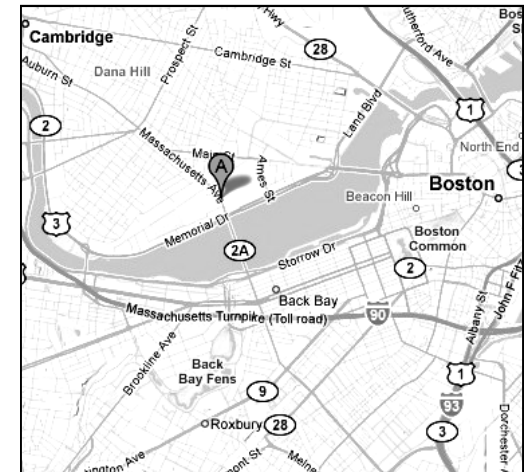
Summer Fellows discuss over dinner.

rates, which means six nights in a single room will cost about \$336, and in a double about \$234.

The fee and room and board costs can be reduced or waived on show of need. Students are expected to cover their own travel expenses, but exceptions will be considered on a case-by-case basis. Additionally, there are...

### Scholarships

Three competitive Honor Scholarships will be awarded that cover full tuition, room, and board. See website for requirements.



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