

MARCH-APRIL 2019

VOLUME 2 ISSUE 3-4

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***Steering Committee
Of the Natural Science/
Mathematics-Astronomy Section***

John Barnes

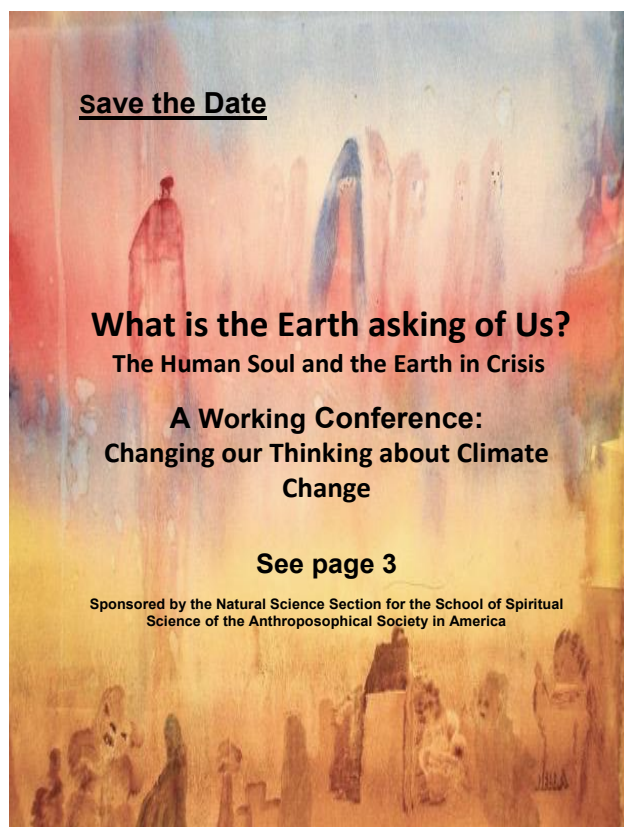
Judith Erb

Jennifer Greene (Representative to Collegium)

Barry Lia (Editor; Treasurer)

Andrew Linnell (Webmaster)

Gopi Krishna Vijaya



Editor's Note

The main purpose of this “March-April” issue is for calendar announcements of interest, including our Save-the-Date announcement for our 2019 Conference and Section Meeting. Johannes Kühl, Section leader at the Goetheanum, has agreed to attend. The content of the conference is still being formed. Some background reading is found in the Notes section. Note also the current speaking engagements of Nicanor Perlas (p.10).

Our Notes and Commentary section is meant to come from you, our readers, reflecting upon what you are encountering in science and technology. This is your opportunity to share a note on an article or a scientific paper you’ve just read, or a commentary on something that struck you in a book you are reading. This newsletter is intended for *reader participation*.

Don’t forget the availability of the video archive of each evening’s lecture for those who could not attend the “Bridging” conference with Prof. Dr. Heusser in November (see p.11). We are still hoping conference attendees and others will use these as a basis for talks or workshops in schools and Branches.

The *Correspondence* welcomes pilot research reports, comments on current scientific research and news, book and article reviews, letters from readers, reports on meetings and workshops, and announcements. There will be editorial review. **For submissions**, click [here](#).

We look forward to hearing from you. Please send **feedback** [here](#).

Barry Lia, Ph.D.
Correspondence Editor

Please Support Our Work

We ask that you please consider making a financial contribution in support of our mission to bring a discerning and unique perspective on developments in science and technology into today’s culture.

Furthering the epistemological foundation of anthroposophy is not only a matter of scientific method. It is important to know that there *is* a scientific basis for a monistic science of spirit/matter and to know *what* that basis is. This is important for *all* of us working with anthroposophy to further our culture today, be we teachers, farmers, doctors, therapists, artists, entrepreneurs, or anyone seeking to heal the contemporary worldview.

The video archive of Dr. Heusser’s public lectures presenting this theme will be a great aid to organize workshops across the country, reaching the broader audience that should take interest in these matters.

With these videos, together with the inauguration of the *Correspondence*, we have made a substantial advance in our outreach capability. We ask you to consider furthering this work financially.

Your donation *of any amount* will help us better serve the Society.


(It is possible to set up recurring monthly donations.)

To donate, click [here](#).

Or mail check payable to “Natural Science Section” in care of our Treasurer, Barry Lia at:
Anthroposophical Society in America, 1923 Geddes Ave, Ann Arbor, MI 48104

Thank you kindly for your consideration.

For a copy of our Case for Support, contact Jennifer Greene: jgreene@waterresearch.org.



Conference Announcement - Save the Date

**Nov. 13 -17, 2019,
Rudolf Steiner House,
Ann Arbor,
MI.**

What is the Earth asking of Us?

The Human Soul and the Earth in Crisis

**A Working Conference:
Changing our Thinking about Climate Change**

**Registration, Meals and Housing: Forms and information available
June 1st at <http://www.naturalsciencesection.org>**

**Call for Participation: Possible presenters may send a description related
to the conference theme by June 1, 2019 to juditherb@comcast.net
Acceptance notifications will be sent by July 8.**

Questions: Judith Erb, 734-730-8429, email juditherb@comcast.net

**Sponsored by the Natural Science Section for the School of Spiritual
Science of the Anthroposophical Society in America**

**Planning: John Barnes, Judith Erb, Jennifer Greene,
Barry Lia, Andrew Linnell, Gopi Vijaya.**

Notes and Commentary

We are pleased to announce that Johannes Kuehl, leader of the NSS, will be joining us for our conference.

Note:

—Barry Lia

In our weekly conference calls, we have been discussing the following books as background reading in preparation for our upcoming Section Conference in November:

Climate—A New Story, Charles Eisenstein (2018, North Atlantic Books)

Eco-Alchemy: Anthroposophy and the History and Future of Environmentalism, Dan McKanan (2018, University of California Press)

The Systems View of Life: A Unifying Vision, Fritjof Capra and Pier Luigi Luisi (2014, Cambridge University Press)

Coming Back to Life, Joanna Macy and Molly Brown (2014, New Society Publishers)

Inner Experiences of Evolution, Rudolf Steiner (2009, Rudolf Steiner Press, CW132)

Life of the Human Soul and its Relation to World Evolution, Rudolf Steiner (2016, Rudolf Steiner Press, CW212)

In the Shadow of the Machine: The Prehistory of the Computer and the Evolution of Consciousness, Jeremy Naydler (2018, Temple Lodge)

Humanity's Last Stand: The Challenge of Artificial Intelligence; A Spiritual-Scientific Response, Nicanor Perlas (2018, Temple Lodge)

The Mutual Evolution of Earth and Humanity: Sketch of a Geology and Paleontology of the Living Earth, Dankmar Bosse (2019, Lindesfarne Books)

Note:

—Barry Lia

Gopi Vijaya's paper, "Original form of Kepler's Third Law and its misapplication in Propositions XXXII-XXXVII in Newton's *Principia* (Book I)," has been published in *Heliyon* 5:e01274 (2019).

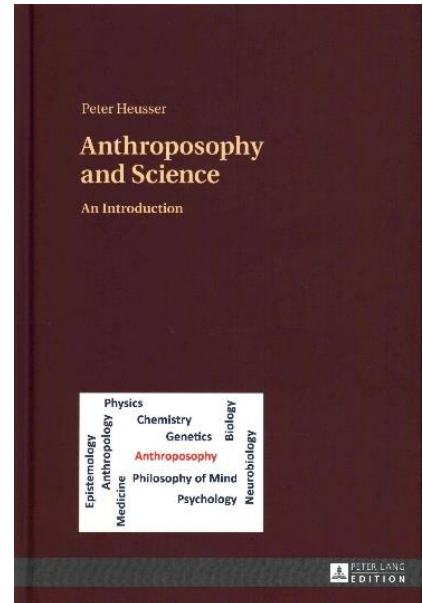
Abstract: The original form of Kepler's Third Law contains a caveat regarding the requirement of small eccentricities—a fact that has not been incorporated by the traditional Newtonian derivations. This constraint is analyzed, and a reclarification of the real meaning of "mean distance" in the law is provided, by following up the indications given by Kepler in the *Harmonices Mundi*. It is shown that the modified expression for the "mean distance" not only clears up conceptual difficulties, but also removes a discrepancy found by Kepler for Mercury. Based on this re-evaluation, the result of ignoring the small-eccentricity constraint is analyzed in the Propositions XXXII-XXXVII in the *Principia*. It is seen that there are several conceptual and mathematical mistakes that are inevitable with the Newtonian form of Kepler's Third Law.

<https://www.heliyon.com/article/e01274/pdf>

Video archive of Prof. Dr. Peter Heusser's Public Lectures



BRIDGING NATURAL SCIENCE AND SPIRITUAL SCIENCE



We wish that more of you readers could have joined us for the “Bridging Natural Science and Spiritual Science” conference in Spring Valley in early November 2018.

However, you can now view Prof. Dr. Heusser’s Public Lectures archived on our website.

These four lectures stand as a summary of his book, *Anthroposophy and Science: An Introduction*, and will hopefully serve as the basis of regional workshops continuing this work to promote an understanding of Rudolf Steiner’s epistemology on a modern, scientific basis.

Lecture 1: ***Is there a place for the spirit in physics and chemistry?***
– ***On the importance of epistemology for natural science.***

Lecture 2: ***Is there a chemical or genetic explanation of life?***
– ***A closer look on causality and agency in modern biology.***

Lecture 3: ***Does the brain cause consciousness?***
– ***A way out of neurobiology’s current doctrine.***

Lecture 4: ***From natural science to spiritual science.***
– ***Rudolf Steiner’s contribution to the evolution of science.***

Click [here](#) to register for video access.

Announcement

Goethean Science Geology Conference

July 18-21, 2019
College Park, MD



How did the geology we see all around us form?

Natural Science - Phenomenological Science - Spiritual Science

**Location: Christian Community Parish House, 4221 Metzerott Rd,
 College Park, Md 20740 (Next to the University of Maryland)**

For geology professionals or those who feel geology as an avocation; but also those newer to geology are welcome (with some small ground rules)

***Pre-Conference field trip** by the DC metro-subway to the Smithsonian's Natural History Museum to see the geology/gem/mineral collection and the long-awaited Natural History paleontology exhibition newly opened! (Smithsonian Museums on the National Mall are free of charge)

***Departing Thursday July 18 at 8:00am** from 4221 Metzerott Rd College Park, Md

Conference Schedule Plan

Thursday July 18

5:00pm Welcome! Meet and Greet and check-in

5:45pm Conference Opening with verse from Goethe

5:50pm Orientation and housekeeping details for the Geology Conference

6:05pm Geologist Frank Fawcett Presentation on his translation of Dankmar Bosse's Natural History book into English from German. Dankmar Bosse is a remarkable Goethean Scientist dwelling in Berlin Germany who brings together Natural Science and Spiritual Science regarding the evolution of earth and humans.

6:50pm Geologist Jonathan Swan Presentation on the what? the how? the why? the who? of Goethean Science (i.e. Phenomenological Science)

7:30pm Guided discussion asking geology attendees about their approach to Goethean Science

8:00pm Open conversation among those with a geology background and welcomed observers

8:55pm Close with a verse from Steiner

Friday July 19

8:00am Biodynamic coffee and conversation

8:30 *Opening* verse from Goethe

8:40 Some small movement exercise for participants

8:55 Sculpting using Cretaceous creek clay; group attempts a sculpture of Coastal Plain-Piedmont-Blue Ridge-Ridge & Valley-Appalachian Plateau

9:30 Geologist *Jonathan Swan Presentation* on Piedmont-Coastal Plain Fall-line geology

10:10 Snack

10:30 Field Trip by car to The Falls of the Anacostia Watershed and then to the Great Falls of the Potomac Watershed (small entrance fee for a car); bring lunch, dinner, and gear; *(optional geology hike possible at Great Falls of the Potomac River)*

6:30-7:45 Return to the Geology Conference location

8:00 Review the geology seen on the field trip that day -Living with the question- ***How did the geology we observed form?***

9:00 *Closing* verse from Steiner

Saturday July 20

8:00am Biodynamic coffee, questions, conversation

8:30am *Opening* verse from Goethe

8:40am Some small movement exercise

8:55am Clay sculpture using Cretaceous clay and other natural materials continues modeling Maryland's & Virginia's Physiographic Provinces

9:30am *Michael Judge Presentation* on Maryland Mesozoic Cretaceous exposures

10:15am Field Trip to close by Paint Branch Creek and the Cretaceous exposures (110 mya)

11:30am Field Trip by car to Cretaceous iron ore siderite-dinosaur exposure (110 mya) at Muirkirk, Md; Bring lunch and gear; *Option of visiting a moon rock at nearby Goddard Space Flight Center - ***How did the moon form?***

6:00-8:00 Dinner on your own (many nearby options)

8:00 Review of the geology of the day -Living with the question -***How did this geology we have observed form?***

9:00 Reviewing the Geology Conference and thinking about future geology work

9:30 *Close Conference* with verse from Steiner

Sunday July 21 *Optional Field trip to Southern Maryland in the afternoon to see Miocene geology and possibly the Tertiary-Cretaceous boundary

****Cost for Geology Conference \$50 (pay upon arrival at the Conference)***

****Scholarships are available for those who need it; contact: [mjudge2000 at gmail.com](mailto:mjudge2000@gmail.com)***

****Let us know if you wish to come for a portion of the Conference, which can then be pro-rated***

****You can let us know your lodging and meal needs, as we have recommendations and options***

****It helps to let us know if you plan to come***

Contact: [mjudge2000 at gmail.com](mailto:mjudge2000@gmail.com)

MYSTECH ANNUAL CONFERENCE 2019, ANN ARBOR, MI. AUGUST 8-11.

Registration will open soon. Save the dates!



The Future of the Human with the Mechanical 2019 MysTech Conference

Thursday, August 8th through Sunday, August 11th, 2019
Rudolf Steiner House, 1923 Geddes Ave. Ann Arbor, MI.

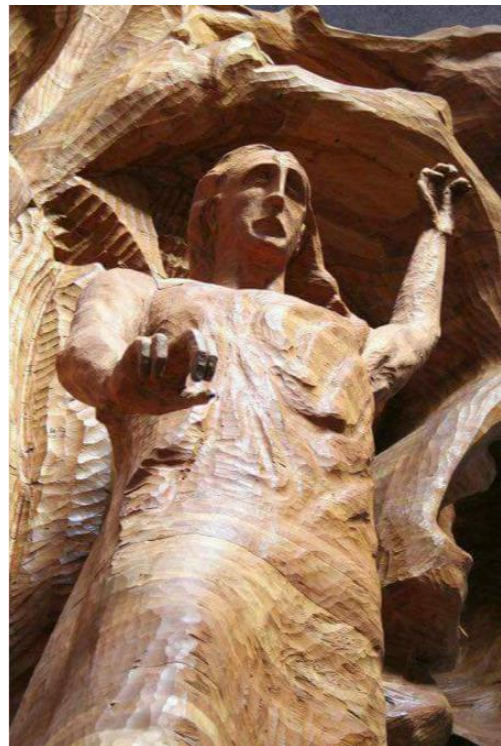
Here is the tentative schedule:

THURSDAY Aug. 8th Noon–9:00 PM

- 11 am Arrivals, registration Rudolf Steiner House
- 12:30 Lunch together
- 1:30 Welcome and Introduction Andrew Linnell
- 2:30 The Power of Our Will to Build Spiritual Forces Caite & Lynn
- 3:00 Hands, Heart, and Head – Etheric Emanations Marc Katchen
- 4:00 Break
- 4:30 World Café: Children & Screen-time: Counter-balances All
- 5:30 Dinner together
- 7:30-9:00 MysTech Music Night: Judith Erb

FRIDAY Aug. 9th 7:30 AM–9:00 PM

- 7:30 Morning Eurythmy Lynn Stull
- 8:30 Breakfast together
- 9:30 Morning Group Work (Electricity and Evil) Doug Smith
- 10:30 Break
- 11:00 The Power of Our Will to Build Spiritual Forces Caite & Lynn
- 11:30 Main Lesson (TBA) Gopi Krishna Vijaya
- 12:30 Lunch together
- 1:30 Walk – Outdoor Exercise Participants
- 2:30 Preparing for Moral Work for the MysTech Future Kay Back
- 3:30 Discussion: MysTech's Moral Work Participants
- 4:00 Break
- 4:30 World Café: 5G and Wireless Challenges Participants
- 5:30 Dinner together
- 7:30-9:00 Preparing Today with Enthusiasm for a Grim Future (public lecture in RSH Conf Room) Andrew Linnell



SATURDAY Aug. 10th 7:30 AM–9:00 PM

7:30 Morning Eurythmy Lynn Stull

8:30 Breakfast together

9:30 Morning Group Work (Meditations for MysTech) TBD

10:30 Break

11:00 The Power of Our Will to Build Spiritual Forces Caite & Lynn

11:30 Walk – Outdoor Exercise Participants

12:30 Lunch together

1:30 Perception of Spiritual Entities in Technology Are Thoresen

3:00 Break

3:30 Member Workshop (Threefold and MysTech) TBD

4:30 Initiatives, Finding Colleagues – Who, What Participants

5:30 Dinner together

7:30-9:00 TBD (RSH Conf Room) All

SUNDAY Aug. 11th 7:30 AM–12:00 PM

7:30 Morning Eurythmy Lynn Stull

8:30 Breakfast together

9:30 Recap of the conference Participants

10:30 Thoughts on our next conference Participants

10:50 Closing All

11:00 Break

11:30 MysTech Planning Meeting Volunteers

12:00 Lunch and departure



HONOUR

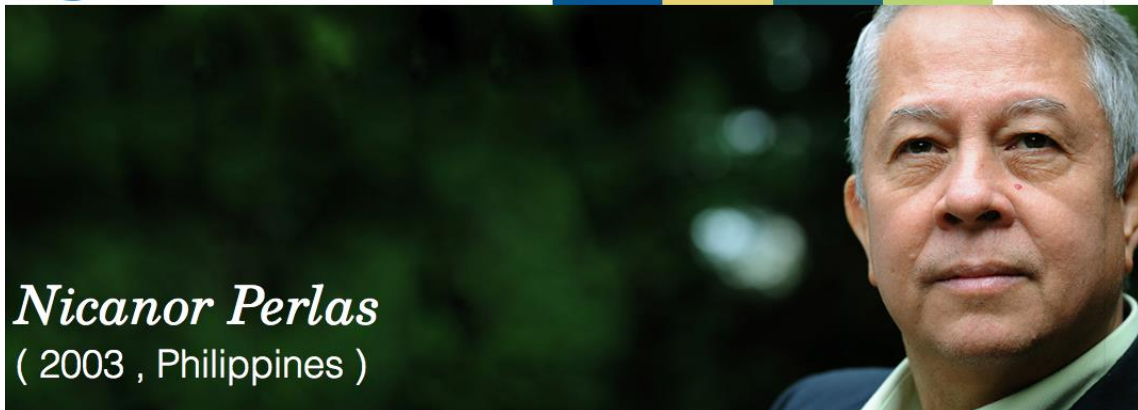
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Nicanor Perlas
(2003 , Philippines)

Speaking Engagements of Nicanor Perlas USA and Canada, June and July 2019

Date: 4 June, Tuesday

Place: Museum of Art and History, Santa Cruz, California

Event: Evening Lecture, 7:30pm

Theme: *Humanity's Last Stand*

Organizer: Santa Cruz Anthroposophical Branch

Contact: John Baring, jfb@usbaring.com

Date: 6 June, Thursday

Place: UC Santa Cruz, Kresge College Seminar Room

Event: Evening Lecture, 7pm

Theme: *Humanizing Artificial Intelligence; Using Cultural Power, Governance & Business to Address the Challenges of Our Times*

Organizer: Right Livelihood College, University of California, Santa Cruz

Contact: David Shaw, daveshaw@ucsc.edu

Date: 8 June, Saturday

Place: Seattle, Washington

Event: Evening Lecture

Theme: *Post-Materialist Science: Its Role in Defending, Upgrading, and Nurturing Humanity in the Turbulent Era of Artificial Intelligence*

Organizer: Center for Anthroposophical Endeavors, Mystech, and the Seattle Branch of the Anthroposophical Society in America

Contact: Frank Dauenhauer, Frank@cfae.us

Date: 9 June, Sunday

Place: Seattle, Washington

Event: Workshop with Dr. Gopi Krishna, whole day

Theme: *Post-Materialist Science: Its Role in Defending, Upgrading, and Nurturing Humanity in the Turbulent Era of Artificial Intelligence*

Organizer: Center for Anthroposophical Endeavors, Mystech, and the Seattle Branch of the Anthroposophical Society in America

Contact: Frank Dauenhauer, Frank@cfae.us

Date: 14 June, Friday

Place: Ann Arbor, Michigan

Event: Evening Lecture, 7:30pm

Theme: *Humanity's Last Stand*

Organizer: Great Lakes Branch, Anthroposophical Society in America

Contact: Ted Roszell, croszell@protonmail.com

Date: 15 June, Saturday

Place: Ann Arbor, Michigan

Event: Workshop, Whole Day

Theme: *Humanity's Last Stand*

Organizer: Great Lakes Branch, Anthroposophical Society in America

Contact: Ted Roszell, croszell@protonmail.com

Date: 18 June, Tuesday

Place: Boston, Massachusetts

Event: Evening Lecture

Theme: *Humanity's Last Stand*

Organizer: Anthroposophical Society in Greater Boston

Contact: Andrew Linnell, UMinventor@protonmail.com

Date: 21 June, Friday

Place: Harlemville, New York

Event: Evening Lecture, 7pm

Theme: *The Emerging Spirit-Oriented Scientific Revolution*

Organizer: Hawthorne Valley Center for Social Research

Contact: Gary Lamb, garyleelamb@protonmail.com

Date: 22 June, Saturday

Place: Harlemville, New York

Event: Morning Workshop, 8:45am to 12:30pm

Theme: *Humanity's Last Stand: The Challenge of Artificial Intelligence. A Spiritual-Scientific Response.*

Organizer: Hawthorne Valley Center for Social Research

Contact: Gary Lamb, garyleelamb@protonmail.com

Date: 22 June, Saturday

Place: Threefold Auditorium, 260 Hungry Hollow Rd., Chestnut Ridge, NY

Event: Evening Lecture, 7.30pm

Theme: *Upgrading Humanity: Defending and Nurturing the Truly Human in the Age of Artificial Intelligence. Can We Make It?*

Organizer: Threefold Educational Center

Contact: Thomas O Keefe, deepening@use.startmail.com

Registration: http://www.threefold.org/events/index.aspx#nicanor_perlas

Date: 23 June, Sunday

Place: Threefold Auditorium, 260 Hungry Hollow Rd., Chestnut Ridge, NY

Event: Workshop, 9am – 3:30pm

Theme: *Upgrading Humanity: Defending and Nurturing the Truly Human in the Age of Artificial Intelligence. Can We Make It?*

Organizer: Threefold Education Center

Contact: Thomas O Keefe, deepening@use.startmail.com

Registration: http://www.threefold.org/events/index.aspx#nicanor_perlas

Date: 26 June, Wednesday

Place: Thornville, Toronto, Canada

Event: Evening Lecture

Theme: *Artificial Intelligence and the Challenge to Human Survival*

Organizer: The Rudolf Steiner Centre Toronto, the Thornhill Group of the Anthroposophical Society in Canada and the Money for a Better World Group

Contact: Richard Chomko, rchomko@protonmail.com

Date: 27 June, Thursday

Place: Thornville, Toronto, Canada

Event: Evening Lecture

Theme: *Societal Threefolding in the Era of Artificial Intelligence*

Organizer: The Rudolf Steiner Centre Toronto, the Thornhill Group of the Anthroposophical Society in Canada and the Money for a Better World Group

Contact: Richard Chomko, rchomko@protonmail.com

Date: 29 June, Saturday

Place: Vancouver, Canada

Event: Evening Lecture

Theme: *Being Human in the Age of Artificial Intelligence*

Organizer: Anthroposophical Society in Canada

Contact: Anthony Perzel, ajperzel@protonmail.com

Date: 30 June, Sunday

Place: Vancouver, Canada

Event: Workshop, whole day

Theme: *Humanity's Last Stand*

Organizer: Anthroposophical Society in Canada

Contact: Anthony Perzel, ajperzel@protonmail.com

Date: 8–12 July, Monday to Friday

Place: UC Santa Cruz, Kresge College Seminar Room

Event: One-Week Course

Theme: *Humanizing Artificial Intelligence; Using Cultural Power, Governance & Business to Address the Challenges of Our Times*

Organizer: Right Livelihood College, Right Livelihood Summer Institute, Santa Cruz Institute for Social Transformation, University of California, Santa Cruz

Contact: David Shaw, daveshaw@ucsc.edu

Date: 16 July, Tuesday

Place: Sebastopol, California

Event: Evening Lecture

Theme: *Humanity's Last Stand*

Organizer: Language of the Heart Branch, Anthroposophical Society in America

Contact: Ed Castellini, edgarcastellini@comcast.net

Calendar of Events

2019

- June 14-15, 2019: **Looking for Hope in Difficult Times: Facing Ourselves and Re-Imagining America**, Talk and Workshop with Christopher Schaefer on his forthcoming book of the same title (Nature Institute, Ghent, NY)
<http://natureinstitute.org/calendar/index.htm>
- June 2019-July 2020: **Encountering Nature and the Nature of Things: Foundation Course in Goethean Science**, a year-long, low-residency program (Nature Institute, Ghent, NY)
<http://natureinstitute.org/calendar/index.htm>
- June 21-23, 2019: **Best Practices Mistletoe Course** (Baltimore, MD) This course is open to licensed MD's, DO's, ND's, NP's and PA's.
<https://paam.wildapricot.org/event-3217985>
- July 18-21, 2019: **Goethean Science Geology Conference 2019** (College Park, MD) [see p.6]
[email: mjudge2000 at gmail.com](mailto:mjudge2000@gmail.com)
- July 28-August 4, 2019: **Working with the Living Aspect of Experience**, Michael D'Aleo (Keene Valley, NY)
<http://www.sensri.org/events.html>
- August 8-11, 2019: **2019 MysTech Conference: The Future of the Human and the Mechanical**, (Rudolf Steiner House, Ann Arbor, MI)
[mailto:jandrewlinnell at gmail.com](mailto:jandrewlinnell@gmail.com)
- November 13-17, 2019: **2019 Natural Science Section Conference: What is the Earth Asking of Us? The Human Soul and the Earth in Crisis** (Rudolf Steiner House, Ann Arbor, MI)
<https://www.naturalsciencesection.org/conferences/>



Natural Science Section

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Mathematics-Astronomy Section

mas.goetheanum.org/en/mas/

School for Spiritual Science

Anthroposophical Society in America

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Disclaimer: The opinions expressed are the authors' own and do not necessarily reflect the views of the editor or members of the Natural Science Section of the Anthroposophical Society in America.