



Natural Science Section at the Goetheanum

Evolving Science 2018

October 3–7

Ways to the spirit in nature

- in the idea
- through symbolising
- on the path to the threshold

Goetheanum

Dear Friends of the Natural Science Section

We would like to invite you to our International Conference «Evolving Science 2018». The conference theme will be:

Evolving Science 2018

Ways to the spirit in nature

- in the idea
- through symbolising
- on the path to the threshold

In the idea: In coming to knowledge, man connects the spiritual in the world with the world of the senses. Through thinking he enters the spiritual realm and in the oscillation between observing and thinking he comes closer and closer to insights which reunite inner and outer experience: «The awareness of the idea in reality is the true communion of man.» (Rudolf Steiner, GA 1) This process is related to the motif of «spirit-remembering» in the first stanza of the Foundation Stone Meditation.

Through symbolizing: A rhythmic shift of attention between sensory observation and inner experiencing can be developed into an inner training in the natural world, fostering a deeper experience of one's own soul in its relation to the «soul-essence» of the world. The soul «will first become aware of this, the delicate but meaningful threads which exist, connecting it and the world into which it is born.» (Rudolf Steiner, preface to the Soul Calendar, 1918). This process can be enhanced through the practice of symbolizing, as indicated in the lectures of October 2nd and 3rd 1920 (GA 322). Various colleagues have attempted this in different ways, using different methods. Thus, a connection between these practices and the motif of «spirit-contemplation» in the second stanza of the Foundation Stone Meditation can be brought to light.

On the path to the threshold: On the path of inner training as it is sought in Anthroposophy, one repeatedly encounters the indication that the sense world becomes – or must become – dark if one wants to progress, and that, conversely, the sense world darkens the spiritual world: «Where sense-knowledge ends, / only there is the gate, / the realities of life / opened to the soul-life» (Rudolf Steiner, May 22,

1915, GA 272). How does this motif relate to a scientific training that deepens the relationship to the sensory world? Here it is worthwhile to seek a relation to “spirit-beholding” in the third stanza of the Foundation Stone Meditation.

With this sketch, we suggest that we might look at different working directions in anthroposophically oriented science with an awareness that different approaches are not only possible but valid. During the three days of our conference, we would like to use these questions or working directions to trace potential paths to the spiritual in nature and see if we can bring into view a common foundation of Goetheanism. The relationship to the Foundation Stone Meditation – a working theme of the Anthroposophical Society in current years, as we approach the 100th anniversary of the Christmas Foundation Conference – offers a fruitful addition to such work.

The following keynote speakers confirmed their participation:

Torsten Arncken (CH), Judyth Sassoon (UK), Martin Basfeld (DE), Konrad Urech (CH), Johannes Kühl (CH), Kees Veenman (NL), Matthias Rang (CH)

As we did during «Evolving Science 2015» we will offer a platform for **research presentations** where participants will have the opportunity to report on their current work. Please register online until August 15, 2018:

www.forschungsinstitut.ch/en/conferences-colloquia/evolving-science-2018/research-presentations/

Updates can be found on our homepage: www.science.goetheanum.org

If participation is not possible for financial reasons, please do not hesitate to contact us: science@goetheanum.ch

Johannes Kühl with the team of the Science Section in Dornach

(subject to change)

Keynotes

(with translation de/en)

Matthias Rang | Physicist, studied in Freiburg and Berlin, and was a guest scientist at the University of Washington in Seattle. In 2015, PhD on a phenomenological approach to complementary spectra. Since 2007 a member of the scientific staff of the Research Institute at the Goetheanum.

“General Observations, Looking Inward” and Goethe’s Color Circle (de)

Goethean Science is an empirical science: phenomena in the external world are observed, conditions are changed and studied. On the other hand Goethe emphasized that no direct conclusions are possible from all these observations. Instead it seems obvious that he was looking for an extension of the empirical method as a sort of “higher experience in the experience”.

Konrad Urech | Studied biology at ETH Zürich. PhD on plant physiology in 1979. Since then, research on Mistletoe at Hiscia Institute of the Verein für Krebsforschung (association for cancer research) in Arlesheim, in context of botany, pharmacology and pharmacy. Work is connected to new treatments in anthroposophical oncology.

Pathways Towards an Understanding of the Mistletoe Healing Plant (Viscum album L.) (de)

Mistletoe displays a wide spectrum of phenomena. Learning to understand these as an expression of something essential requires dedicated inner and outer work with the plant. Some essential steps on this path of mistletoe research will be discussed in this contribution.

Judyth Sassoon | Associate Researcher at Bristol University and the Ruskin Mill Field Centre. Studies the evolution of secondarily aquatic tetrapod animals and runs lectures and courses in Goethean science. Also teaches in international training programmes for Waldorf Upper School science teachers.

Is there an Archetypal Semiosis in Living Organisms? (en)

Do universal signs and gestures exist in nature in their own right? Do they hold intrinsic meaning and is it possible for the human mind to grasp that meaning? In this lecture I will explore these questions from the perspective of animal development and evolution, using extinct and extant vertebrates as examples.

5. Goethes “Typus”-Idee und das Kompensationsprinzip | *Manfrid Gädeke (de)*

Anhand verschiedener Phänomenzusammenhänge im Tier- und Pflanzenreich wollen wir uns die Fruchtbarkeit wesentlicher Goethe'scher Ideen zur Morphologie vergegenwärtigen. Ziel soll insbesondere ein Verständnis der “Typus”-Idee unter Mitberücksichtigung der Idee eines abgemessenen “Etats des Bildungstriebes” sein.

6. Exploring the Vortex in Phenomena and Idea | *Simon Charter (en)*

Can we relate the torroidal ring vortex to the spiral vortex? Is there a single flexible idea to be seen in the forming of laminar harmonic flow? Could this help us relate this to the forming of living organisms and to potentisation techniques? We will create and observe these wonderful movements in water – as well as the Karman vortex street and the half ring vortex.

7. Steps Towards Discovering the Intrinsic Qualities of Water | *Jennifer Greene (en)*

The earliest examples of qualitative science can be found in the “native science” of indigenous peoples. The native science of American Indigenous Peoples has a close kinship with Goethean Science. We will give indications in this direction through examples. The approach toward understanding water will be further explored as if “The Philosophy of Freedom Matters”.

8. Wasserphänomene im Grenzbereich des Sinnlich – Nichtsinnlichen | *Eva Wohleben & Manfred Schleyer (de)*

In Experimenten, Übungen, Verkostungen: Möglichkeiten eines Zugangs.

9. Conversation about Work and Future of the Natural Science Section | *Johannes Kühl & Kees Veenman (de or en)*

We would like to facilitate the possibility of sharing work, hopes and worries around the work of the section with anyone who is interested and actual coworkers.

10. Die Ätherarten aus Sicht der Bildekräfteforschung | *Markus Buchmann & Ute Söffker-Ziolkowski (de)*

Die vier Ätherarten bilden einen wesentlichen Teil einer “anthroposophischen” Naturwissenschaft und dienen als Referenzsystem in Physik, Biologie und Medizin. In der Bildekräfteforschung wird versucht, durch eigene “imaginative” Bemühungen zu einem “Wesensbild” zu kommen, das auch gegensätzliche Gesichtspunkte zu integrieren vermag.

Towards Boundaries of Cognition Between Imaginative and Sense Based Awareness (en)

In dreaming the human being lives on the border of sensory and imaginative experience through the supersensible shaping forces of the body. If, on the other hand, one seeks the creative forces in the imagination, developed in the sense world – by learning to live consciously thinking in the imagination, one gets to the same border. Now, however, the experience is carried by the human I and can thus be expanded into an instrument of knowledge.

Working Groups

(no translation)

1. Towards a Goethean Psychology | Graham Kennish (en)

Goethean science has not yet turned its attention to psychology, which is remarkable given that the basis of all Goethean scientific work places the observer's inner experience as central. In this experiential workshop, participants will find a practical tool for engaging more deeply with phenomena, through increased empathy.

2. Comprehending, Imagining, Meditating Nature | Johannes Wirz (de or en)

We will explore the relationship of the bees between visiting flowers and natural comb construction, and deepen our experience with two guided meditations.

3. What is an Innovation? | Ruth Richter & Matthias Rang (de or en)

Every innovation is preceded by the shaping of a concept which reflects its historical context. However, the Genius is an individual who grasps a new context from old settings. In this workshop, we move in the arena where concepts are woven.

4. Chemische Experimente mit den Eisenverwandten Cobalt und Nickel: Beobachtungen, Erkenntnisgrenzen und deren Überwindung | Martin Errenst & Martin Rozumek (de)

Beim Beobachten und Beschreiben von chemischen Experimenten mit den Eisenverwandten Cobalt und Nickel werden wir uns Erkenntnisgrenzen bewusst machen und Wege zu ihrer Überwindung besprechen.

Torsten Arncken | Born in 1962. Working at the Research Institute of the Science Section at the Goetheanum since 1990. Main topic of research is the sensual-supersensual relation between form, development, smell and taste of plants and their effect on human beings.

Symbolizing of Pure Perception as a Scientific Way into Imagination (de)

Through symbolizing pure perception, the consciousness of the scientist dives into the world of imagination and then returns into the world of the senses. In this rhythmic process, the living spirit of nature comes closer to the world of the senses. This scientific method is presented with examples of plants fertilized with metals.

Kees Veenman | Born in 1953 in the Netherlands. Studied physics in Utrecht. Physics teacher at the Waldorf School of Haarlem. Research on the theme of color for thirty years. Coordinator of the Science Section in the Netherlands since 1998.

Threshold Experiences in the Field of Color (en)

Living with the gestures of different color experiments led me to threshold experiences. These brought me to the development of a range of color meditations. The rainbow meditation is an example of such a meditation.

Johannes Kühl | Born 1953 in Hamburg. Studied physics, mathematics and chemistry in Hamburg and Göttingen. 1982–1996 secondary school teacher at Uhlands-höhe Waldorf School in Stuttgart. From 1982 member of the collegium of the Natural Science Section at the Goetheanum, and Leader of this section since 1996. Work on flow physics, mechanics of human locomotion, Goethean optics and colour theory as well as physics education.

Light and Darkness on the Path to the Threshold (de)

Through comparison of outer and inner experiences with light and darkness we can explore how, on the path to the threshold, the relation to the sense world, will at first, become obscured and then renewed with a different quality.

Martin Basfeld | Born in 1956. PhD in physics, followed by research and publications on foundations of Anthroposophy, history of physics, the human I and warmth, the human sense organism, reincarnation and other themes. Waldorf secondary school teacher for six years and fifteen years in teacher training in Mannheim. Independent researcher since 2017. Current main interest: Franz Brentano and Rudolf Steiner.

Schedule Evolving Science 2018: Ways to the spirit in nature ...

Time	Wed. Oct. 3	Thu. Oct. 4	Fri. Oct. 5	Sat. Oct. 6	Sun. Oct. 7	
08:30–09:30			Review of the Previous Day			
09:30–10:45		... in the idea	World Café on the Theme of the Day ... through symbolising	... on the path to the threshold	Research Presentations	
10:45–11:30		COFFEE BREAK				
11:30–12:30		Research Presentations				
12:30–14:30		LUNCH BREAK				
14:30–15:30		Nature Observation as an Artistic Activity				
15:30–16:00		COFFEE BREAK				
16:00–17:15		Working Groups / Professional Meetings				
17:30–18:30		Opening <i>Johannes Kuhl</i>	KEYNOTE II ... through symbolising <i>Judith Sassoon</i>	KEYNOTE III ... on the path to the threshold <i>Kees Veenman</i>	KEYNOTE Towards Boundaries of Cognition <i>Martin Bosfeld</i>	
		KEYNOTE I ... in the idea <i>Matthias Rang</i>				
18:30–20:00	DINNER BREAK					
20:00–21:00	KEYNOTE I ... in the idea <i>Konrad Urech</i>	KEYNOTE II ... through symbolising <i>Tosten Amcken</i>	KEYNOTE III ... on the path to the threshold <i>Johannes Kuhl</i>	Eurythmy Performance «Kokoro»		
21:00–21:30	Interactive Eurythmy					

Booking Form

8ES

EVOLVING SCIENCE 2018

Conference of the Natural Science Section

at the Goetheanum from Wednesday, 3 to Sunday, 7 October 2018

Booking closes: Wednesday 19 September 2018

Please complete the booking form and mail, fax or email to:

Goetheanum Empfang, Postfach, CH-4143 Dornach

Fax + 41 61 706 4446, Tel. + 41 61 706 4444 email tickets@goetheanum.org

Please fill out in block capitals!

☐ Ms ☐ Mr

Name, first name

Billing address ☐ private address ☐ address of institution

if so, name of institution

Street, n°

Town

Postcode

Country

Phone/fax

Email

Occupation

I need translation into ☐ English ☐ German

Conference ticket early bird fees until 15.08.2018

☐ CHF 430 (with sponsorship¹) ☐ CHF 250 (regular price) ☐ CHF 180 (concessions²)

Conference ticket fees from 16.08.2018

☐ CHF 430 (with sponsorship¹) ☐ CHF 320 (regular price) ☐ CHF 230 (concessions²)

Meals (3 lunch, 4 evening meal) ☐ CHF 175

Breakfast (4) ☐ CHF 60

Workshops 1st choice, n° _____ 2nd choice³, n° _____ 3rd choice³, n° _____

Registration for the Artistic Activities and Professional Meetings at the information desk at the beginning of the conference.

Group accommodation (mattresses on the floor)

Please bring a sleeping bag as well as a pillow and a sheet, limited spaces

(4 nights from 3 to 7.10.2018) ☐ CHF 60

Parking at the Goetheanum ☐ Parking permit: CHF 28

Insurance

☐ Cancellation insurance (5% of the total costs, CHF 10 minimum)

See cancellation conditions in the General Information

Payment methods

☐ on invoice (only Switzerland and Euro zone)

Credit card (all countries) ☐ Visa ☐ MasterCard

Card number: ____ / ____ / ____ / ____ Expiry date: ____ / ____

Biannual events magazine (Pdf-Download): www.goetheanum.org/en/events/events-magazine

I agree to the terms of payment and cancellation.

Place, date, signature

¹ Should you be in a position to pay an additional amount, this would help to cover the costs of the conference and support the work of the section.

² Concessions apply for students, schoolchildren, OAPs, the unemployed, those in training, military or civil service and people with disabilities who receive benefits. Proof of status has to be submitted with your booking form. If participation is not possible for financial reasons, please do not hesitate to contact: science@goetheanum.ch

³ When registering, your first choice is no longer open, is cancelled or will be cancelled, your second and third choice will be taken into account. If your first, second or third choice is full, we will try to contact you. Please look for updated information at the start of the conference.

Terms and Conditions will be sent on request or can be accessed online at www.goetheanum.org/6025.html.

General Information

EVOLVING SCIENCE 2018

Conference of the Natural Science Section

at the Goetheanum from Wednesday, 3 to Sunday, 7 October 2018

Booking closes: Wednesday 19 September 2018

Conference fees early bird until 15.08.2018:

with sponsorship ¹ :	CHF 430	with meals:	CHF 605
regular price:	CHF 250	with meals:	CHF 425
concessions ² :	CHF 180	with meals:	CHF 355

Conference fees from 16.08.2018:

with sponsorship ¹ :	CHF 430	with meals:	CHF 605
regular price:	CHF 320	with meals:	CHF 495
concessions ² :	CHF 230	with meals:	CHF 405

Conference meals

Conference meals (vegetarian) include 3 lunch and 4 evening meal at CHF 175 in total. Breakfast (4x) can be booked separately at CHF 60. The other meals cannot be booked separately. We regret that food intolerances cannot be catered for.

Group accommodation

(Booking possibility on the booking form, further information: www.goetheanum.org/6644.html)

Accommodation with mattresses on the floor: 4 nights from 3th October in the evening to 7th October in the morning. Please bring a sleeping bag, a pillow and a sheet; limited spaces.

Parking permit

For the period of the conference: CHF 28 (not right next to the Goetheanum building).

If you have a disability, please display your disability badge in your car.

Methods of payment/confirmation

On receipt of a group application, the respective institution will receive the account for the group. Subsequent bookings can only be applied for and paid on an individual basis.

Credit cards (all countries): The full amount will be charged to your credit card as soon as your booking has been processed. You will receive postal or email confirmation of your booking and payment.

Invoice Switzerland: Confirmation of booking and an invoice will be sent to you once your booking has been processed. Please note that we only send out invoices up until 10 days before the beginning of an event. After that, payment is only possible by credit card or on arrival.

Invoice Eurozone: Confirmation of booking and an invoice will be sent to you once your booking has been processed (Euro account). Please note that we only send out invoices up until 14 days before the beginning of an event. After that, payment is only possible by credit card or on arrival.

Other countries: Once your booking has been processed you will receive a confirmation by post or email. The amount due will either be charged to your credit card or you can pay on arrival. Bank transfers are not possible.

Please note that the conference fee must be paid before the conference starts.

Conference tickets: Tickets can be collected at the Reception until half an hour before the conference starts, also if you pay on arrival. We accept cash (Euro and CHF), VISA, MasterCard, ec-direct and Postcard-Schweiz.

Cancellation: Bookings may be cancelled free of charge up to 14 days prior to the beginning of the conference (19.09.2018, date of posting). After that, 50% of the conference fee will be charged. Meals, breakfast, parking permit and group accommodation may be cancelled free of charge up to 1 day prior to the beginning of the conference (02.10.2018). Cancellation on the day when the conference begins or failure to attend are subject to a 100% invoice total. Substitutes will be accepted at no extra cost.

Cancellation insurance: Subject to a payment of 5% of total costs (CHF 10 minimum) full cancellation insurance can be taken out to cover illness (including dependent children and partner), job loss and force majeure. Please ask for our terms of insurance or visit www.goetheanum.org/6053.html.

Data processing: All data will be electronically recorded and filed and not passed on to any third party.
