

The TOPO BIO (Topological BioDynamics) Seminars

A unified four-part series of theoretical biology and biophysics workshops within 2015 thru 2016

The TOPO BIO Seminars: Coherent Quantum Behaviors in Macroscopic Biomolecular Systems including Mechanisms of Intracellular and Intercellular Communication and Control

Four compact workshops with online participation and presentation, focusing upon:

Foundations and Bases (roots, assumptions, prejudices, presumptions, expectations, as well as the tools and methods as they have evolved over particularly the past century), enabling a new consideration of coherent topological quantum fields and operators and their role in:

- the role of boundaries, surfaces and topological relations in cellular signaling and control
- algebraic models for differentiation of field effects by cell membranes within eukaryotic cells and simpler processes within prokaryotic organisms
- “quantum biology” and coherent quantum field effects in macroscopic, molecular-based systems including field-computing-like molecular-implementation communications
- “molecule as field,” in differentiation to “molecule as point-line object” and the consequences for cellular biology and especially intracellular signaling
- metabolism as function of the continuous measurement of boundary conditions and extra-cellular processing, and models of defects within such, including genetic (de)activation
- consideration of a new basis for embryonic and adult stem cell differentiation protocols as well as for regulation and deregulation of apoptosis and immunomodulation
- implications for a large class of pathogenicity including both common and uncommon diseases of autoimmune, neurological, endocrine and oncological natures, particularly autoimmune disorders and diseases with implications for autoimmune etiologies

These seminars are planned for small groups meeting in “roundtable” and informal formats, with presentations but primarily discussions as the norm, as seminars in the classic sense. The importance of “face to face” and bringing together diverse “roots and leaves” is considered to be of great value. In order to accommodate a diversity, breadth and scope of participation and knowledge exchange within the global scientific community, primarily among but not limited to particular segments of theoretical biology, biophysics, genetics, physics and mathematics, there will be a real-time, on-line programme; this is currently being implemented in order to enable many scientists to not only “attend” but to have opportunities for Q/A and “mini-forum” discussions. This dimension of the Seminar Series is also being extended to provide unique educational and “online lab” project opportunities for students at all levels.

The meetings will take place in suitable facilities and accommodations for onsite meetings of 12 to 18 participants, and in the first three meetings, in close proximity with multiple noteworthy institutions. All teleconferencing technology including equipment has been arranged and will be provided by the conference organizing team.

Dates and Locations (prospective; including start/end partial days (main session is +1 and -1 period):

I. Primus Spring 2015 United States New York City 30.May-7.June (8)	II. Secundus Fall 2015 Switzerland Bern 19-26.September (7)	III. Tertius Winter 2016 Germany Bad Wildbad 23-31.January (8)	IV. Quartus Summer 2016 Scotland Edinburgh 16-24.July (8)
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On the next page are additional remarks regarding suggested thematic questions and issues. The TOPO BIO Seminar Series is one of the four Seminar Series sets managed by the Institute for Innovative Studies.

Organizing and Planning Document (final draft: 1.August.14 version)

I. Primus - Spring 2015

Focus: Theoretical background, foundations, experimental findings and the change in the paradigm about quantum biology and coherent macroscopic quantum effects. Re-examination of theoretical models for and against macroscopic quantum coherence in biology. Re-examination of the fundamental questions of coherent quantum entanglement in macroscopic and living systems. Critical evaluation of experimental methods and techniques in development with special attention to Bose-Einstein condensates at high (biologically-sustainable) temperatures.

II. Secundus - Fall 2015

Focus: *Topos driving kyberos*; models of cellular evolution, differentiation and signaling. Examination of cellular membrane and microtubulin array/network communication models with particular respect to gene activation and deactivation. Examination of biosolitons in experimentation and observation within cross-membrane and intracellular molecular networks.

III. Tertius – Winter 2016

Focus: Disequilibrium in growth and life and death; models of the organism as a whole influencing the parts through its fields; models of dis-ease and wellness = efficiency of the whole unity. Strong focus on autoimmune-type disorders including etiology in light of quantum biology for cytokine irregularities and inflammation imbalances and non-pharmaceutical therapeutics. Discussion of new mathematical models and new experimental techniques including high-temperature (ambient environment) measurement of CQER (coherent quantum entanglement resonance).

IV. Quartus - Summer 2016

Focus: Furthering experimentation based upon theory and refining theory from experiment, using both micro and macro observation and experiment. New directions in medicine, focusing upon diagnostics and therapeutics. Close examination of models of coherent quantum effect resonance and new interpretation of epigenetic cybernetics. Discussion and critique of the potentials for quantum biology in predictive and therapeutic medicine.

Additional Notes:

It is hoped that most of the active participants will have an interest to attend all four of the seminars, but if that is not possible, the internet-based teleconferencing capabilities being set up will offer excellent prospects for participation “in absentia” – particularly for persons who have attended previous seminars or who know other participants well. The cross-cultural, cross-generational educational dimension of the Series cannot be overemphasized.

This Seminar Series is one of four such series. It is expected that some individuals participating in one series will have an interest in either direct or indirect participation in one of more of the other series. The primary organizer of the four Series is the Institute for Innovative Study (instinnovstudy.org), and the primary sponsor is ECOADUNA Foundation (ecoaduna.org), TetraDyn Ltd. (tetradyn.com), KOIN Ltd. (koin.tdy.org) and FORTE Horizons LLC (www.fortehorizons.com).

Presently (July, 2014) the organizing committee is being finalized. It is expected that the process of defining individual participation and topic refinement, firm dates and locations, organization-involvement, and completion of the already-underway securing of funds, will become substantially finalized within the next three months. Persons with interest in becoming directly or indirectly involved in the organizing committee and in assisting with special tasks, as well as for participation, preparation, publications related to one or multiple seminars should make contact by email and then meetings can proceed via phone, Skype or teleconference. Key funding is already firmly in place.

Without question, particularly in these challenging socioeconomic times, all resources for science, especially for theoretical biology and medicine, and for an event of this complexity, require creativity, innovation, determination and persistence. The combination of confirmed private donation pledges, multiple prospective small grants, and a combination of inventive fund-raising plans made by the primary organizers, all together provides a present substantive base to enable making this announcement in confidence of a successful seminar series. The international coming-together-of-diverse-minds is also an extremely important theme. The challenges in theoretical biology and biophysics, new mathematics, and trans-scalar science (e.g., bridging physics, biology and neuroscience) will not happen from solitary individuals or nations. This Seminar Series can be an important catalyst for new ideas and also new practices in our future world in which we all have an important stake.

Principal Contact: Prof. Martin Dudziak, PhD martin@instinnovstudy.org +1 (202) 415-7295, (505) 926-1399 Skype:martindudziak

topobio@instinnovstudy.org or martin@instinnovstudy.org <http://topobio.instinnovstudy.org>