

**Martin Joseph Dudziak PhD**

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**Summary**

Martin Dudziak is an accomplished scientist with background in both theoretical and applied areas of research as well as in development and management of programs and projects in “STEM” disciplines. His principal area of research has been in quantum chaos, quantum relativity and complexity relating to foundational physics and implications within the biological and social sciences. Over a career-span of more than 30 years in academic, public and corporate service, he has initiated and managed wide and diverse set of programs and projects in physics, biophysics, artificial intelligence, biomedical engineering, and particularly in novel interdisciplinary and cross-disciplinary research, application development and management.

Martin is a co-founder of several centers, institutes and companies and many of these have involved international collaborations. As co-founder of The TETRAD Institutes and a corporation, Intelligence Renaissance Industries, he currently serves as a mentor, advisor, consulting scientist and business executive to several teams and companies.

Serving in similar capacities of executive management and as consultant to corporations and institutions in USA, EU, Ukraine, Russia and Asian countries, Martin’s career background is unique in spanning basic research, application and product development. He possesses extensive experience in multinational joint ventures, emerging technologies, and incubator-accelerator partnerships. Martin also has a strong lifelong history of work with non-profit consortium programs that integrate education, research, communications and business development.

In his work Martin has strongly focused upon the challenge of integrating innovative research with practical applications that can demonstrate and produce commercial, social and financial value. Within social, educational and humanitarian domains, Martin has combined “STEM” with corporate responsibility programs and ventures. These have included projects initiated and supported by multinational employers and partners.

Born and raised in USA, Martin completed university programs at Colgate University (BA), Johns Hopkins University (MA), and Union Institute and University (PhD). His doctorate is in theoretical and computational physics and his doctoral degree program at Union incorporated studies and dissertation advisors from Georgia Institute of Technology, University of London, and Oxford University. His chief advisors were David Bohm, Basil Hiley, Sir Roger Penrose, David Finkelstein and Kevin Sharpe. Martin has published and contributed many papers particularly to conferences in physics, cybernetics, control, AI, and systems theory.

**Focus and Objectives**

[1] Bringing together and integrating current activities including the newly-reorganized TETRAD Institutes and its associated corporate business ventures into a cohesive and progressive relationship within one or two closely-coupled institutions of higher education, research and application development that have focus and strength in the physical and biomedical sciences and receptivity for innovative new directions matching with capabilities.

[2] Developing opportunities for teaching through lectures, seminars and workshops, for extending current research and past accomplishments within specific areas of importance for society including environment and medicine, and for advantageous engagement and progress with multiple partners, sponsors and collaborators worldwide.

[3] Through institutional affiliation and appointment, assisting in practical dissemination and application of emerging theory into concrete applications for critical problems not being sufficiently or adequately addressed in our world, enabling next-generation students to be philosophically and scientifically well-prepared for these challenges.

**Professional Experience**

§ 2016 - present: Director and co-founder, The TETRAD Institutes –and- International Renaissance Industries  
<http://primus.tdyn.org> <http://mirnova.org> <http://oasis.tdyn.org> <http://astra.tdyn.org> <http://iri.tdyn.org>

§ 2004 - 2015: Chief Scientist, TetraDyn Ltd. (TETRAD Group), also (concurrently) visiting professor at several universities in USA and Europe. <http://tdyn.org/initpage.php>

(Professional Experience, continued)

§ 2000 - 2004: Group Manager and Research Lead, Intel Corporation (USA, Costa Rica, Russia), with visiting faculty positions at Univ. of Costa Rica and Moscow State University

§ 1996 - 2001: CEO and Director of R&D, Silicon Dominion Corporation, Richmond, VA

§ 1993 - 1998: Assistant/Associate Professor, Physics and Biomedical Engineering (dual appointments), Virginia Commonwealth University (Medical College of Virginia), Richmond, VA

§ 1988 - 1993: Senior Scientist, Special Projects, SGS-THOMSON Microelectronics (now ST.com), Baltimore MD (Concurrent 1991-1993: Visiting Faculty, VA Tech & Radford Univ.)

§ 1985 - 1988: Research Engineer, Martin Marietta Aerospace (now Lockheed-Martin), Baltimore MD

§ 1983 - 1985: Research Scientist, Battelle Laboratories, Columbus OH

### **Detailed Curriculum Vitae with selected publications and technical information**

CV may be found, with representative papers, abstracts, and other materials, at <http://tdyn.org/martindudziak>

This resource includes papers published, presentations, courses-taught, workshops, project specifics, international experience, grant support and other funding, visiting appointments, awards, special presentations, board memberships.

### **Special Experience including Volunteer Work, Developing/Underdeveloped Locations, Emergency/Disaster Response**

This information is also provided in the full CV and other materials available at <http://tdyn.org/martindudziak> and upon direct request.

### **Formal Higher Education**

§ BA (high honors), dual-major (Philos/Phys), Colgate University, Hamilton, NY

§ Postgrad program in computer science at UCSB and UCLA, Los Angeles, CA

§ MA, Philosophy of Physics (concentration: quantum logics) Johns Hopkins University, Baltimore, MD

§ PhD, Theoretical and Computational Physics, Union Institute and University, Cincinnati, OH (1993)  
"Quantum Processes and Dynamic Networks in Physical and Biological Systems"

### **Citizenship, Languages, International Experience**

USA (native). English (native), also Russian, German, Spanish. Extensive international and multi-cultural work and living experience, all continents – further details in formal CV.

### **Contact Information**

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