

Professional Bio (13.May.2020) for Dr. Martin Joseph Dudziak, PhD

Prof. Dudziak works extensively in the domains of complex systems, particularly in theoretical and quantum physics, quantum biology, quantum computing, and specifically in application areas pertaining to topological models for biology, virology and immunology.

Martin is executive director of TETRAD Institute (TI), Chief Science Officer of Intelligence Renaissance Industries (IRI), and an affiliate special professor with University of Alabama (USA) and University of Arizona (USA). He is also engaged as a principal within a US-Canadian private equity investment firm.

Dr. Dudziak's teaching and research spans physics, biomedical engineering, computer science, and specific areas within medicine including neurology, infectious and autoimmune disease, virology, and epidemiology. Within IRI, he directs the VESID Project – a novel approach to developing prophylactic and therapeutic antiviral medicine that will also enhance vaccines and natural antibody response, for SARS-CoV-2 (COVID-19) and other viral pathogens. Martin also directs MedAtrium (mobile, reconfigurable, modular laboratory systems for testing, diagnostics, evaluation, analysis and patient education, pertaining mainly to infectious and inflammatory and certain neurological and cardio-pulmonary diseases. Dr. Dudziak is also engaged as principal scientist in the development and deployment of Eyrie, a global informatics and analytics system directly serving the public health community for contact tracing and tracking, epidemiological diagnostics and pathogen mutation identification, and medical resource availability and distribution.

Within these and prior project and research areas, Dr. Dudziak has been directly involved in diverse technologies including: AI, Bayesian and neural networks, parallel processing, topological models, quantum information technologies, directed acyclic graphs, very large scale MEMS and other sensor networks and data acquisition systems, cybersecurity, virtual and augmented reality, “CBRNE” detection and tracking, and applications within areas directly pertaining to both public health and public safety (e.g., counterterrorism). This work, spanning more than three decades, has been conducted and funded by both corporate and governmental and private foundation sources, in USA, UK, EU and other countries.

Present affiliations and collaborators include Cepheid, Novartis, Gilead, Roche, ST, Veredus, Quanterix, and governmental agencies in USA, EU, Russia and South Korea including WHO and CDC.

Introductory URLs of interest include: www.tdyn.org, www.intelrenaissance.com, www.tdyn.org/martindudziak.

Teaching, consulting, and joint-venture collaboration are areas in which Dr. Dudziak is open and willing to consider online (remote, distance-based) as well as onsite (travel-based) working relationships, under contract terms, and with potentials for long-term relationships.

Martin has worked extensively over his career to establish strong international and multi-cultural relationships to benefit people in diverse societies and situations of need. He has been engaged within emergency response, especially in medical and social crises, around the world. He has founded TETRAD Institute with a goal of creating an environment for creative “STEM” that benefits humanity.