

September 16, 2019  
Columbus, OH 43215

Cognizant

Dear Madam or Sir,

I am an internationally recognized cognitive scientist with 30 years of research experience, have a variety of popular books covered in hundreds of magazines and news stories, have done several TEDs and many television appearances, have directed research teams for 20 years, am founder and CEO of my own medical device start-up ([VINO OPTICS](#)), have been Vice President of Research and Development for an incubator ([2ai Labs](#)), have a history of bringing cutting edge insights from the cognitive and brain sciences to the next generation of human-centered technology ([Human Factory LLC](#)), and would like to be considered for the position of "Vice President, Human Sciences Global Research and Development Leader, Consulting."

I began as a student at the Thomas Jefferson High School for Science and Technology in Alexandria, Virginia, became a physics/math undergraduate at the University of Virginia, and then got my Ph.D. in applied math at the University of Maryland in 1997. My interests brought me toward the cognitive and brain sciences, and after my first professor job at the Department of Computer Science at University College Cork, Ireland, I went to Duke University as a postdoc in neuroscience. In 2002 I won a prestigious Sloan-Swartz Fellowship in Theoretical Neurobiology at Caltech. I left to begin as an assistant professor at the Department of Cognitive Science at RPI in 2007.

My research lines cut across the cognitive and brain sciences, medical devices, physics, computation, language and more. I am a polymath and very agile researcher, and have been successful in multiple fields. I also have a history of keynotes, TED talks, television appearances, articles in magazines such as *WIRED*, *Discover Magazine*, *Wall Street Journal* and the *Telegraph*, and am finishing up my sixth book on my research.

In 2010 I started my own research and incubator lab, 2ai (<http://2ai.org>). I was responsible for creating fundamentally new innovations, and transforming them into monetizable start-ups. We have several in various stages: VINO Optics, The Emotion Chip, and Gilder.

VINO OPTICS (<http://vinOOptics.com>) is the farthest along. It emanates from my research on the origins of primate color vision. It is an optical device company with technology that enhances perception of health and veins, sold to medical and tactical personnel. The technology is designed to leverage our natural human color perceptual capability and enhance it to see oxygenation variations under the skin better. In a sense, it is an example of a human-machine

interface, but no battery or electricity required. Through my efforts, we have sold nearly ten thousand pairs of glasses, and have appeared in many hundreds of news stories.

The Emotion Chip (<https://www.theemotionchip.com/>) concerns groundbreaking technology on emotion-machine interfaces. I believe that the patented tech will undergird the next generation of emotional ai and affective computing.

And Gilder is a new financial gaming platform, which I can't discuss quite yet.

I have consulted for years through my Human Factory (<https://www.humanfactorylab.com/>), helping companies build technology that optimally interacts with human brains.

I believe I have a rare combination of experience -- in research, incubation, startups, team leadership and executive -- that makes me a great fit for the opportunity. I would look forward to the challenge.

Sincerely,

Mark  
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