

RAJESH MURALEEDHARAN NAIR

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BACKGROUND

- Trained as product designer, with 30 years of industry experience in developing more than a hundred products
- 25 years of experience in starting and running four for-profit startups and a non-profit organization.
- System Thinker, Design Thinking practitioner, Entrepreneurship coach, and Design & Making mentor. Catalyzed 50+ student startups from workshops
- Currently creating research based pedagogy to develop innovators and entrepreneurs in untapped communities

EDUCATION

Massachusetts Institute of Technology , Cambridge, MA	
Master of Science, <i>Engineering and Management, System Design & Management</i>	2014
Thesis: <i>'Catalyzing Entrepreneurs from the Ground Up in Rural India'</i>	
University of Massachusetts , Amherst, MA	
Master of Science, <i>Manufacturing Engineering</i>	1989
Indian Institute of Science , Bangalore, India	
Post Graduate Diploma, <i>Electronic Product Design (Center for Electronics Design & Technology)</i>	1986
Bachelor of Engineering, <i>Electronics and Communications Engineering</i>	1984
Kerala University , Trivandrum, India	
Bachelor of Science, Physics	1981

EXPERIENCE

EnCube Labs. USA & India (encube.co)	
Founder, Chief Mentor	2014-Present
<ul style="list-style-type: none">• Started this social enterprise to aid schools, universities and communities develop programs for early recognition and fostering of entrepreneurship abilities in students.• Worked with Govt of India in establishing 1000 Tinkering Labs in schools to enhance STEM learning• Executed workshops in Nashua, NH to expose students in disadvantaged communities to 'design and making' skills with support from Deshpande Foundation• Developing programs to develop employability among community recovering opioid addiction in New Hampshire	
Asia School of Business. Kuala Lumpur,	
Professor of Practice, Director Innovation and Entrepreneurship center	2015-2020
<ul style="list-style-type: none">• Started a series of workshops to teach product design and digital fabrication skills in schools, colleges and communities in Malaysia• Established ASB-Innovation & Entrepreneurship Center with a FabLab on campus	
TechTop Trust. Nashua NH	2006-Present
Founder, Chair Trustee	
<ul style="list-style-type: none">• Started TechTop National Innovation Challenge in India for students from rural engineering colleges. Over the past twelve years more than 2500 student innovators were showcased and encouraged to consider entrepreneurship as a viable career option. Many of these students have created more than 50 startups or have pursued higher education in a community that usually pursue immediate employment after undergrad.	
Massachusetts Institute of Technology. Cambridge, MA	
Visiting Scholar, MIT-Tata Center/ MIT- Office of Digital Learning	2014-2019
Degree Controls, Inc. Milford, NH	
Founder, CEO (1996-2003), Chairman, CTO (2003-2017)	
<ul style="list-style-type: none">• Bootstrapped the company from \$60,000 initial founder's investment to \$14.7m revenue and 120 employees in four years.• Judged as the Fastest Growing Company in NH in 2002 by <i>New Hampshire Business Review</i>.• Acquired and integrated two companies; a sensor manufacturer and a product test lab.• Created AdaptivCool Division based on self patented technology for green energy management in data centers• Sold the company to a private equity group in 2017	
Cambridge AccuSense Inc. Shirley, MA	1993-1996
Cofounder, Engineering Head,	
<ul style="list-style-type: none">• Developed technology patents and related products such as lab instruments and sensors for airflow measurement that are now considered 'industry standard'.	

- Led the technical team to innovate new products and grow the company from start to \$2 in two years.
- Degree Controls acquired this company in 2003

Think A Magic Inc. Nashua NH
 Founder, CEO

1994-1995

- Developed and patented technology for infant care products. Bootstrapped part ways but failed to raise capital to launch. Closed the company after a year. .

TEACHING EXPERIENCE

- **University of Rhode Island:** Created and taught a 2-week long, hands-on bootcamp style course, since 2016, *ENG326: Engineering Entrepreneurship*, based on Maker-Innovator-Entrepreneur Framework for entrepreneurship attitude development. First course of its kind, leading to URI's current efforts on establishing an Innovation & Startup center.
- **Driving Strategic Innovation:** Taught 'Maker' experience to senior executives at this executive education program offered by MIT-Sloan and IMD, Lausanne, Switzerland in Sep '15 (ASB, Kuala Lumpur) March '16 (IMD, Lausanne) and September '16 (MIT, Cambridge)
- **MIT: Make-In-India:** 4-week long hands-on bootcamp, sponsored by MIT, based on Maker-Innovator-Entrepreneur framework, for students from MIT and Indian universities. Four startups launched from the program. Last offered in summer 2015 in Kerala and in 2017 at IIT Delhi.
- **ASB 48 Hour MakerFest:** 2-day introductory program on 'Making', Digital Fabrication and Prototyping, offered for school students to adults. Conducted 30+ events in Malaysia, India, USA, Timor Leste, Indonesia, and Vietnam
- **Innovator Workshop:** An intense program on application of Design Thinking that introduces 'Making' & Innovation experience where students visit unfamiliar communities to identify a real problem and create solutions with commercial potential. Conducted 30 such workshops in India, Malaysia, Timor Leste, and USA. Also offered to executives and employees of Tata Consultancy Services, Mumbai and Axiata Corp, Malaysia.
- **Entrepreneurship Bootcamp:** Taught four intense, residential, hands-on programs from 2 to 6 weeks long, at rural Indian colleges that did not have any I&E initiatives, to study efficacy of the Maker-Innovator-Entrepreneur framework of training. More than 20 student startups emerged from the program some are currently in operation.
- **Design Thinking Workshops:** Conducted onsite courses and online mentoring in Design Thinking for Emeritus from 2017-2019.

SOCIAL OUTREACH

- Launched **Zero2Maker program for creating tomorrow's entrepreneurs** in secondary schools in the state of Kedah, Malaysia with Asian Development Bank, Chief Minister's Office, MaGIC Malaysia, 2019
- Created an **Zero2Entrepreneurship program** in Dili, Timor Leste to create young innovators and entrepreneurs in rural communities and building nurturing ecosystem in collaboration with Timor Leste government and UNDP.
- **Building Self-Efficacy in Children from Inner City Communities:** Conducted a 2-part workshop for under-privileged school children from refugee community in Nashua to influence their entrepreneurship outlook.
- **Training Mentors for Rural Maker Labs in Libraries:** Trained librarians from several state libraries in Malaysia to teach making courses to local children in a program funded by American Corner initiative of US Embassy.
- **Building I&E Ecosystems in Malaysian Public Universities:** Starting a 1-year program in 2018 for University of Malaysia Kelantan to build a sustaining student entrepreneurship ecosystem with support of Ministry of Higher Education. This is the first one of a future series of universities

POSITIONS

- **Director, Corporate Board:** Universal Air Filters, Inc, Sauget, Illinois. Served for two years. Helped in sale of the company to a private equity group.
- **Member:** Industrial Advisory Committee, Mechanical & Industrial Eng Department, University of Massachusetts, Amherst, MA USA
- **Board Member:** New Hampshire High Tech Council, Manchester, NH, USA
- **Chair Trustee:** TechTop Charitable Trust, Trivandrum, Kerala, India
- **Mentor:** Atal Tinkering Labs, Govt of India's program on early intervention on STEM in schools through 'Making'
- **Advisor:** LuxTag, a startup in Malaysia working on authentication of luxury goods using blockchain technology.

RECOGNITION

- **Speaking Engagements:** "UN General Assembly (Sept 2018) Creating 10x Entrepreneurs in Communities", **TEDx Beacon Street** (2014): 'Starting Up Entrepreneurs', **TEDx UTP** (2017): 'Creating Pre-Entrepreneurs'
- **Tata Fellowship:** Received fellowship from *MIT-Tata Center for Technology & Design* 2012
- **13 US Patents:** Airflow sensing, Thermal management, Green IT and Childcare products.
- **Green IT Award:** *Japanese Ministry for Economy, Trade & Industry* 2010
 For technology from patent on data center cooling and thermal management
- **Entrepreneur of the Year:** New Hampshire High Tech Council. 2001
- **Entrepreneur of the Year Finalist:** Ernst & Young EoY New England Award. 2002

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- **MIT System Thinking Conference:** Speaker “A Systems-Based Approach to Creating Entrepreneurs and the Ecosystems that Sustain Them” 2016
- **Design Thinking Course:** D-School, Stanford University 2016

US PATENTS

1. Rajesh M. Nair, Vivek Mansingh, Raouf A. Ismail: *Gas flow and temperature probe and gas flow and temperature monitor system including one or more such probes*, Apr 30, 1996; **US5511415A**
2. Rajesh Nair: *Self learning diaper wetness detector and toilet trainer* Oct 22, 1996; **US5568128A**
3. Adam J. Cohen, Roger L. Holman, Rajesh M. Nair: *Digital, Back EMF, single coil sampling, sensorless commutator system for a D.C. motor*, Sep 30, 1997; **US5672948A**
4. Rajesh Nair, Roger Holman, David Gagnon: *Thermal management system*, Nov 20, 2001; **US6319114B1**
5. Rajesh Nair: *Intelligent internal fan controller*, Nov 20, 2001; **US6318965B1**
6. Rajesh Nair, Roger Holman, David Gagnon, Owen R. Mann: *Air flow sensor using measurement of rate of heat loss*, Jul 20, 2004; **US6763711B1**
7. Rajesh Nair: *Intelligent networked fan assisted tiles for adaptive thermal management of thermally sensitive rooms*, Apr 19, 2005; **US6881142B1**
8. Rajesh Nair, Izundu F. Obinelo: *Uniform heat dissipating and cooling heat sink*, Sept 13, 2005; **US6942025B2**
9. David M. Ellis, Rajesh M. Nair: *Pulsed thermistor sensor*, Apr 10, 2007; **US7201049B2**
10. Izuh Obinelo, Rajesh M. Nair: *Multi-stage blower*, Oct 14, 2008; **US7435051B2**
11. Rajesh Nair: *Air flow controller for electrical equipment holder*, Nov 12, 2009; **US20090277622A1**
12. Rajesh Nair: *Airflow sensor for filter blockage detection*, Jun 1, 2010; **US7726186B2**
13. Rajesh Nair: *Heat exchanger for data center*, Mar 29, 2012; **US20120073783**