# Syllabus

IEOR 191 Section 001

# Tech Entrepreneurship

Instructors: **Naeem Zafar (nzafar@berkeley.edu)**          Spring 2020
Classroom: GSPP 150 [Goldman School]                     Fridays 2– 5 pm
IEOR Course control number 27947

## Purpose of the Course

This Entrepreneurship course is designed for upper-level undergraduates and graduate students (absolutely no freshmen or sophomores). This experiential learning course introduces key entrepreneurial concepts relevant to the high-technology world and how to take ideas to real products and start companies. Topics include the entrepreneurial process, customer discovery process, conducting market research, funding options, entrepreneurial finance and creation of the material for a business plan.  Students undertake intensive study of actual business situations through case studies, lectures and class discussions.  Several guest speakers (entrepreneurs, investors, lawyers) are invited to speak to the class throughout the semester. The final outcome will be a short business plan Executive Summary and team presentations to a panel of investors.

This course is about developing an entrepreneurial mindset and will enable students develop their own toolkit to overcome the myriad challenges they will face in creating a scalable business.  The mindset and toolkit is useful for those who want to launch or join a startup as well as those who seek to innovate within a large company.

This course will focus on entrepreneurship; on developing business plans that are appropriate for sophisticated angel and/or professional (especially venture capital) investors.  Accordingly, most of the cases to be prepared in the class involve technology companies (i.e. the sorts of businesses in which professional venture capitalists invest).  Notwithstanding that focus, the lessons to be learned in the class about entrepreneurial businesses are certainly applicable to non-technology businesses.

The driving force behind startup ventures are entrepreneurs – those individuals who have the courage, insight, knowledge, intensity and luck to attempt to achieve great business results without resources remotely sufficient for the job (or so it seems at first).

**This is not an easy course.  Do not take this course unless you plan to take it very seriously. I strongly discourage taking it the pass-fail grading option.**  Grades are ~75% team-based so a great student in an average team cannot do much better than what the team did.

You will be cold called.  There is no hiding behind in this class.  This is about preparing you all for real life with all of the confusions and frustrations of real life.  This is probably unlike any other course that you will take during your university stay.  It is not for the faint of heart. You will either love it or hate it. But 26 semester of data tells me that 92% of the people, who take it seriously, find this course "life-changing"!

## The Business "Plan"

A key vehicle for the entrepreneur's effort is the business plan – This business "plan" is not a 25-page document but the **clarity** that entrepreneurs achieve as they plough through all aspects of thinking through the issues and challenges that all new ventures face. The plan helps the entrepreneur pitch/explain an "idea" in business terms or "her business", and attract support and resources from others because it (whether in a full-blown form, in a PowerPoint form or in its Executive Summary) communicates what the business is about, what its strategy will be, how its management thinks and what the financial risks and rewards most likely will be.  It also helps the entrepreneur to manage a growing and necessarily complex set of dynamics by providing mileposts and indicating the resources that will be necessary to achieve them.  Finally, it provides a set of standards against which actual performance can be compared.

But a great plan by itself is no guarantee of success.  A successful startup requires relentless execution against the plan and flexibility in reevaluating and changing the plan. The ultimate validations are customers' orders and a scalable, repeatable and profitable business model.

## Requirements
The main requirement for the course will be the development of a business plan on a venture of the student's choosing, subject to faculty approval.  Students will work together, in teams of four or five, to develop an idea for a new venture, research its potential, perform analysis to identify what resources are needed and when, and write a formal business plan.  This work serves as the basis for two substantial efforts:

1. First, development of a written mini "business plan executive summary", including sales and marketing objectives and financial projections; and second,

2. An oral 25-minute presentation of that plan to a panel of investors who will be surrogates for your most likely source of startup capital. Other teams will present to class instructors & mentors.

Your team is expected to make between 50 and 100 contacts with potential customers, partners and users as a part of your market research.  If team members fail to make at least 50 personal contacts, it will severely affect their ability to create a compelling and believable plan and impact their grades negatively.  Best teams usually make 100 such contacts and additional consideration is given to the teams that do more market research.

The course is about learning the art of progressive refinement of your initial assumptions through a process of face to face interactions.  You will have to leave the campus and talk to actual people.  You will be expected to submit at least 100 assumptions about your customers, users, partners, channel, financials, sales strategies and pricing – then you will have to find out if these were right or wrong and keep refining these assumptions.

## Textbooks
The course will use two text books:

1) **"Get Funded!**  A Definitive Guide to Seeking the Right Funding, at the Right Time, from the Right Source" by Naeem Zafar  (available from www.FiveMountainPress.com )
2) "**Market Research on a Shoestring:** How to validate your big idea for under $100" by Naeem Zafar (Five Mountain Press)

## Supplemental Reading

Students are encouraged to read these articles and books for additional insights to the topics that will be covered in the class:

1) "New Venture Financing"; Stevenson & Roberts, HBS Publishing [9-802-131]
2) "Angel Investing", article published by HBS Publishing & MIT Sloan School [9-800-273]
3) "How VC Evaluate Potential Venture Opportunities", Roberts & Barley, HBS Publishing [9-805-019]
4) "Relationship between Venture Capitalist & the Entrepreneur", by Brook Byers
5) "Negotiating Strategic Alliances" by Michael Watkins, HBS Publishing [9-902-166]
6) "Funding New Ventures: Valuation, Financing & Cap Tables", Michael Roberts, HBSP [9-806-058]
7) "Notes on Marketing Strategy" HBS Publishing [9-598-061]
8) "Notes on Business Model Analysis for the Entrepreneur", Hamermesh & Marshall, HBS 9-802-048
9) "The Discipline of Teams", Harvard Biz Review article, 1993
10) "The Questions all Entrepreneurs Must Answer" Amar Bhide, Harvard Business Review 1996

For all Harvard Publishing articles call 800-988-0886 or www.hbrreprints.com or www.hbsp.harvard.edu

**Course pack can be ordered at**  https://hbsp.harvard.edu/import/683765

## Instructor

Office hours are by appointment.
Naeem Zafar Best reached by e-mail: nzafar@berkeley.edu

**Course Coordinator:   Mahira Dayal mahirad@berkeley.edu**

## Mentors

A few experienced entrepreneurs will serve as mentors to the business plan groups. (bios at the end). Once you are assigned a mentor (by Week 3) you are expected to set up a session every other week with the mentor. Think of this as a "Board Meeting".  Where you will present your progress and plans and mentors will provide feedback and guidance.  There will be special mentor-led sessions and timing will be announced in the class.

## Grading

Students will be graded on class attendance and participation, as well as on the thoroughness and quality of their plan and presentation.  Perhaps more than most courses, this one will depend heavily on input provided by students.  It will combine readings, lectures, case materials and regular class involvement by entrepreneurs and business professionals. Well-prepared and intellectually engaged students are essential for the class to succeed. Please come to class prepared and please be prepared to work hard on your plan.

There is a curve for grading. Majority of your grade will depend on the team score and rank but at least 30% of the grade will depend on personal behavior and engagement.

The course grade will be based upon:

The group exercise[1]:

[1] Allocation of grades within a group will be based in part on team self-evaluation of individual effort.

a) Written business plan summary (Exec Summary)            20%
b) Oral plan presentation                        20%
c) Attendance                                 20%
d) Class participation (composed of these 3 elements)    25%
   ● Quality of your comments during class
   ● Amount of market research conducted [# of contacts made & documented]
   ● Weekly take away from the class
e) Homework assignments & Gates (on time & complete)        15%

<u>Your team is expected to make at least 50-contacts with potential customers, partners and users</u> as a part of your market research.  If team members fail to make at least 50 personal contacts, it will severely affect their ability to create a compelling and believable plan and impact their grades negatively.  Best teams usually make 100 such contacts and additional consideration is given to the teams that do more market research.

**NOTE:**  65% of the grade is the TEAM GRADE (item a & b) plus ~1/2 of the item d & e.  There will be variation from team grade to the individual grade based on attendance, class participation and your contribution to the team efforts.  This means a great student in a lousy team can only get a slightly better grade than the team grade.  Similarly, an average student can get an excellent grade if the team performs well.  Please know this and select a team early and participate in the team so that the whole team succeeds.
*Just like real life!*

# Prep:
The best way to succeed in this class is to come prepared with a few ideas that you are passionate about and have recruited a couple of others in the class who would like to join you in 'starting that business'. Just like in real life having a team where everyone is passionate and motivated and wants to work together is the biggest secret to success.  Start looking for team members early as you MUST finalize a team by week 3 of the class.

*There are no unexcused absences for the class. Excused absences: beginning the third week of classes, if you have an interview, you must notify your instructor one week in advance. If your interview falls during a class, inform your CC (Course Coordinator) as soon as you know this is the case (more than one week if possible). If you have a medical emergency, please notify your GSI and follow up with documentation (e.g., note from the Tang Center) to your CC ASAP.*

# Weekly Homework:
- Team: Submit new assumptions and proved/disproved assumptions related to topic for the week
- Individual:
   o All weeks: Reflection on the next case to be discussed – analyze & submit answers to questions posed in the syllabus (~1/2 a page or a few bullets on email to TA and Instructor)
   o Weeks 2-5: Research startup that got funded

         ○ Weeks 5+: Research news/startup article related to lecture topic

In class: different team each week speaks about the assumptions they validated or invalidated from previous week.

- Market research assumptions
  - Have at least 100 assumptions by week 4 (weeks 1 and 2 for forming teams) to prove or disprove
    - 8 topic areas to create assumptions: value proposition, positioning (channels), user / customer needs, revenue model, business model, go-to-market strategy, marketing & sales strategy, partnership strategy
    - Approximately 12-15 assumptions per lecture topic

## Course Coordinator's method of monitoring participation, grading

- Proctor's grading transparency:
  - Attendance ranked from 1-5
  - ¾ class attendance. 1 excused absence is allowed with prior notification of reasonable explanation for absence.
  - ¼ individual assignments
- Participation ranked from 1-5
  - 1/3 in-class participation
  - 1/3 team deliverables
  - 1/3 market research (number of interviews)

# Class-by-Class Syllabus

**1        January 24        Anatomy of a Startup & Art of Story Telling**

Pretext:  Driven by founders' passion, hinged on assumptions of market need, a startup is a careful alignment of a number of moving parts. Knowledge of these parts is crucial to move them in harmony. A surgeon cannot operate without understanding their patient and startup execs cannot move profitably forward without developing deep understanding of their moving parts – people, positioning, markets, etc.

**Learning Objectives:**  What is a startup and the process of creating a venture from scratch? Understand course objectives and key themes, consider reasons for creating a business plan, share business plan assumptions and think about what makes a great business plan. Understand what is expected from students & what should their final product look like.

Case to be Prepared:      None ("Deodorant" case will be discussed <u>in class</u>)

Written Assignments:  A ½ page description of ~5 business ideas about which you might want to create a startup in the class with at least one co-founder listed (another student from the class) if already identified. (It will be ideal to have formed a team of 4 or 5 persons)

Activity:                Discuss top 2 ideas in groups with mentors – get to know team members

Plan Related:        Be prepared in class to give a 1 minute "sales pitch" for your business plan ideas --4 to 5 people per team expected.

**2  January 31            Conducting Market Research & Discovering 5 Critical Metrics**

Pretext:                The market is never silent. It is always talking and telling us something. Since the market doesn't communicate in words and instead expresses though behavior and reactions, a market researcher has to learn to observe and interpret these market messages. The vocabulary of the market is well camouflaged but not impossible to learn.

Learning Objectives:   To understand how to apply, adapt and interpret classic market research techniques towards entrepreneurial business ventures. What assumptions to make and how to ask the questions to get the data that you need.  What are ½ a dozen key metrics that all startups are built on (CAC, LTV, Churn, Market size etc.)

Case to be Prepared:     EcoWash – Does this business make sense? Fill out Lean Canvas for one of the segments

Class activity:         **break out in sections with mentors & refine ideas, market research techniques**

Assigned reading:       Market Research on a Shoestring! Section 2 (chapters 5-9)

Deliverable:            At the start of class, hand-in your final team roster and the (hopefully) approved concept for your business plan (one hand-in per team).

Guest                   none

**3    February 7   Opportunity Identification & Assessment**

Pretext:                To see things far we have telescopes, for things near we have microscopes … for opportunities we have mostly intuition. What if we had a prism that could dissect an

opportunity and augment our intuition?

Learning Objectives:   Think about how to screen entrepreneurial ideas and begin to create your own opportunity screen.

Case to be Prepared:    Veridicom A [Haas Business School case]

Questions to prepare:   a) What problem is Veridicom trying to solve?
b) Who are Veridicom's customers & who needs them more?
c) If you were Tom Rowley, how will you set the strategic direction?
d) How are the team dynamics here as a startup team?

Assigned reading:       Market Research on a Shoestring!  Read Section 1 (Chapter 1-4)

Class activity:         finalize team formation & initial ideas [**Break-out sections with mentors**]

Written Assignments:    (1) **for every class:** Upload your main take-away from the last class [2-5 bullets] **AND** research and upload details about one startup that got funded last week [what they do, who funded them? How much did they receive? What stage is this company at?]

Plan Related:           Final idea refinement – working with teams we will finalize ideas & teams [**Break-out sections with mentors**]

Speaker:                Tina Shrivastava, CEO Badge Biometrics

<span style="color:red">**Teams Finalized & Receive Green Lights from instructor**</span>

**4        February 14       Team Dynamics: Attracting Talent & Assembling Startup Teams**

Learning objective:     Startup dynamics & politics within the founding team and how they influence the growth of the business, and the key dos and don'ts of personnel issues in the early phase of a startup. Managing and setting up global teams. Dividing equity among co-founders and using 3 currencies that an entrepreneur has to attract talent.

Case to be Prepared:    Vermeer Technologies (A) & (B)

Prep questions:         a) What qualifies a person to be considered a "founder"?
b) What type of resources must you gather for a startup? How did Vermeer do as a team?
c) Imagine you are Ferguson – will you accept the deal from the VC?

Assigned reading:       none

Speaker:                Kathryn Kranen

**5    February 21         Positioning & Customer Value Proposition**

Learning Objectives:   Learn why and how you must establish customer value proposition and then chose channel and execution plan to deliver that value.

Guest Speaker:          **Dave Whetstone & Rob Gray** (Founders Virgin Mobile USA)

Case:                   Virgin Mobile USA [Harvard case 9-504-028]

Case questions to prep: a) what segment should Virgin Mobile target in a crowded space?
b) How can you differentiate your offerings?
c) What are the risks that you must mitigate for the target segment?

Assigned reading:       Market Research on a Shoestring! Section 3 (chapters 10-13)

**6        February 28              Understanding Key Metrics That Drive a Business**

Learning Objectives:    The art of storytelling – how to get investor's attention.
Case to be Prepared:   Get Funded, Chapter 2, 3 & 4 (VC Model and Approaching Investors)
Guest speaker:             none
Class Activity:             Gate 1

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**Business Plan Deliverable**:  First draft of a Mini-Executive Summary (1-3-page WORD document) – addressing Five Critical Questions

**Gate 1 Class Activity:**  For the second half of the class, there will be breakout sessions to permit the groups to present to the mentors and instructors their business plan opportunity.  Each team will present their business idea, market research and customer discovery results in a 5 to 6-minute PowerPoint presentation.

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**7        March 6        Go-to-Market Strategies,**
                            How to launch, price & promote a product, picking a channel, partnerships
Assigned reading:        Get Funded, Chapter 5 (Getting Investor-Ready)

Guest Speaker:             TBA
Deliverable:               Research comparable public companies in your space and outline what percent of revenue do they spend on (a) R&D, (b) sales and marketing, (c) G&A, their gross profit and net income as a % of their revenue

**8        March 13        Business Models, Revenue Models & Market Size**

Learning Objectives:   To understand various startup business models, the key lessons in business models, and how to size a market. Sizing your market and weighing various business models and their pros and cons.
Case to be Prepared:    Urban Water Partners – does this business make sense? Startup budget? Unit economics
Questions to prep:       a) Is this a good business to get into?
                            b) How much profit can they make in Year 3?
                            c) How much should they raise to cover their costs in the first two years?
Assigned reading:        Get Funded, Chapter 7 (12-Step process of getting funded)
Deliverable:             2 Year hiring plan for your company & estimated HR budget
Class activity:          Evaluate business model of a few existing companies
Guest speaker:           Amit Kumar (Accel Venture Partners)

**9  March 20        Financial Modeling & Estimating Financial Needs, Understanding Sources of capital**

 Learning Objectives:  How to build a financial model – estimating how much do you need?

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| Case to be Prepared: | Elite Personal Training (Ivey case no: 907NO5) |
| Questions to prep: | a) who should Menard & Craciun target & at what price point? |
| | b) How much should they allocate as the startup capital? |
| | c) does it make sense to build the 3rd gym? |

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| **March 27** | **Spring Break – No class** |

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| **10** | **April 3** | **Gate 2 & VC Pitching** |

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| Learning Objective | Understand how VCs view entrepreneurs & how the process of seeking investment works.  Who are investors, how do they make money and what happens to founders and their equity? 28-Questions investors ask.  What do investors look for? |
| Assigned Reading: | Get Funded, chapter 8 (Funding process & term sheets) |
| Deliverable: | Sales & marketing plan (1-3-page WORD document) |

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| **Gate 2** | Class Activity for the **2nd half** of the class, there will be breakout sessions. All groups will present the sales and marketing plan for their project and solicit peer feedback. They will work with the mentors to fine-tune. |

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| **11** | **April 10** | **IP & Legal Issues for Startups & Understanding VC model** – |
| Learning Objectives: | | How to think about creating a brand, manage channels and decide how to bring a product to market.  How has the Internet changed the landscape for product launch? How does one build a sales organization? |

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| Learning Objectives: | Understand how IP should be protected and what legal issues surround startups. Understanding basic legal structure and aligning the agendas of the founders and investors. How does one think about creating meaningful partnerships? |
| Format | A few teams will be randomly selected to present their partnership strategy while the rest will be the judge & provide feedback |
| Assigned reading: | Get Funded, Chapter 6 (Approaching Investors) |
| Deliverable: | create your partnership strategy plan – who would you ideally like to partner with and why [3 slides, teams will be randomly called to present their partnership plan] |
| Case: | GolfLogix |
| | Prepare to discuss these questions: |
| | 1)   What should GolfLogix do? Sell through retail or courses? |
| | 2)   Should they even sell the Complete System? |
| Assigned Reading: | "Legal forms of organizations", M. Roberts, HBS 9-898-245 |
| Guest speaker: | none |

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| **12** | **April 17** | **Analyzing Term Sheets & Negotiating with Investors Plus Marketing & Sales,** |

**Partnerships**

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| Learning Objective | How does one negotiate with investors? |
| | Basics of the term sheets. Understand how VCs view entrepreneurs & how the process of seeking investment works.  How to compare term sheets and what is important regarding getting funded. Funding ecosystem – accelerators, angels, VCs, strategic, Grants. How to compare term sheets and what is important regarding getting funded. |
| Assigned Reading: | "How Venture Capital Works" HBS Reprint 98611 (December 1998) |
| Case: | Bodacious Studios – [Make a list of items you would like to push back on in the term sheet] |
| Assigned Reading: | Get Funded, chapter 8 (Funding process & term sheets) |
| Deliverable: | Financial section of the business plan- 1-pager on 5-year P&L statement |
| | Include Yearly revenue, COGS, Gross Profit, costs by Dept. and net income.  Must also include % of revenue column for Year 5 |

**13      April 24      VC Presentation Practice**

All teams present first ~5 minutes of their VC presentation and seek feedback from instructors and peers– feedback from VC on what they like to see and not see from entrepreneurs

Class activity Review key metrics of financial plan for each team

Each team will list these numbers on the board:
1) Revenue for year 1, 3 & 5
2) Market size
3) % of revenue spent in year 5 on S&M, R&D, G&A
4) Amount being raised from investors
5) How long this money will last?

Deliverable:      Partnership plan – 2-3 slides on who will you partner with and who have you approached

**14   May 1      Summary of the Entrepreneurial Process + Life as an entrepreneur**

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| Learning Objectives: | Real world lessons from a life in entrepreneurship are shared by mentors & instructor. Teaching team members share their own experiences and give advice to the students. How can you apply the learning in this course to being entrepreneurial at work? How do you when to pull the trigger? |
| Assigned reading: | The Questions Every Entrepreneur Must Answer (HBS: Bhide) |
| Keynote speaker: | Qasar Yunus, ex-COO Y-Combinator, CEO & Founder of Applied Intuition |
| Class activity: | Course evaluations |

**May 2-10      VC Pitches: Business plan presentation to panel of investors**

Each team will have 20 minutes to make a final investor pitch to a panel of judges.

# Instructor's Bio:

## Naeem Zafar

Naeem is a serial entrepreneur, having started his own business at the age of 26 and going on to start or work at six startups. He has extensive experience in mentoring and coaching entrepreneurs and founders. Naeem is currently the founder and CEO of TeleSense in the IoT space. www.teleSense.com.  He co-founded Bitzer Mobile in 2010 and served as its president and CEO until its acquisition by Oracle in November of 2013. Bitzer was a software company that delivered a platform to secure enterprise mobility.

He has been teaching at Berkeley-Haas since 2005 and at Berkeley College of Engineering since 2013. He is also a **Professor of the Practice at Brown University** Engineering where he teaches a course on Innovation and Entrepreneurship.

Prior to Bitzer, Naeem was the president and CEO of Pyxis Technology Inc., a company specializing in advanced chip design software for nanometer technology until 2007. He has also been president and CEO of two other technology startups, (Silicon Design Systems and Veridicom, a Bell Labs spin-off that invented the silicon fingerprint sensors today found on most laptops). Naeem has held senior marketing and engineering positions at several companies, including Quickturn Design Systems which had an IPO in 1993.  Naeem obtained a Bachelor of Science degree in electrical engineering from Brown University (magna cum laude), Rhode Island, and he also has a Master's degree in electrical engineering from the University of Minnesota.  His book "7 Steps to a Successful Startup" and five other eBooks are published by www.FiveMountainPress.com and are also available on Amazon.com, iTunes and Kindle and Kobo platforms.

Naeem was the founding president of Brown Club of Silicon Valley, he is a charter member of TiE (www.TiE.org) and the Board Chairman of OPEN SV www.OPENSiliconValley.org). He is on the Aspen Institute NAPEO board and works extensively with the US State Department on promoting entrepreneurship throughout the world.  Naeem has served as an advisor or as a board member to over 35 startups.  He is frequent traveler having visited 78 countries and lectured or taught in 9. More information can be found on www.NaeemZafar.com

# Mentors:

## Faraz Hoodbhoy

Faraz is an accomplished entrepreneur & now a Fortune 10 company executive. In 2005, Faraz founded and lead a mobile social networking and applications platform company called PixSense which he successfully exited in 2011. Currently Faraz is the Director of Outreach, Ecosystem & Innovation, at AT&T where he is the formal front door and face of AT&T to the innovator ecosystem (Startups, entrepreneurs, VCs, & big company innovation orgs.) Faraz & his team meet with 500+ startups a year and are responsible for evaluating technology & business fit of startups with AT&T. Faraz has 15 years of entrepreneurial experience in the mobile software space. He is an engineer and the co-author of "Applied XML – A Toolkit for Programmers", one of the first 10 books on XML. Faraz has mentored the entrepreneurship course at UC Berkeley for 6 semesters.

# Howard Lee

Howard is Co-Founder and Managing Director at Founders Equity Partners, a venture investment firm focused on both early stage and secondary opportunities, based in San Francisco, Calif. He has more than thirteen years of experience in venture capital and growth equity investing, and more than twenty-one years of experience in research, development, and marketing in emerging and established technology companies and research institutions.  His extensive investment experience includes cross-border investments with both US/Asia/China as well as US/Europe. Howard has also been both a GP and LP investor.

Howard's investment areas have included mobile, IT, cloud infrastructure, communications, and solar project finance. Some of his successful investments include Infinera, Infravio, and LGC Wireless. He has advised numerous companies in the ecommerce, data center infrastructure, online learning, and video streaming sectors. Prior to Founders Equity, Howard was a General Partner at Crystal Ventures, a venture capital firm focused on early-stage infrastructure and enabling technology companies in both the US and Asia, and Vice President and co-founder of Volendam Capital Advisors, a venture fund that invests in technology companies in the US and Europe.

Howard has held operating roles in product management and marketing at Applied Materials and has worked in semiconductor research at the US Army Research Labs. He has also held engineering positions at IBM and Unisys. Howard holds a BS and a PhD in Electrical Engineering from Cornell University, and an MBA from INSEAD in Fontainebleau, France. Cornell University, an MS in Computer Science, and a BSEE.

# Rajiv Patel

Rajiv Patel is a seasoned technology executive with over 25 years of experience in the networking, computing and imaging fields. His technical contributions have spanned the areas of Silicon and Systems for which he has been awarded several patents. Rajiv worked at Juniper Networks for over 16 years, starting from when it was founded in 1996. During his long tenure, he gained valuable experience and helped the company through multiple phases of growth. He was VP of Engineering in their Data Center Group prior to leaving Juniper to pursue other opportunities. Prior to Juniper, Rajiv has worked at Xerox and Sun Microsystems. He has a Master's degree from UT Austin and a Bachelor's degree from BITS, Pilani.

At present, Rajiv is pursuing several activities that include angel investing, mentoring startups and individuals, and giving back to the community thru the TiE organization. Rajiv is currently a Board Member at the TiE Silicon Valley Chapter and has been helping to organize their annual conference – TiEcon.

# Thorsten Claus
**Northgate Ventures**

Mr. Claus serves as a Partner in Northgate's San Francisco, USA office.  He has experience in both venture capital investing and executive operational roles. Prior to Northgate, he was Principal at Next World Capital (NWC), an expansion-stage venture capital firm in San Francisco, focusing on investments in the areas of Big Data, Cybersecurity, and Enterprise Software.  Before NWC, he was a Senior Investment Manager with T-Venture, the venture capital arm of Deutsche Telekom with over 1BN USD AUM, in the Silicon Valley. He worked closely with management teams, boards, and investors of T-Venture's large US portfolio to enter and grow European and international business through investments in the areas of Mobile, IT and Network Infrastructure, and Enterprise Software. Before T-Venture, Mr. Claus led large-scale IT infrastructure and digital transformation projects for international fixed, mobile, and cloud communication service providers. He sourced and managed innovative partnerships with venture-backed startups, vendors, and suppliers across North America and Europe. In 2005, he was awarded the Deutsche Telekom International Award for Excellence in Innovation. Thorsten was born in Germany and has a Master of Science in Information Technologies from Technische Universitat Darmstadt.