CHINTAN VAISHNAV
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Education

Massachusetts Institute of Technology (MIT) **Cambridge, MA**
Postdoctoral Researcher, across Computer Science & Artificial Intelligence Laboratory, Department of Political Science, and Sloan School of Management. Research focused on understanding the impact of Cyberspace on International Relations, and separately, on understanding technology and industry disruption. (January 2011-August 2012)

Carnegie Mellon University-Instituto Superior Técnico **Lisbon, Portugal**
Postdoctoral Researcher, across Institute for Systems and Robotics (IST) and Heinz College of Public Policy (CMU). Research focused on Internet's impact on political engagement. (October 2009-December 2010)

Massachusetts Institute of Technology **Cambridge, MA**
Ph. D. in Engineering Systems (or Technology, Management, and Policy), February 2010
Thesis: *The End of Core: Should Disruptive Innovation in Telecommunications Invoke Discontinuous Regulation*
Thesis Committee: Prof. Charles Fine (Chair), Dr. David Clark, Prof. John Sterman, and Prof. Kenneth Oye

Massachusetts Institute of Technology **Cambridge, MA**
Master of Science in Technology and Policy Program, December 2005
Thesis: *Voice over Internet Protocol (VoIP): The Dynamics of Technology and Regulation*

Colorado State University (CSU) **Fort Collins, CO**
Master of Science in Electrical Engineering, December 1996
Thesis: *Event Driven Simulation and Performance Evaluation of Robust Wavelength Division Multiplexed (WDM) Networks*

R.V.C.E, Bangalore University **Bangalore, India**
Bachelor of Engineering in Electronics Engineering, August 1992
Thesis: *A Local Area Network (LAN) using SDLC/HDLC Protocol Controllers and 8086 Microprocessor based Single Board Computers*

Positions

Atal Innovation Mission, Government of India **Delhi, India**
Mission Director and Additional Secretary
NITI Aayog, Government of India
Led Government of India's 'Innovation Office', Atal Innovation Mission (https://aim.gov.in/) to create innovation and entrepreneurship ecosystem across the country. During my tenure, the AIM accomplished all of the targets from Phase-I and received the Union Cabinet's approval for the five-year-long Phase-II. During Phase-I, AIM built 10,000 maker spaces called Atal Tinkering Labs (ATL) in middle and high schools across 722 districts of India, making it the world's largest program of its kind with over 11 million students trained in Design Thinking and Entrepreneurship. The success has led to the Government announcing 50,000 more ATLs. To take the India's incubation landscape beyond academia, AIM created 101 new business incubators called Atal Incubation Centers (AIC) across sectors such as defense, space, bio sciences, health, agriculture, textile, commodities, electronics & IT, and more. To go beyond metro cities, AIM built 50 Atal Community Innovation Centers (ACIC) in

smaller towns of India. To address areas of market failure, AIM conducted several national innovation challenges in key sectors. For the Ministry of Defense to engage startups via challenges and procurement, AIM built what is now a successful platform called iDEX. For the Phase-II, the Cabinet has approved eight new programs to make India's innovation and entrepreneurship ecosystem even more inclusive, expansive, and deeper including building startup ecosystems in India's 22 official languages. (April 2021-December 2024)

Startup20 Engagement Group of the G20
Founding Chair
Chaired the creation of the Startup20 Engagement Group during India's Presidency of the G20 in 2023. The group was proposed to give global startups a voice equal to that of large corporations in G20. In the New Delhi Declaration at the G20 Summit, the world leaders accepted Startup20 as a permanent feature of the G20 architecture, thus creating the world's highest policy forum for startups.

Massachusetts Institute of Technology **Cambridge, MA**
Senior Lecturer, Sloan School of Management
Academic Director, MIT Tata Center for Technology and Design
The Tata Center for Technology and Design trains graduate-level engineers and managers in addressing problems of resource constrained communities worldwide with academically rigorous and practically relevant solutions (https://tatacenter.mit.edu). (September 2012-2021)

Indian Institute of Technology Bombay (IITB) **Powai, India**
Visiting Assistant Professor, Tata Center for Technology and Design
Collaborating with IITB faculty and students to transfer the teaching and research methods from my MIT course on Technology, Design, and Entrepreneurship for Emerging Communities. Building a base for system level research in water and agriculture technologies. (October 2018-2021)

Indian Institute of Science (IISc) **Bengaluru, India**
Sundarrajan Endowed Visiting Chair Professor of the Year
Visiting Center for Policy and Society to initiate research collaborations with IISc faculty. Launching a project on characterizing and influencing resilience in face of Bengaluru water crises. (August 2019-2021)

Awards

Distinguished Alumni Award, Rastriya Shiksha Samiti Trust, RV University (my undergraduate institution)
Citation: *[f]or creating socio-technical systems that improve lives in underserved communities and for analyzing its implications for promoting and implementing such technologies for policymakers, managers, and society at large…[f]or the exceptional leadership in academia and public service.* (2022)

Research Grant – MISTI Global Seed Fund, MIT International Science and Technology Initiatives, for 'A Checklist-based Advisory to Minimize the Cost and Duration of Worse-before-better in Transitioning from Chemical to Organic Smallholder Farming' (January 2020-August 2021)

Winner - Atal New India Challenge, in the category 'Providing Potable Water to Water Quality Affected Areas.' A challenge set up by India's Central Government think tank, NITI Aayog and five ministries (November 2019)

Finalist - The Groundbreaker Prize 2019, Foodshot Global's Moonshots for Better Food (2019)

Research Grant - Internet Policy Research Initiative, MIT-Hewlett Foundation, for 'How Public Should The Public Data Be?' (September 2017-December 2019)
Translational Grant – Deshpande Foundation, for 'translation and commercialization of QuantiSoil' (September 2018-August 2020)
Translation to Policy Grant – International Policy Laboratory, MIT, for 'Data for Improved Governance (DIG)' (September 2018-December 2019)
Research Grant – MIT Tata Center, for 'Mind the Yield Gap in Smallholder Agriculture' (September 2017-August 2019)
Research Grant – MIT Tata Center, for 'Dry Sampling of Water Contaminants (Phase II)' (September 2017-August 2019)
Research Grant – Abdul Latif Jameel Water and Food Labs, for 'Dry Sampling of Water Contaminants (Phase I)'(September 2015-August 2017)
Research Grant – MIT Tata Center, for 'Point-of-use Water Quality Testing' (September 2015-August 2018)
Research Grant – MIT Tata Center, for 'Point-of-use Soil Testing (Phases I & II)' (September 2014-August 2017)

Research Fellowship – FCT, Portugal (Portuguese equivalent of US NSF) (October 2009-December 2011)
Integrative Graduate Education and Research Traineeship – US National Science Foundation (NSF), (January 2007-June 2009)
Graduate Research Fellowship – Massachusetts Institute of Technology (August 2003-December 2006)
Graduate Research Fellowship – Colorado State University (September 1994-August 1996)

Languages Read, write, and speak English, Hindi, and Gujarati; Intermediate level Italian.

Design, Computer Programming, Modeling Skills Amazon Web Services, Electronic design and production, Mechanical Design, Machine Design, Molding Casting, Computer-controlled Machining; C, C++, Java, Perl, Python, Shell Script; Linux-based systems/embedded/application programming; XHTML, XML, Javascript; System Dynamics, Agent-based modeling, Econometrics, Social Network Analysis, Domain Structure Matrix Analysis.

Teaching

Technology, Design and Entrepreneurship for Emerging Communities
I have designed and currently teach a graduate class titled *15.S17 Technology, Design, and Entrepreneurship: Understanding Emerging Communities*, and *15.S14 Technology, Design, and Entrepreneurship: Operating in Emerging Communities*, both at MIT's Sloan School of Management. This course is a part of a two-year curriculum that I have designed and led the implementation of. The overarching goal of this course portfolio is to develop capability along three dimensions: (a) to deeply understand the challenges of resource-constrained environment; (b) to research them rigorously and arrive at a scalable solution, whether technology or policy; and (c) to create a practical implementation plan. Over the past six years, 200 graduate students from 18 different departments of MIT have benefited from this curriculum, which has led to 200,000 hours total of fieldwork in India, Nepal, and Africa, and has produced 45 patents, 12 commercial licenses, and so far 9 startups this academic year. 25% of students have gone on to do their PhD in the topics developed through this curriculum.

Modeling Dynamics of Socio-technical Systems
Decision-making in contemporary socio-technical systems in sectors such as telecom,

agriculture, water, energy, health is challenging because of the *dynamic complexity* that results from the rapid technological, economic, and social change. This course introduces methods to enhance ones' systems thinking, and teaches flexible and powerful simulation and modeling approaches such as System Dynamics and Agent-based Modeling to structure problems and visualize the interconnectedness of systems to improve decision-making.

Introduction to Network Science and its Applications to Analyzing the Impact of Internet and Communications Technologies
This course is focused on learning theory and techniques of Network Science to understand the properties of any network, including ones created by the ICT technologies.

Research & Action

I am motivated to build socio-technical solutions that overcome information constraints fundamental to improving human conditions in resource-poor environments. My research and action pursues this objective at the intersection of Information Technology and Systems, Development, and Public Policy. Concretely, this quest has led to research in two interrelated work streams: *Information Architecture with Socio-technical Feedbacks for Resource-limited Systems*, which is focused on building solutions centered on new forms of information generation, sharing, and decision support for the resource-poor communities in various domains such as agriculture, water, urban governance; and *Understanding the Dynamics of Disruptions*, which is focused on characterizing the context within which the Information Architecture must be built in order to disrupt the incumbent paradigm of information poverty by creating the necessary technological, industrial, and regulatory disruptions, and equipping entrepreneurs, policymakers, and the society at large with strategies to manage such a change.

The work stream *Information Architecture for Resource-limited Systems* comprises of several on-going thrusts:

- *QuantiSoil+MITTI: An On-farm Soil Testing and Recommendation System for Smallholder Farmers: QuantiSoil* measures Nitrate, Phosphate, Potassium and pH levels in the soil at the farm within 10 minutes, with an accuracy +/- 10% that of laboratory-based testing. *MITTI* is a machine learning driven soil nutrient management platform that delivers site-specific nutrient recommendations that are timely and actionable, suggests both chemical and organic inputs, and presents the risk-benefit of each choice in terms of likely yields, profits, and environmental impact. Presently, *QuantiSoil+MITTI*'s on-farm solution is being benchmarked against the National Soil Health Card Scheme's laboratory-based solution in one state of India. (August 2014-Present)
- *Dry Absorption of Water Contamination: A Technology to Remove and Monitor Obstinate and Pernicious Metal-based Contaminants:* A compact and easy-to-use device (viz. a tea bag) for '*dry absorption*' of heavy metal based trace contaminants (e.g., Arsenic, Cadmium, Chromium, Copper, Nickle) from water to make it potable from the perspective of metal in 10 minutes and for < 2 cents/liter, and then allow for easy transportation or postage of the dry sample for further lab testing and contamination prfiling. This work has won the *Atal New India Challenge 2019*, and is in the phase of designing a second pilot. (September 2015-present)
- *PEIQS: Balancing Privacy, Efficiency, and Innovation In Data-driven Urban Governance*: In working with 112 cities of India that provide all citizen services digitally, this research has built two simple indices: Governance Efficiency Index (GEI), a measure of how timely and accurate is the service

delivery of a city; and Information Privacy Index (IPI), a measure of how responsible is the data collection, use, and disclosure by a city. The indices are being implemented on eGovernment Foundation's digital platform for viewing real-time performance of the cities, and improving their service efficiency and citizen privacy simultaneously. (September 2017-2020)

- The success of these projects has spawned several research questions on agriculture (work on yield gap, transition to organic farming, and AI in agriculture); water (resilience in water-stressed cities, data for improved governance at the nexus of sanitation-water-health); and urban governance (citizen data-youth-evidence based policymaking in American Cities).

The work stream *Understanding the Dynamics of Disruption* builds upon the work of over a decade, where I have developed a system dynamics based general model of disruption that illuminates conditions under which disruptions do or don't occur. This model has been applied comprehensively to two industries:

- In collaboration with leaders of the communications industry, we have studied several disruptions such as voice over IP, audio, video, news, wireless telephony, location based services etc. An equal focus of this work has been on the regulatory response to technological disruption; in particular, *how to achieve the necessary regulatory compliance without killing innovation as the new technology displaces the existing one*. The outcome of this research has found use in decisions at the Office of Science Technology and Policy (OSTP), at the White House; the US Federal Communications Commission (FCC); and the Telecom Regulatory Authority of India (TRAI). This work is being summarized in our forthcoming book *Tails of Disruption.*
- In collaboration with leaders of automotive industry, we have studied the present trends in the disruption of conventional vehicles and infrastructures with the Alternative Fuel Vehicles and infrastructure. This work is summarized in MIT's 2019 report *Insights into Future Mobility.*

The work above has produced several graduate-level theses. (September 2012-2021)

Theses Supervised

Primary Supervisor and Principal Investigator
Soumya Braganza (2016), MS in Technology and Policy, MIT
Zyad El Jebbari (2016), MS in System Design and Management, MIT
Charlene Ren (2017), MS in Technology and Policy and MS in Civil & Environmental Engineering, MIT
Sydney Beasley (2018), MS in Urban Studies & Planning and MS in Technology and Policy, MIT
Nikhil Mallareddy (2018), MS in Technology and Policy, MIT
Rakesh Sridhar (2019), MS in Transportation and MS in Technology and Policy, MIT
Jean-Baptiste Seby (2019), MS in Technology and Policy
Nikita Kodali (2019), MEng in Computer Science

Reader on Thesis Committee or Project Co-PI
Ron Rosenberg (2016), MS in Mechanical Engineering, MIT
Rebecca Hui (2017), MS in Urban Studies and Planning, MIT
Ahmed Alawaji (2018), MS in Computer Science and MS in System Design and management, MIT
Michael Arnold (Current), PhD in Mechanical Engineering, MIT
Emily Hanhauser (Current), PhD in Mechanical Engineering, MIT

Mark Jeunnette (2019, not a co-PI, close collaboration), PhD in Mechanical Engineering, MIT

Social or Policy Entre-preneurship

MITTI
(Startup registration underway) A machine learning-powered open and actionable soil nutrient management platform that introduces a new, two-way paradigm for agricultural extension. (Present)

Data for Improved Governance (DIG)
Founded and continue to direct a volunteer group based to collect, clean, and organize public data on sanitation, water quality, and health to understand their interconnections, and help with public and private sector decision support in these sectors. Instituted an annual fellowship for undergraduate students at Ahmedabad University, India. (Present)

How Public Should Public Data Be
A collaboration with eGovernance Foundation, Bangalore to build research-based efficiency, transparency, and privacy index for 325 Indian Cities. (Present)

Dry Absorption of Metal-based Contaminants from Water
Co-leading a demonstration of a platform to provide the water management authority a framework to assess in a centralized manner the metal-based contamination levels in water sources, and to provide the end user in a decentralized manner clean water at significantly reduced cost and complexity as compared to currently available solutions. (Present)

Smsvani
Founded an sms2web micro-philanthropy platform, where small local needs reported via text messages from mobile phones are aggregated and broadcasted globally for donors to make risk-free donations. (2007-2009)

COVID-19 Response Work

Billion Social Masks (www.billionsocialmasks.org): safety for all, livelihood for many. Billion Social Masks is committed to making safe, certified, high quality N95+ face masks for the general public and for healthcare professionals at an affordable price. It is designed to meet the need while enhancing the livelihoods of many Self Help Groups (SHGs). This vision grew out of a group of innovators and entrepreneurs who are passionate about serving this critical need with worldclass quality, locally available materials and livelihood enhancing activities. To achieve this vision, we presently work with our partners; Self Employed Women's Association (SEWA), Selco Foundation, Ekam Foundation, Abhihaara, H2C, and Parisodhna Technologies.

Medical Resource Control Rooms: Working with collaborators from Stanford University, IITB, and a team of software engineers to rapidly build and deploy virtual control rooms at city/region levels that save lives by alleviating urgent resource scarcity of a hospital. Presently deployed in one state of India and a large hospital in Mumbai.

MIT e-Vent to Vayu: Liaising with two teams in India to translate MIT's e-Vent Emergency Ventilator to the Indian context. Two ventilators designs successfully translated (Ashok Leyland Ventilator, Breaks India Ventilator) and are under regulatory approval.

Covid-19 Opinion Pieces
1. Opinion: Which Covid-19 combat plan fits perfect: Bulldoze the curve or let it simmer; Economic Times, April 03, 2020
2. What Should India's Package for Saving Small Businesses Look Like?. The Wire, April 17, 2020

3. The Virus, The Architecture of Poverty, and The Tough Balancing Act Ahead, Medium, April 24, 2020

India Metro Model
Adapted a simple, classic epidemic model for a community confronting coronavirus to a typical Indian metro with a population of 1 cr (10 million), known hospital as well as public health capacity. Importantly, I have also converted the names of the model variables to *hindi* in order make it easier for public health workers to explain the coronavirus situation to those who find hindi more accessible.
India Metro Corona Model Part I (the structure of the epidemic)
India Metro Corona Model Part II (controlling the virus spread)

Post & Doctoral Research

MIT, Computer Science and Artificial Intelligence, Dept. of Political Science, and Sloan School of Management **Cambridge, MA**
Introduced tools of complex socio-technical systems to modeling interdependencies between Cyberspace and International Relations. Project brought together engineers and political scientists from MIT and The Kennedy School of Government at Harvard University. (January 2011-August 2012)

Carnegie Mellon University – Instituto Superior Técnico **Lisbon, Portugal**
Integrated into a single theoretical model the current theories of cyber democracy, and demonstrated their limitations in explaining Internet's impact on political engagement. Offered integrated hypotheses that could overcome these limitations, and argued for the need to broaden the information bases of the contemporary research for it to pursue these hypotheses. Advised Portuguese Telecom Regulator (ANACOM) on policies for universal broadband. The research team consisted of faculty members from MIT, IST, and Carnegie Mellon University. (October 2009-December 2010)

MIT, The Program on Emerging Technologies (PoET) **Cambridge, MA**
Participated in National Science Foundation's (NSF's) Program on Emerging Technologies. Investigated ways of improving responses to emerging technologies, by engaging early and explicitly with the pervasive uncertainty that is often under-recognized in technology assessment exercises. The group consisted of faculty and PhD students from engineering, political science, and technology history, and studied several emerging technologies using a rich mix of methods from all three disciplines. (January 2007-September 2009)

MIT, Communications Futures Program (CFP) **Cambridge, MA**
Comprehensively modeled the disruption of technologies/firms in the communications value chain. Participated in creating a framework to understand value migration in voice, music and video communications value chains. The work was carried out as a part of Communications Futures Program consisting MIT researchers and industry partners worldwide. (August 2003-December 2006)

Colorado State University, Dept. of Electrical and Computer Engineering, Fort Collins, CO
Developed an event driven simulator in C and C++ to conduct performance analysis of several medium access control (MAC) layer reservation-based protocols proposed for packet switched, circuit switched, and hybrid Wave Division Multiplexed (WDM) optical networks. Simulated and analyzed throughput and delay in WDM networks with various user configurable network parameters. (August 1994-November 1996)

Industrial Research & Development

Bell Labs, Lucent Technologies & Avaya Labs, Avaya Inc. **Denver, CO**
Member of Technical Staff
Worked in the area of Voice and Data Convergence. Designed highly reliable, secure and maintainable converged solutions for voice, video, and communications. (January 1997-August 2003)

- *Next Generation Processor Complex Project:* Led a team of eight engineers to architect, design and develop fault tolerance engine, error and alarm collection and reporting, and SNMP based network management system with a user interface for Avaya's largest next generation enterprise communication server. The project brought 99.999% reliability, offered by traditional voice switches, to the new converged system. The project was multidisciplinary and involved Avaya's R&D teams worldwide. Work contributed to positioning Avaya as leader in converged voice communications market. (November 1998-August 2003)

- *OverLAN Project:* Architected and implemented the migration of circuit switch connectivity foundational to Lucent's products, to TCPIP. The solution has 30,000+ installations globally in more than 90% of Fortune 500 companies. (January 1997-November 1998)

Asea Brown Boveri Ltd. (ABB) **Bangalore, India**
Systems Engineer, Industrial Process Automation Division
Designed process control and automation systems for integrated steel plants, including hardware design and software development for Programmable Logic Control (PLC) and Distributed Control Systems (DCS). As a member of the project execution team, coordinated R&D, manufacturing, testing, service support, and customers. Successfully executed five projects (September 1992-July 1994)

Research Internships

Indian Institute of Management (IIM) **Ahmadabad, India**
Participated as an independent researcher on a project jointly commissioned by the Government of India and Microsoft Research to understand the impact of information technology on the agricultural sector. Ethnography was the research method used. (Summer 2005)

Federal Communications Commission (FCC) **Washington DC**
Performed detailed stakeholder analysis of over 3500 public comments in response to FCC's IP-enabled Services regulation. Participated in microeconomic modeling and analysis of wireless industry's then largest AT&T-Cingular merger under FCC's chief economist. (Summer 2004)

Indian Space Research Organization (ISRO) **Bangalore, India**
Developed a token ring network using Intel 8086 microprocessor and compatible chipset. (August 1991-July 1992)

Past Teaching

Carnegie Mellon University **Pittsburgh, PA**
Telecommunications Management, Guest Lecturer
Designed and taught a section on contemporary challenges in telecommunications regulation as a part of a graduate level course offered to the students of Heinz College, Tepper School of Business, and Engineering and Public Policy. (Spring Semester 2010)

Instituto Superior Técnico **Lisbon, Portugal**
Contemporary Issues in Telecommunications Management, Visiting Professor
Designed and taught a section on dynamic complexity in regulating disruptive technologies such as the Internet. Introduced system dynamics modeling to the analysis of regulatory decisions that are traditionally analyzed using microeconomic and econometrics models. (Fall Semester 2009; Fall Semester 2010)

Massachusetts Institute of Technology **Cambridge, MA**
Science Technology and Public Policy, Teaching Assistant
Designed and graded exams, and comprehensive term papers on market and institutional failures in a breadth of topics related to science and technology policy. This is a core course for graduate students in Technology and Policy Program at MIT, and is taught in two large sections of graduate as well as undergraduate students. (Fall Semester 2006)

Business Dynamics, Teaching Assistant
Designed and taught recitations on system dynamics modeling. This is a flagship course for the Sloan School of Management at MIT, and attracts over 200 students from MIT,

Harvard, Tufts, and Boston University each semester. (Fall Semester 2006; Spring Semester 2006)

Colorado State University **Fort Collins, CO**
Advanced Computer Networks, Adjunct Faculty
Responsible for a complete graduate level course on advanced computer networks. Introduced simulation-based hands-on learning of network architecture and programming to a course traditionally focused on queuing theory. The shift led to doubling of class size in my two years of teaching it. (Fall Semester 1998; Fall Semester 1999)

University Service

MIT, Baker House, Graduate Resident Tutor
For five years, served as a live-in mentor in an MIT undergraduate dormitory, Baker House, to support MIT undergraduates as their first point of contact for academic and other campus life needs. (Fall 2005-Spring 2010)

Colorado State University, Member of Industrial Associates Board (IAB)
As an elected member of the Industrial Associates Board, advised CSU's engineering school on aligning their research and teaching to industry trends. (2001-2003)

Student Leadership
Executive Committee Member, MIT Heritage Arts Society (MITHAS) (Fall 2004-Fall 2007)
Executive, Indian Student Association, MIT (called Sangam) (Fall 2004-Spring 2006)
President, Indian Student Association, Colorado State University (Fall 1995-Spring 1996)

SELECTED NEWSPAPER OPINIONS

How India can lead the way in transformative innovations, Indian Express, January 2025 **(**https://indianexpress.com/article/opinion/columns/how-india-can-lead-the-way-in-transformative-innovations-9802535/**)**

In J&K, school-going innovators show the way, Indian Express, December 2024 **(**https://indianexpress.com/article/opinion/columns/in-jk-school-going-innovators-show-the-way-9744403/)

Lessons from Tata's Nano: Learn from communities before solving for them, Indian Express, November 2024 (https://indianexpress.com/article/opinion/columns/lessons-from-tatas-nano-learn-from-communities-before-solving-for-them-9670415/)

Making India a start-up nation, Indian Express, September 2024 (https://indianexpress.com/article/opinion/columns/making-india-a-start-up-nation-9562903/)

Lessons in how to build an innovation ecosystem, Indian Express November 2023 (https://indianexpress.com/article/opinion/columns/lessons-in-how-to-build-an-innovation-ecosystem-9011134/)

Startup20 Engagement Group: A New dawn for the global startup ecosystem, Yojana, April 2023 **(**https://www.publicationsdivision.nic.in/journals/Journalarchives/Yojana/Yojana-English/2023/April/Yojana_2023_April_pdf.pdf**)**

G20's Startup20 Engagement Group: A SUMup of ideas, Indian Express, March 2023 (https://indianexpress.com/article/opinion/columns/south-korea-painful-reckoning-with-a-history-of-baby-exporting-9911701/)

India's G20 presidency | Innovations double engine: Start up, scale up, Indian Express, February 2023 (https://indianexpress.com/article/opinion/columns/indias-g20-presidency-innovations-double-engine-start-up-scale-up-8447524/)

SELECTED RADIO/TELEVISION INTERVIEWS and PODCASTS

TEDx, *When Schools Transform into Innovation Hubs* (https://www.ted.com/talks/dr_chintan_vaishnav_when_schools_transform_into_innovation_hubs)

BloombergQ Prime, *All about Atal Innovation Mission* (https://www.youtube.com/watch?v=KrwkSRL3qfc)

All India Radio News, Startup20 Engagement Group (https://www.youtube.com/watch?app=desktop&v=KloC6DsYKwQ)

Spotify, Amazon Music Podcast, *Clarity Podcast* (https://www.youtube.com/watch?v=6l-RP6lWHDQ)

(Hindi) Door Darshan News (Indian National TV), *Atal Innovation Mission* (https://www.youtube.com/watch?v=6fac4dC06Vc)

Impact Failure Conference 2022, *Symptoms of Incubate-itis* (https://www.youtube.com/watch?v=S6FMkhFbYGs)

SELECTED ACADEMIC TALKS

UNDP	**'***Using Data To Improve Cities' Services: Yes, But At What Costs (And Can We Avoid Them)?'* (October 2019)
IISc & IITB India	*Explorations in Information Architecture for Development* (IISC, Aug 2019; IITB, January 2019)
TPRC Wash DC	'*How Public Should Public Data Be? Privacy-Egovernance-Innovation In Indian Cities'* (September 2018)
NITI Aayog Delhi, India	*'Innovating for Implementing New Technologies in Core Sectors'* – NITI Aayog is India's Central Government Think tank (January 2017)
Delft Netherlands	'*Can We Avoid Worse Before Better in Transitioning to Organic Farming?'*- International System Dynamics Conference (July 2016)
OSTP, The Whitehouse	'*Effects of Policy on Competition in Telecom Equipment Markets: Insights from a Multi-level Multi-method Study'* (2014)
TPRC Wash DC	'*From Herding Sheep to Herding Cats: Balancing Regulation and Innovation in the Modular Age of the Internet'* (TPRC 2010)
Athens Greece	'*Does Technology Disruption Always Mean Industry Disruption?'* (July 2008)

PUBLICATIONS

Books/ Reports

Tails of Disruption
(with Charles Fine). About conditions causing the disruption of incumbents, failure of entrants, and coexistence of the two; and strategies to thrive in each scenario. (In Progress)

Insights into Future Mobility
One of the lead investigators on this three-year long Mobility of the Future study, MIT Energy Initiative (November, 2019)

Patents

Method for Preservation, Transport, And Analysis Of Water Samples, US Application No. 15/497,761.

Systems, Devices, and Methods for Point-of-Use Testing for Fluid Contamination, PCT International Application No. PCT/US17/57265.

Publications

On Information Architecture for Resource-limited Systems…
Nikhil Mallareddy, Chintan Vaishnav, Soumya Braganza, *'Machine in the Loop: Personalizing Farm Advisory for Smallholder Farmers Using AI,'* International Conference of System Dynamics Society, Bergen, Norway, 2020.

Chintan Vaishnav, Vijay Chandru, *'No Dieses Orphan: Technology, Economics, and Policy for Providing Equitable Health Amidst Extreme Inequity,'* International Conference of System Dynamics Society, Bergen, Norway, 2020.

Bono MS Jr, Beasley S, Hanhauser E, Hart AJ, Karnik R, Vaishnav C (2020), "*Fieldwork-based determination of design priorities for point-of-use drinking water quality sensors for use in resource-limited environments*," PLoS ONE 15(1): e0228140. https://doi.org/10.1371/journal.pone.0228140

Nikita Kodali, Karen Sollins, Chintan Vaishnav, "*Not a Zero-Sum Game: How to Simultaneously Maximize Efficiency and Privacy in Data-driven Urban Governance,*" 47th Telecom Policy Research Conference Washington DC, 2019.

Bono, Michael, Sydney Beasley, Emily Hanhauser, A. John Hart, Rohit Karnik, and Chintan Vaishnav. 2019, "*Solid-phase extraction, preservation, storage, transportation, and analysis of trace contaminants (SEPSTAT) via iron oxide xerogels for improved water quality monitoring of arsenic(III) in resource-limited environments*," under review, Environmental Science and Technology.

Chintan Vaishnav, Karen Sollins, Nikita Kodali, "*How Public Should Public Data Be: Privacy and E-Governance in India,*" 46th Telecom Policy Research Conference Washington DC, 2018.

Ron Rosenberg, Michael Bono Jr., Soumya Braganza, Chintan Vaishnav, Rohit Karnik, A. John Hart, "*In-Field Determination Of Soil Ion Content Using A Handheld Device And Screen-Printed Solid-State Ion-Selective Electrodes*," PloS one 13 (9), 2018.

E. Hanhauser, M. Bono, C. Vaishnav, A. John Hart, R. Karnik, "*Dry Preservation Of Heavy Metal Contaminants In Water Samples Using Cation Exchange Resins For Improved Water Quality Monitoring*" Abstracts Of Papers Of The American Chemical Society 256, 2018.

Michael Arnold, Michael Bono, Nikhil Mallareddy, Ron Rosenberg, Soumya Braganza, Rohit Karnik, Chintan Vaishnav, A John Hart, *"On-Site Soil Nutrient Analysis System For Small-Holding Farmers Utilizing Printed Solid-State Ion-Selective Electrodes,"* Abstracts Of Papers Of The American Chemical Society, 256, 2018

Chintan Vaishnav, Sydney Beasley, Michael Bono, Vinod Kothari, Sunesh Sharma, Avijit Mallik, "*The Evolutionary Dynamics Of India's Rural Water Systems (Part I)*" International Conference of System Dynamics, Boston, USA, 2017.

Sarah Nolet and Chintan Vaishnav, "*Can We Avoid Worse Before Better in Transitioning to Organic Farming?,*" International Conference of System Dynamics, Delft, Netherlands, 2016.

Chintan Vaishnav, *'Information Flows in the Traditional Knowledge and the Grassroots Innovations Value Chains for Agriculture - A Report from Gujarat,'* submitted to the Government of India, 2005.

On Internet and Telecom Policy…
Chintan Vaishnav and Johannes Bauer, "*Effects of Policy on Competition in Telecom Equipment Markets: Insights from a Multi-level Multi-method Study*," Telecom Policy Research Conference, Arlington, VA, 2016.

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