

Podcast Title: *ACM Bytecast*

Episode Title: Ramesh Raskar - 13

Tune in to the *ACM Bytecast* podcast—brought to you by the world’s largest educational and scientific computing society. Listen as host Rashmi Mohan talks to researchers, practitioners, and innovators who are at the intersection between computing research and practice. They share about personal experiences, lessons, and visions for the future. In this episode, guest Ramesh Raskar engages in an eye-opening conversation! What you see is what you get, but what if you could see more? Listen to this visionary—an associate professor, the head of MIT media lab camera culture group, and a renowned speaker—and his passion to make the invisible, visible!

Rashmi asks our guest to provide insight into who he is and what drew him into this field of work in computer vision and imaging. The fundamental science of this field attracted Ramesh and caused him to question whether you should be driven by great ingredients and tools, or the final outcome of something? Learn about Ramesh’s passion for the magical tools.

The conversation shifts to talking about the general spike in interest and demand for this industry as a whole. Humans are bad at output, but are decent with input. Find out how computer intelligence can provide a new eye and brain to help us both in seeing and processing the world. Ramesh talks about the three aspects of the industry—capture, analyze, and act. Learn about the whole research field dedicated to capturing and recording the world in new ways. Listen to how analysis is made actionable, how research is conducted, and what all the underlying aspects are that must be tackled.

Ramesh shares about the details of his specific passion for capturing data and the projects he’s been working on with extremely high-speed imaging. Is it possible to see around corners? Ramesh says yes! Find out more about the possibilities with seeing the world in such high resolutions and how Ramesh is collaborating on a variety of projects with this! Their goal is to provide a new field of vision and ultimately re-define what cameras and computers can do. Ramesh argues that we are not very far from this being a more common reality.

Rashmi asks Ramesh to share more about the relevant and tangible societal impacts he has been working on recently. Learn about his project with COVID contact tracing. Ramesh discusses the similarities between Waze and his vision for the medical field. The intersection of computation and healthcare, fusing the physical and digital He talks about the challenge of the classic trade-off between privacy and utility, and his goal to figure out a way to preserve privacy and advance the health field!

Ramesh shares about his balance between being an entrepreneur and researcher. He encourages listeners not to “silo” themselves into one area, but rather leverage what they learn in various fields to impact the others—bringing ideas to impact. Learn about his REDX project to bring peer to peer invention to his students and where this program is today. Ramesh has a passion to foster freedom for innovation and believes this is something that can be taught. He talks about his idea hexagon and how the fundamentals of STAMP (space, time, action, money, and people) do not change despite the changing landscape of remote work.

This episode draws to a close as Rashmi asks Ramesh to share about what he does outside of work and his future vision. Learn about Ramesh's interest in picking up one skill at a time and how magic tricks keep him going! Finally, Ramesh shares about his vision to make a bird's eye view possible for healthcare with the untapped potential of preserving privacy, while optimizing utility.

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Key Takeaways:

0:42 Introduction and guest Rashmi Mohan

1:14 Who is Ramesh?

1:50 What attracted Ramesh to this field?

4:00 Interest and demand for this industry

6:13 Capture, analyze, and act

8:36 Passion for capturing data

12:10 A new field of vision

14:18 COVID contact tracing

18:45 Intersection of computing work and healthcare

21:15 Straddling being an entrepreneur and continuing in his research

23:20 REDX and where this is today.

25:50 Can innovation be learned and taught?

27:42 Remote working and STAMP

29:26 What does Ramesh do outside of work?

30:25 Ramesh's future vision

Links:

Learn more about [Ramesh](#) and [REDX](#).

Connect with Ramesh on [LinkedIn](#) and [Twitter](#).

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Tags: Capture, analyze, act, vision, STAMP, career, innovation, REDX, peer, invention, research, privacy, utility, medical, contact tracing, Waze, healthcare, COVID, protection, high speed imaging, cameras, computer, computation, visible, invisible