Abstract:

The Internet of Value. The Future of Money. The Trust Machine. A Universal Computer. Blockchain has been called many things by many people. It is a little like the fable of five blind men and the elephant. Perhaps no one really understands what all blockchain is and yet there there is an excitement about the possibilities that it opens up. To some, it is reminiscent of the early days of the world wide web with grand visions of how it can change the world.

This talk will seek to give a brief overview of blockchains. The first application of blockchains was the bitcoin cryptocurrency. Even though bitcoin is remarkable in what it has achieved, it is the underlying blockchain technology that has potential applications beyond currency. The most ambitious applications are about re-imagining today's social institutions.

At its heart, what blockchain achieves is decentralized trust. Using some very innovative application of cryptography and distributed computing, it allows nodes in a peer to peer network to achieve a consensus. In monetary applications, this consensus is about the transactions that have taken place and are recorded in a distributed ledger. Placed in the larger social context however, money itself is just a tool in an accounting system of trust and reputation - the two pillars of modern social life. Thus, what blockchain enables is the opportunity to re-engineer social institutions.

We are however, only at the beginning of this journey. Blockchain, as a technology presents both opportunity and challenges. For example, one of the key challenges is of being able to scale blockchain technology; another one is to prevent misuse by antisocial elements. But the opportunities far outweigh the challenges and the applications are limited only by one's imagination. And finally, lets not forget the huge data set that blockchains make publicly available.

Speaker Bio:

Dr. Praphul Chandra is the founder of koinearth - a startup working at the intersection of Mechanism Design, Blockchains and Machine Learning. He is also a professor of data science and machine learning at the International School of Engineering (Insofe). Prior to this, he was Principal Data Scientist at Hewlett Packard Enterprise where his focus was on the application of machine learning techniques to solve real world problems across multiple domains like the Internet of Things, Taxation Fraud, Telecom and Social Network Analytics. His other industry experience includes positions at HP Labs and Texas Instruments. He has an undergraduate degree in Electronics engineering from IIT BHU, a post graduate degree in Electrical Engineering from Columbia University, NY, a post graduate diploma in public policy from University of London and a PhD in Game Theory & Mechanism Design from the Indian Institute of Science.

About Koinearth:

At koinearth, our focus is building a platform which simplifies the creation of blockchain based solutions: Think of it as a crypto-economic layer for decentralized applications. By abstracting

out the technical complexity of Distributed Ledger Technologies & the economic complexities of token design & mechanism design, we seek to enable the creation of a wide variety of blockchain based solutions. Our work is a combination of research & development and involves technologies in the Ethereum & Hyperledger ecosystem.

Koinearth was founded by Dr. Praphul Chandra. We are a small team and growing quickly. Our advisors include academicians like Prof. Boi Faltings (EPFL, Switzerland) & Prof. Y. Narahari (IISc, India). We are actively partnering with research groups in academia to advance the state of art. Simultaneously, we are partnering with industry to drive the adoption road map of these technologies.