



# VIJITH KUMAR K. P.

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## EDUCATION

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<b>PhD</b>   <i>Information Theory</i> Indian Institute of Technology, Guwahati	July 2014 – Present Assam, India
<b>M.Tech</b>   <i>Microwave and Television</i> University of Kerala	July 2012 – June 2014 Kerala, India
<b>B.Tech</b>   <i>Electronics and Communication</i> University of Calicut	July 2007 – May 2011 Kerala, India

## TEACHING EXPERIENCE

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<b>Peer-assisted Learning Program</b> Indian Institute of Technology, Guwahati	July 2016 – November 2016 Assam, India
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I was a mentor in the peer-assisted learning program for the course Electrical Sciences (EE 101) organized by IIT Guwahati during July-November 2016.

<b>Teaching Assistantship</b> Indian Institute of Technology, Guwahati	July 2014 – May 2019 Assam, India
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I participated in the coordination of the following courses:

- Information Theory and Coding (EE 337)
- Pattern Recognition and Machine Learning (EE 626)
- Signals and Systems (EE 220)
- Electrical Sciences (EE 101)
- Communication Laboratory (EE 331)

## RESEARCH

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<b>New Results on Optimal Schemes for Coded Caching</b> Indian Institute of Technology, Guwahati	July 2014 – Present
<b>Wavelet Based Frequency-Hopping Spread Spectrum System</b>   <i>MATLAB</i> College of Engineering Trivandrum, University of Kerala	July 2012 – May 2014

## PROJECTS

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<b>Real Time Audio Compression Using Daubechies 8-Tap Wavelet Transform</b> College of Engineering Trivandrum, University of Kerala	January 2013 – May 2013
<b>Autonomous Wheelchair</b> Government engineering college thrissur, University of Calicut	July 2010 – May 2011

## PUBLICATIONS

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### Conferences and Presentations

<b>Pareto Optimal Schemes in Coded Caching: Uncoded Prefetching</b> IEEE International Symposium on Information Theory	July 2021
<b>Towards the Exact Memory Rate Tradeoff for the (4, 5) Cache Network</b> International Conference on Signal Processing and Communications	July 2020

<b>Pareto Optimal Schemes in Coded Caching</b> IEEE International Symposium on Information Theory	July 2019
<b>Fundamental Limits of Coded Caching: The Memory Rate Pair (K-1-1/K, 1/(K-1))</b> IEEE International Symposium on Information Theory	July 2019
<b>Towards the Exact RateMemory Tradeoff in Coded Caching</b> National Conference On Communications	February 2019

## Preprints

<b>The Exact Rate Memory Tradeoff for Small Caches with Coded Placement</b> <a href="https://arxiv.org/pdf/2102.04797.pdf">https://arxiv.org/pdf/2102.04797.pdf</a>	February 2021
<b>The Exact Rate Memory Tradeoff for Large Caches with Coded Placement</b> <a href="https://arxiv.org/pdf/2101.09785.pdf">https://arxiv.org/pdf/2101.09785.pdf</a>	February 2021

## SKILLS

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**Languages:** English, Malayalam, Hindi  
**Programming:** Matlab, C, Python  
**Document Creation:** Microsoft Office Suite, LaTeX

## REFERENCES

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**Dr. Tony Jacob**  
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IIT Guwahati,  
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