



# SRINIVAS UNIVERSITY

Mangalore-575001, Karnataka (India)

**Srinivas Atomic Research Centre in 4G and 5G  
Mobile Communication Technology For Online  
Banking Services**

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**Dr. Krishna Prasad K**



**Prof. Dr. P. S. Aithal**

## **About:**

The advancement in information technology has resulted explosive growth in banking technology like ATMs, internet banking and mobile banking. Banks which emphasis more on existing customer satisfaction and in attracting new customer have implemented online banking and mobile technology to make banking more convenient, attractive and simple. Computerization, wireless network, ATMS, internet banking and mobile banking can connect any customer of any bank in any branch with a customer in any other bank regardless of time, location or physical boundaries. 5G (Fifth generation wireless systems) is emerging mobile telecommunication standard beyond 4G in terms of speed, bandwidth, data transfer rate and signaling efficiency. Next Generation Mobile Network Alliance (NGMN) defines 5G with some requirements, which includes data transfer rate more than 1 Gbit/s and should support tens of thousands of users, up to several lacks of connection simultaneously and spectral and signaling efficiency should be more than 4G.

## **Objective:**

The Objective of this centre is to develop a novel system or model or approach or architecture to online banking or mobile banking services with user centric approach through 4G and 5G communication technology. Putting the user in the center of the development aims to guarantee a long-lasting, sound and profitable future for 4G and 5G, as more than ever we need to know what are the needs and expectation of the users before embarking to develop technical solutions. Technology should be the response to the user needs, and not the other way around.

## **Journal Publications:**

1. Krishna Prasad K. & Dr. Aithal, P.S. (2016). The Growth of 4G Technologies in India- Challenges and Opportunities. *International Journal of Management, IT and Engineering (IJMIE)*, 6(1), 543 - 551, (January 2016) ISSN: 2249-0558, I.F. 5. 299.  
DOI : <http://doi.org/10.5281/zenodo.161130>
2. Krishna Prasad, K. and Aithal, P. S. (2017). A Customized and Flexible Ideal Mobile Banking System Using 5G Technology. *International Journal of Management,*

- Technology, and Social Sciences (IJMTS)*,1(1), 25-37. DOI: <http://doi.org/10.5281/zenodo.820457>
3. Krishna Prasad, K. and Aithal, P. S. (2017). A Study on Online Education Model Using Location Based Adaptive Mobile Learning. *International Journal of Applied Engineering and Management Letters (IJAEML)*, 1(1), 36-44. DOI: <http://doi.org/10.5281/zenodo.820457>
  4. Krishna Prasad K. & Dr. Aithal, P.S. (2016). The Growth of 4G Technologies in India- Challenges and Opportunities. *International Journal of Management, IT and Engineering (IJMIE)*, 6(1), 543 - 551, (January 2016) ISSN: 2249-0558, I.F. 5. 299. DOI : <http://doi.org/10.5281/zenodo.161130>
  5. Krishna Prasad K. & Dr. Aithal, P. S. (2016). Changing Perspectives of Mobile Information Communication Technologies towards Customized and Secured Services Through 5G & 6G. *International Journal of Engineering Research and Modern Education (IJERME)*, ISSN (Online): 2455 - 4200 ([www.rdmodernresearch.com](http://www.rdmodernresearch.com)) 1(2), 2016, 210-224.
  6. Krishna Prasad, K. & Aithal, P. S. (2016). An Online Comparative Study on 4G Technologies Service Providers in India. *International Journal of Advanced Trends in Engineering and Technology (IJATET)*. Impact Factor: 5.665, ISSN (Online): 2456 - 4664 ([www.dvpublication.com](http://www.dvpublication.com)), 1(1), 96-101. DOI: <http://doi.org/10.5281/zenodo.240269>. <https://www.academia.edu/30895106>
  7. K. Krishna Prasad and P.S. Aithal (2016). Mobile System for Customized and Ubiquitous Learning by 4G/5G. *International Journal of Management, IT and Engineering (IJMIE)*, Volume 5, Issue 7, PP. 63-71, (July 2015), ISSN: 2249-0558, I.F. 5. 299.
  8. K. Krishna Prasad and P.S. Aithal, Massive Growth of Banking Technology with The Aid Of 5G Technologies. *International Journal of Management, IT and Engineering (IJMIE)*, Volume 5, Issue 7, pp. 616-627, (July 2015), ISSN: 2249-0558, I.F. 5. 299.
  9. Krishna Prasad, K. and Aithal, P. S. (2017). A Study on Enhancing Mobile Banking Services using Location based Authentication. *International Journal of Management, Technology, and Social Sciences (IJMTS)*, 1(1), 48-60. DOI: <http://doi.org/10.5281/zenodo.583230>
  10. Aithal, P. S. (2016). A Comparison of Ideal Banking Model with Mobile Banking System. *International Journal of Current Research and Modern Education (IJCRME)*, ISSN (Online): 2455 - 5428 ([www.rdmodernresearch.com](http://www.rdmodernresearch.com)), 1(2), 206-224. DOI: <http://dx.doi.org/10.5281/ZENODO.198708>.

### Conference Publications

1. K. Krishna Prasad & Dr. P. S. Aithal, A Study on Enhancing Mobile Banking Services using location based Authentication. National Conference on Reinventing Opportunities in Management, IT, and Social Sciences-MANEGMA, 23-24<sup>th</sup> April 2017, SIMS Mangalore, India. ISBN No.: 978-93-5268-756-5.
2. K. Krishna Prasad & S. Sumana, “An Improved Multi Phase Security solutions to ATM Banking Systems” in National Conference “E-Learning, E-Business and E-

Governance” on 24 January, 2015 at Srinivas Institute of Management Studies, Pandeshwar, Mangalore. ISBN No. 978-81-929306-4-0.

3. K. Krishna Prasad & Dr. P. S. Aithal, A Study on Online Education Model using Location Based Adaptive Mobile Learning. National Conference on Emerging Trends in Educational Innovations, 23-24th June 2017, SIMS Mangalore, India. ISBN No.: 978-93-5279-403-4.
4. K. Krishna Prasad, P. S. Aithal, An Online Comparative Study On 4G Technologies Service Providers In India, Innovations and Transformations in Banking, Management, IT, Education and Social Sciences, (August, 2016), ISBN No.: 978-93-5265-656-1.
5. K. Krishna Prasad, P. S. Aithal, A Customized And Flexible Ideal Mobile Banking System Using 5G Technology, Innovations and Transformations in Banking, Management, IT, Education and Social Sciences, (August, 2016), ISBN No.: 978-93-5265-656-1.
6. K. Krishna Prasad & P.S. Aithal, “Mobile System for Customized and Ubiquitous Learning by 4G/5G” Proceedings of National Conference “Recent Advances in IT, Management and Social Sciences”, Manegma - 2015, Mangalore on 23rd April, 2015, ISBN No. 978-81-929306-6-4.
7. K. Krishna Prasad & P.S. Aithal “Massive Growth of Banking Technology with the Aid of 5G Technologies” Proceedings of National Conference “Recent Advances in IT, Management and Social Sciences”, Manegma - 2015, Mangalore on 23 April, 2015, ISBN No. 978-81-929306-6-4.
8. P. S. Aithal & K. Krishna Prasad “The Growth of 4G Technologies In India- Challenges and Opportunities” Proceedings of National Conference “Innovative Practices in IT, Management, Education and Social Sciences” October 17th, 2015, ISBN No. 978-81- 929306-8-8.
9. P.S. Aithal, Benefits, Challenges and Prospects of Online Retail Banking in India. Presented at National Conference on Management of “Emerging Sectors” : New Paradigms and perspectives, held at Bapuji Institute of Management Studies, during 15 & 16 April, 2005, Davangere,
10. P.S. Aithal, Presented research paper titled “Mobile Business in Developing World: An Innovative Technology based competitiveness in Productivity enhanced Business Transaction” Dr. P.S. Aithal, at European Productivity Conference (EPC) 2009 held during 28-30th October 2009 at Grimsby, U.K.
11. P.S. Aithal, Security Issues in Online Financial Transactions with Special Reference to Banking Industry, by P.S. Aithal, Srinivas Institute of Management Studies, Mangalore, & K.V.M. Varambally, Manipal Institute of Management, Manipal published in Quality in Service Sector and Managerial Challenges – Allied Publisher Pvt. Ltd. 2006, Page 103- 114, ISBN 81-7764-992-2.
12. P.S. Aithal, “Comparison of Conventional and M-business based on the framework of Ideal Business Model” in National Conference “E-Learning, E-Business and E-Governance” on 24th January, 2015 at Srinivas Institute of Management Studies, Pandeshwar, Mangalore. ISBN No. 978-81-929306-4-0
13. P. S. Aithal, “Recommendations on Policy & Regulatory Guidelines for Mobile Banking in India” Proceedings of National Conference “Recent Advances in IT, Management and Social Sciences”, Manegma - 2015, Mangalore on 23rd April, 2015, ISBN No. 978-81-929306-6-4.

14. P. S. Aithal, "Factors Affecting Banker's Perspective on Mobile Banking" Proceedings of National Conference "Recent Advances in IT, Management and Social Sciences", Manegma - 2015, Mangalore on 23rd April, 2015, ISBN No. 978-81-929306-6-4.
15. P. S. Aithal & K. V. M. Varambally, "Customer Perspective on Online Mobile Banking in India - An Empirical Study" Proceedings of National Conference "Recent Advances in IT, Management and Social Sciences", Manegma - 2015, Mangalore on 23rd April, 2015, ISBN No. 978-81-929306-6-4.
16. P. S. Aithal "Review on various E-Business and M-Business Models & Research Opportunities" Proceedings of National Conference "Innovative Practices in IT, Management, Education and Social Sciences" October 17th, 2015, ISBN No. 978-81-929306-8-8.
17. P. S. Aithal, "A Review on Opportunities and Challenges for Mobile Business Activities in India" Proceedings of National Conference "Innovative Practices in IT, Management, Education and Social Sciences" October 17th, 2015, ISBN No. 978-81-929306-8-8.
18. Dr. A. P. Achar & Ramesh Pai A., "E-Commerce Business Model: Businessman's Perspective" in National Conference "E-Learning, E-Business and E-Governance" on 24th January, 2015 at Srinivas Institute of Management Studies, Pandeshwar, Mangalore. ISBN No. 978-81-929306-4-0.

#### **Working Papers:**

1. A conceptual study on Why Mobile Banking Services are not accepted by majority of professionals in India
2. An online comparative study on mobile banking financial transaction of major nationalized banks in India
3. A conceptual study on challenges of 4G technology in reaching out all states of India
4. A study on Impact of 4G Technology in enhancing online banking services
5. An online comparative study on major 4G services providers

#### **Coordinator of the Research Center:**

Dr. Krishna Prasad K.  
Associate Professor  
College of Computer Science and Information Science  
Pandeshwar,  
Mangaluru-575001

#### **Email and Links of Popular Research Work Uploading Sites**

Email: [karanikrishna@gmail.com](mailto:karanikrishna@gmail.com), [krisshnaprasadkcci@srinivasuniversity.edu.in](mailto:krisshnaprasadkcci@srinivasuniversity.edu.in),  
[Google Scholar Profile \(https://scholar.google.co.in/citations?user=g2I5sKEAAAAJ&hl=en\)](https://scholar.google.co.in/citations?user=g2I5sKEAAAAJ&hl=en)  
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[Academic.Edu Profile \(https://independent.academia.edu/KrishnaPrasad167\)](https://independent.academia.edu/KrishnaPrasad167)  
Personal Website: [www.krishnaprasadk.website](http://www.krishnaprasadk.website)  
College Website: [www.srinivasgroup.com](http://www.srinivasgroup.com)  
University Website: [www.srinivasuniversity.edu.in](http://www.srinivasuniversity.edu.in)

#### **Director:**

Prof. Dr. P. S. Aithal  
Principal & Director, Srinivas Institute of Management Studies, Pandeshwar,  
Mangalore, 575 001  
Vice-Chancellor, Srinivas University, Mukks, Mangalore,

Emails: [psaithal@gmail.com](mailto:psaithal@gmail.com)

Personal web page : [www.psaithal.blogspot.com](http://www.psaithal.blogspot.com)

Company Website : [www.srinivasgroup.com](http://www.srinivasgroup.com)

University Website : [www.srinivasuniversity.edu.in](http://www.srinivasuniversity.edu.in)