



Mangalore University  
Karnataka



Government of India  
Ministry of Human Resource  
Development

**ONE WEEK GIAN COURSE ON**  
**DIGITAL PAYMENTS: Technology for Cashless Society**  
**23 - 27, July 2018**

**Preamble:** Payment is the process of transferring money from payer to payee through payment instruments, payment processing and payment settlement. An E-payment system utilizes information and communications technologies & integrated circuit card, cryptography, and telecommunications networks to transfer Monetary Values electronically. The fundamental changes in socio-economic trends and the financial infrastructure of the nation has made it essential to move to a cashless society. The payment system is the infrastructure which comprised of institutions, instruments, rules, procedures, standards, and technical, established to affect the transfer of monetary value between all the parties. With the advent of modern technologies in telecommunications, infrastructure and protocols, future payments will be made through e-payments by Business to Business, Business to Customer, Customer to Government.

**Teaching Faculty:**

**Prof. H. R. Rao**

Prof. Rao is a Professor of Computer Science, UTSA and AT&T Distinguished Chair in Infrastructure Assurance and Security, San Antonio College of Business, the University of Texas.



Prof. Rao, a graduate of Purdue University and the FBI Citizens Academy, published 200 papers, 125 in Journals, several best paper at ISR, AMCIS & ICIS and co-edited Four Books and he is a chair of IFIP WG 8.11/11.13, Co-editor in chief of IS Frontiers, Advisory Editor of DSS, Associate Editor of ACM TMIS and senior editor at MIS Quarterly. Recipient of Fulbright fellowship in 2004, ISSD Fellow Award in 2016 and research funding of the National Science Foundation, the Department of Defense and the Canadian Embassy.

For details: <http://business.utsa.edu/faculty/hrrao/>

**Coordinating Teaching Faculty:**



**Prof. B.H. Shekar**

He is a Professor of Computer Science and Special Officer (Administration), Mangalore University. He received his Ph.D in Computer Science from University of Mysore.

Prof. Shekar has published nearly 145 articles in International and National level Journals and Conferences, in the area of Pattern Recognition, Image Processing, Database Systems and Data Structures. Awarded DAAD fellowship to carry out part of his research work University Nuremburg, Germany during 2004 and Commonwealth Academic fellowship to carry out his Post-doctoral work at University of Surrey, UK during 2014 and Teachers Fellowship, DRDO Fellowship and NMS scholarship during his Research, Master's and Graduate Studies. Successfully completed two collaborative project works with Moscow State University, Moscow awarded under DST-RFBR sponsorship and a bilateral workshop with Moscow State University, awarded under DST-RFBR sponsorship: Emerging Applications of Computer Vision-2011.

<https://mangaloreuniversity.ac.in/drbshekar>

**COURSE CONTENTS:**

**INTRODUCTION TO MONEY**

Money and E-pay systems, Fiduciary, scriptural, Token & notational money, World banking, central and commercial banks, Money transfers: checks, e-transfer.

**TOKENIZATION FUNDAMENTALS**

Tokenization Approaches, EMVco Payment Tokens - Flows, Roles, and Data Elements.

**AUTOCLEARING & SETTLEMENT SYSTEMS**

Payment graphs, RTGS, NEFT, Automated clearing, ATMs, Hong Kong and U.S. bankings, Fedwire, CHIPS and SWIFT.

**EPAYMENT SECURITY & DIGI- SIGNATURES**

Digital certificates, Public-key, Digital IDs and remote authentication, SSL/TLS Protocol and credit cards, SET and Visa 3D-Secure.

**SMART & STORED-VALUE CARDS, OCTOPUS**

Smart card and security, RFID cards, PIN verification, Smart Debit and Credit, Gift card technology and Octopus.

**MICROPAYMENTS, MOBILE PAYMENTS**

Micropayment systems: brokers, Script systems: Payword and MicroMint, Peppercoin, MR1 and MR2, Wireless payments.

**DIGITAL WALLETS**

Google wallet, Obopay, Apple Pay, Android Pay vs Samsung Pay vs Chase Pay, Visa Checkout, MasterCard, MasterPass, and AmEx Express, P2P Mobile Apps, M-Pesa Case Study.

**P2P, E-CASH & VIRTUAL MONEY SYSTEMS**

P2P payments: PayPal, Anonymity, Digital denominations, Chaum's double-spending protocol, Virtual currencies and Bitcoin.

**E-INVOICE PRESENTMENT AND PAYMENT**

E-statement, Biller & customer service providers, Bill data mining, Invoice elimination: SBT, Future of e-Payment, Braintree, Stripe, and We-Pay.

**WHAT'S NEXT?**

In-App Payments - Use Cases and Implications, Buy Buttons - Evolution or Revolution? Digital Payments and the Internet of Things.

**Who Should Attend?**

- ❖ Students at all levels (BTech/BE/ME/MTech/MCA/MSc/MBA/MCom/PhD)
- ❖ Faculty from Universities and Technical Institutions
- ❖ Administrative Personnel from Government & Private Sectors
- ❖ Researchers from Industry

**Registration Fee**

- ❖ UG/PG Students: Rs. 1000/-
- ❖ Research Scholars: Rs. 2000/-
- ❖ Faculty/Administrative Personnel: Rs. 3000/-
- ❖ Freelancer/Industry Participants: Rs. 5000/-
- ❖ International Participants : 300/- USD

The participants will be provided an accommodation on payment basis.

**For Details & Registration**

<https://mangaloreuniversity.ac.in/gian/>

Email: [gian.bhs@gmail.com](mailto:gian.bhs@gmail.com)

**Registration Closing Date**

16<sup>th</sup> July 2018

**Course Coordinator**

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