DEPARTMENT OF COMPUTER APPLICATIONS
DR.N.G.P ARTS AND SCIENCE COLLEGE
COIMBATORE-641048

News Letter 2015- 2016

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ABOUT THE DEPARTMENT

The Department of Computer Applications was established during the year 2007-2008 after the bifurcation of Computer Science.

The Department comprises 12 faculty members (with 09 female and 03 male) who are dedicated and sincere. 11 faculty members completed M.Phil degree and 2 faculty members completed Ph.D programme and 4 faculty members are pursuing Ph.D programme. The department consists of 339 students at UG level. The students are motivated to handle seminars and to participate in group discussions. Apart from good academic performance, the department encourages participation in the co-curricular and extra-curricular activities to bring out the talents in students. As the course is in high demand there are two sections with full intake of 60 in each section.

Activities for the Academic year 2015-2016
Association Activities

Guest Lectures

- Guest Lecture **on "Responsive web design"** held on **25th June 2015** by Mr.M.Karthikeyan**, Director**, Smartmobian, Chennai.
- Guest Lecture on **"Project Guidelines"** held on **7th July 2015** by **Ms.A.Gayathri,** Application Developer, Vee Explorer, Coimbatore.

Inter-departmental meet

- One day Inter Departmental Meet **"Tech-knowledge 2015"** held on **21th September 2015.** Technical Events Paper Presentation, Code Generation, Web Designing, short film and type master were conducted.

Intra-departmental meet

- One day Intra Departmental Meet held on **21th December 2015.** Paper Presentation, Connection and Technical Session were conducted.

Workshop

- Workshop on **"PHP PROGRAMMMING"** held on **22nd August 2015** by **Mr.P.Anand,** Software Engineer, Skava systems, Coimbatore.
- Workshop on **"Android Application Development"** held on **4th and 7th September 2015** by Mr.M.Sowrimalaiyan, Application Developer, Suriya Tex Solution and Apex Multimedia, Coimbatore.

Seminar

Seminar on **""**"Big data with Case studies" held on **11th September 2015** by Dr.E.Chandra Blessie Associate Professor, Department of Computer Applications, Nehru College of Management, Coimbatore

Placement Readiness Programme

- Placement Readiness Programme on **""Mathematics for Competitive Exams and Solving Puzzles"** held on **3rd July, 2015.** by **Prof.R.Kandasamy,** Director-Department of Mathematics, Dr. N.G.P. Arts and Science College, Coimbatore.
- Placement Readiness Programme on **"Idioms and Phrases for Interview" held on the 7th July, 2015** by **Ms.K.Nagalakshmi,** Assistant Professor**,** Department of English, Dr. N.G.P. Arts and Science College, Coimbatore.
- Placement Readiness workshop **held on the** 16.02.16 &18.02.16 by **Kadamai Ravikandan**, Effective Communication Faculty, Motivational Trainer, Speak English centre, coimbatore.

Extension Activity

- Extension Activity on **"Role of computer in education"** for students of VIII Standard, Panchayat union middle school, Veriyampalayam held on 29th July 2015 by our BCA Students.

- Extension Activity on **"**Online Scholarship Examination**"** for students of VIII Standard, Panchayat union middle school, veriyampalayam held on 29th January 2016 by our BCA Students.

Online Training Programme

- Training programme through ICT on Advanced C through Spoken Tutorial from June2015.
- Training programme through ICT on Advanced C++ through Spoken Tutorial from June 2015.

Linkages with Professional body

The Department has linkage with Professional body "**Computer Society of India**" and has student Branch " **DR N.G.P CSI Student Chapter**" for the betterment of the students through number of student development programmes .

Academic Achievements

Pass percentage
Final year BCA students have secured **94 %** (out gone) result for **April 2015** examinations.

Proficiency

- First Year T.Gayathri I BCA 'B' has secured 86%
- Second Year P.C Divya Priya of II BCA 'A' has secured 91%
- Third Year R.Indira of III BCA 'B' has secured 87%

Sports Achievements

- S .Prabhu ,I BCA 'A' National level participation in Power Lifting.
-

Placement Achievements

97 students of our department have been offered in various MNC'S such as TechMahindra - 1 Students, Wipro -31 , Hexaware Technologies-1,Infosys IT-6,IBM-2,Accenture-15 TCS 26, CTS 7 , Reliance – 11 ,AGS-2,DICOM-3, Vee Technologies-7, EP Technologies-8,HDFC-6,Hinduja global-4,IDBI Federal bank-3.

Achievements by the Student in Inter college competitions

More than **50 students** from **BCA** eagerly participated in various competitions like **paper presentation, debugging, quiz, marketing** etc which was conducted by various colleges.

Achievements by staff
Publications by Faculty

1. Mr. R.Rajesh kanna published an article "Efficient MAC Based AODV Routing Protocol to improve the efficiency of MANET" in Journal of Computer science and Enginneering with ISSN 3785-0855- Vol 2, Issue6 August 2015.
2. Ms.K.Suguna published an article "Literature review on data mining techniques" in International Journal of computer technology and applications with ISSN 2229-6093Vol 6, Issue 4 August 2015.
3. Bharathi Anbarasan published an article "A Survey on Detecting Software Clones in Web Pages for Code Privacy" in International Journal of Advanced Research in Computer Science and Software Engineering Volume 5, Issue 9, September 2015 with ISSN: 2277 128X
4. R.Kousalya published an article" Webpage change detection using data mining techniques and algorithms" in International Journal of computer science and engineering technology, Vol 6,Issue 10,Oct 2015,Page No 608, ISSN: 2229-3345
5. Dr.D.Devi Aruna published an article "A Survey on Different Disease and Image Processing Techniques in Sugarcane Crops", International Journal for Scientific Research & Development,Vol. 3, Issue 11, 2016, ISSN (online): 2321-0613.

6. A.Nimala published an article on " An Investigation of Image Segmentation Method for Remotely Sensed Hyperspectral Images with Region Object Aggregations" in International Journal of Computer Applications, Vol 135,Number 8, Feb 2016, ISSN: 0975 – 8887.

Total paper presentations: 6

Book published

Mr. R. Rajeshkanna has published a book titled "Recent Trends in Enterprise Information Technology" (ISBN 978890773072)

Participation by Faculty

1. Ms. R.Kousalya particpated in workshop " Introduction to PHP Programming" conducted by ICTACT, SNR Sons college on 12th and 13th August 2015,Coimbatore.

2. *Dr*.D.Devi Aruna participated in seminar on "Analysis of signal and image processing techniques for diagnosis of neuro and cardiac abnormalities" at Kongu Engineering College, Perundurai on 16th October 2015 to 17th October 2015

3. A.Nirmala participated in workshop" Research challenges and security issues in wireless networks" at Dr.N.G.P Institute of technology on 7th November 2015 to 11th November 2015

4. R.Rajesh Kanna participated in workshop" Research challenges and security issues in wireless networks" at Dr.N.G.P Institute of technology on 7th November 2015 to 11th November 2015

5. P.Dinesh Kumar participated in workshop" Research challenges and security issues in wireless networks" at Dr.N.G.P Institute of technology on 7th November 2015 to 11th November 2015

6. B.Ramya participated in workshop" Research challenges and security issues in wireless networks" at Dr.N.G.P Institute of technology on 7th November 2015 to 11th November 2015

7. K.Gomathy participated in workshop" Research challenges and security issues in wireless networks" at Dr.N.G.P Institute of technology on 7th November 2015 to 11th November 2015

8. K.Suguna participated in workshop" Research directions in Data mining – Statel level (UGC)" at Gobi Arts and Science college on 22nd January 2016 to 23rd January 2016.

9. S.Poorana Senthilkumar participated in FDP " Mobile app Development" at Sengunthar Engineering college erode on 15th December 2015 to 19th December 2015 **.**

10. Mr.P.Dinesh Kumar has particpated in 2 days Faculty Development Program on People Empowering People by ICT Academy of Tamilnadu at Coimbatore Institute of Technology, Coimbatore on 28th and 29th August 2015.

Inter Departmental Meet "Tech-knowledge 2015

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STUDENTS ARTICLES

1. THE ROLE OF SOCIAL MEDIA IN AGRICULTURE

AGROPEDIA

INTRODUCTION

Agriculture is important to India's economy. The need for current and relevant information by professionals in this sector for sustainable agricultural production is a key issue for the nation Information communication technology facilities are greatly influencing how information is sourced and disseminated these days, and the latest trend is to use social networking sites.

Traditionally, agricultural information exchange has been dominated by industrial media such as newspapers television and magazines. In recent years, however, technology awareness and computer literacy are increasing across all demographics and various forms of social media are being used more and more by people looking for news, education another information related to agriculture.

Social media can be defined as internet based application that allows the creation and exchange of user-generated content. It is the blending of technology and social interaction that creates value in these types of media.

WHY SOCIAL MEDIA

Is social media important to agriculture? While many outsiders would never think to associate farmers, dairy farmers, animal keeper with Face book and Twitter, they actually represent on a large group of active users on both of social networking sites. According to some farmers and tech savvy scientists, social media is an indispensable communication tool for farmers to connect with each other and educate others about their industry.

A recent article showcased as a farmer from foreign country uses social media to educate dieticians, politicians and consumers about farming. They also connect with framers around the world running many different types of farms. We personally believe that more success encouragement younger farmers to jump on board with social media. While some farmers are resistant to social media, many are beginning to see the benefits of building relationships with order farmers and leaders in other farmers and leaders in other industries and scientific community and continues to press the issue because in his opinion. Social media is another tool that can help farmers maximizes output and profits.

Agriculture is becoming more diverse as a population and we are becoming further removed from the farm, it is important that agriculture explore different communication options. New generations removed from the farm, meaning it has been two generations or more since they have lived on a farm or other agriculture related industry.

AGROPEDIA

Agropedia is an open ended knowledge sharing platform. It is an online agricultural knowledge repository that makes agriculture information available to scientists, researchers, extensions personnel and the agricultural community and allows them to search and make contributions to the vast knowledge base. It is a collaborative project of seven consortium partners'viz. ICRISAT¬-Hyderabad, NAARM-Hyderabad, IIT-Kanpur, IIT Bombay, GBPUAT-Patnagar, UAS-Raichur and IIITM-Kerala. Project is backed by government of India and sponsored by the World Bank through the National Agricultural innovation project was launched on 12 January 2009. Many social enterprises are currently addressing the agriculture space, attempting to bring new technologies to rural areas to improve the efficiency and profitability of formers.

Agropedia works as a one-stop hub for information on the agriculture ecosystem. The Wiki-style platform provides, among other things, a space for stakeholder interaction, best practice sharing, news updates, and an online library certified by the Indian Council of Agricultural Research (ICAR). Agropedia has also collaborated Krishi Vigyan Kendra, a training and education center for farmer and rural entrepreneur's, to develop "Voice Krishi Vigyan Kendra" (VKVK), a mobile-based advisory system that send SMS and voice-based messages to field officers and farmers around the country.

S.ARUNKUMAR
III BCA A

2. MOBILE PHONE CLONING

What is cloning???

Cell phone cloning is a technique wherein secured data from one cell phone is transferred into another phone. The other cell phone becomes the exact replica of the original cell phone like a clone. As a result, while calls can be made from and received by both phones, only the legitimate subscriber is billed as the service provider network does not have a way to differentiate between the legitimate phone and the "cloned" phone. The cloner can set the options to ring his phone when you make a call and you will have no idea that the cloner is listening from his own mobile. He can read text message, phone book entries, look at pictures etc. Also he can dial phone numbers from their phone and a whole lot more. Though communication channels are equipped with security algorithms, yet cloners get away with the help of loop holes in systems. So when one gets huge bills, the chances are that the phone is being cloned. Millions of cell phones users, be it GSM or CDMA, run at risk of having their phones cloned.

How it is done?

Cloning is the process of taking the programmed information that is stored in a legitimate mobile phone and illegally programming the identical information into another mobile phone. The culprits clone and hack into your phone using software's that are easily available, once the software is installed they just need the unique IMEI number of the phone and they can digitally imprint these numbers on any of the phone they want. Once this is done they can send messages, make calls to anyone and the person whose phone has been cloned and hacked will be held responsible.

How serious is the Cloning Fraud Problem?

Each year, the mobile phone industry loses millions of dollars in revenue because of the criminal actions of persons who are able to reconfigure mobile phones so that their calls are billed to other phones owned by innocent third persons. .

How to checkout whether your cellphone is cloned or not ?

Frequent wrong number phone calls to your phone, or hang-ups.

Difficulty in placing outgoing calls.

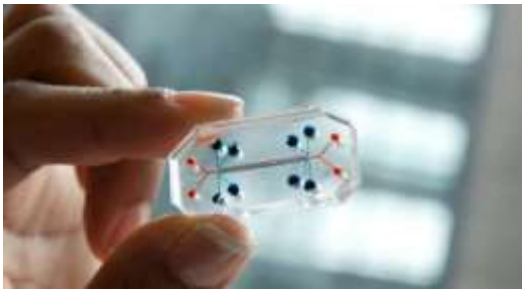
Difficulty in retrieving voice mail messages.

Incoming calls constantly receiving busy signals or wrong numbers

RENUKA.S
MANJULA.N
I BCA - B

3. ORGAN CHIP

Many viruses which go on to infect individual organs to various degrees, hang out in white blood cell reservoirs where they can co (Whole organs on a chip coming to diagnostic centers near you)

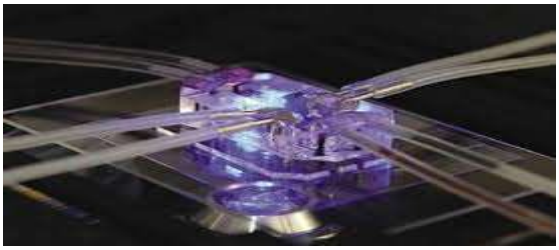


The organs-on-a-chip has become an important way to test the effects of chemicals or radiation on different kinds of cells. The military, in particular, has been interested to use them to study how poisonous agents like ricin, botulinum toxin, or anthrax attack different organs. Ideally, there would be a way to integrate individual subunits into a single body-on-a-chip where all the different elements could interact in a more realistic way. Researchers in the field (and the various funding bodies that support them), got together a meeting of the American Society for Microbiology in DC to discuss how this might best be done. Several concepts have previously been fleshed out for devices that mimic the biological particulars of everything from liver or lung, to more refined tissues like the brain. The key now is to integrate some of the other intangibles that make the body work as a whole — the more nebulously distributed organs like the vasculature, skeleton, or skin.

Donald Ingber, an FDA-supported researcher from Harvard's Wyss Institute, has developed a "bone marrow on a chip" device. Bone marrow, among other things, is where blood cells get made. The effects of radiation, and many toxic chemicals, are most acutely absorbed there. These kinds of nasties often lead to the "liquid tumor" class of cancers — the leukemia's and lymphomas where out of control cells proliferate and then circulate as single entities in the blood or lymph ntinually gain infective passage to the entire body.

An article mentioned that the EPA is planning to announce a new $18 million war chest to combine livers on chips with other devices that simulate fetal membranes, mammary glands, and developing limbs. These regions have been shown to be particularly susceptible to environmental pollutants like dioxin and biphenyl A. Like many harmful chemicals, their metabolite products generated by the action of various enzymatic systems of the liver are often what do the real damage.

Sometimes the fastest way to find out what chemical, bacteria, virus could be causing your problem is not to try to Positively ID the invader but rather to analyze their metabolic effects on the body. As it happens, different organs have come to exert their wills upon each other in many idiosyncratic ways. Gross physiologic observables like heart rate, blood pressure, and blood composition are in part controlled by rare peptides or hormones often made by just a single organ. In quirky yet predictable feats of evolution, via myriad migrations from salt water to fresh water and back, ultimately through mud to air, our lungs, kidneys and guts have had their mutual allegiances repurposed and honed for the benefit of the whole. The plan for the integrated organ on a chip is to have working devices in researcher's hands in five years.



On the other diagnostic front, there are new gene or antigen array chips that can potentially sequence or otherwise capture any villain as fast as you can feel it. No doubt both approaches with by of value in keeping our military, and hopefully our civilians healthy.

V.KANIMOZHI
C.VIJAY
III BCA-B

4. EWASTE

E-waste is a popular, informal name for electronic products nearing the end of their "useful life." Computers, televisions, VCRs, stereos, copiers, and fax machines are common electronic products. Many of these products can be reused, refurbished, or recycled.

Electrical waste contains hazardous but also valuable and scarce materials. Up to 60 elements can be found in complex electronics.

In the United States, an estimated 70% of heavy metals in landfills comes from discarded electronics.

RECYCLING:

Recycling raw materials from end-of-life electronics is the most effective solution to the growing e-waste problem. Most electronic devices contain a variety of materials, including metals that can be recovered for future uses. recycling reduces the amount of greenhouse gas emissions caused by the manufacturing of new products.

The processes of dismantling and disposing of electronic waste in the third world lead to a number of environmental impacts as illustrated in the graphic. Liquid and atmospheric releases end up in bodies of water, groundwater, soil, and air and therefore in land and sea animals – both domesticated and wild, in crops eaten by both animals and human, and in drinking water.

The environmental impact of the processing of different electronic waste components

E-Waste Component	Process Used	Potential Environmental Hazard
Cathode ray tubes (used in TVs, computer monitors, ATM, video cameras, and more)	Breaking and removal of yoke, then dumping	Lead, barium and other heavy metals leaching into the ground water and release of toxic phosphor
Printed circuit board (image behind table - a thin plate on which chips and other electronic components are placed)	De-soldering and removal of computer chips; open burning and acid baths to remove final metals after chips are removed.	Air emissions as well as discharge into rivers of glass dust, tin, lead, brominated dioxin, beryllium cadmium, and mercury
Chips and other gold plated components	Chemical stripping using nitric and hydrochloric acid and burning of chips	Hydrocarbons, heavy metals, brominated substances discharged directly into rivers acidifying fish and flora. Tin and lead contamination of surface and groundwater. Air emissions of brominated dioxins, heavy metals and hydrocarbons

Plastics from printers, keyboards, monitors, etc.	Shredding and low temp melting to be reused	Emissions of brominated dioxins, heavy metals and hydrocarbons
Computer wires	Open burning and stripping to remove copper	Hydrocarbon ashes released into air, water and soil.

MANISH KUMAR.S
RIJATH THOUFIC.S
II BCA B

5. WINDOWS 10

Windows 10 is a New Chapter for Microsoft On Jan 21, Microsoft raised the curtain on the next act for Windows 10 and provided some significant insight into how the operating system and Microsoft are evolving.

As a quick recap, Windows 10 is currently going through a year-long "preview" period. This started with the Technical Preview in September 2014, and will end with the release of Windows 10 which we expect to see this coming September or October. In between, Microsoft is continually updating the preview to test and demonstrate new capabilities and aspects of the OS. The announcements this week are aligned with the next major update of the preview: "Technical Preview 2". This update focuses more on consumer rather than enterprise features which we expect will be expanded in the coming months. The new preview includes the revamped tablet experience, a more complete feature set, and the first look at the upcoming phone UI. While there is still work to be done, Microsoft is demonstrating progress from the original preview. For those who had issues with Windows 8's UX, Windows 10 should be more comfortable to work with. Those who like Windows 8's touch UX will appreciate how the experience has been evolved to better adjust to different types of tablet and 2-in-1 devices. All users will appreciate how the user can control the experience based on their preferences.

Along with the enhancements to the technical preview, Microsoft also made a number of other announcements about Windows and its ecosystem. Now, we see about a major feature in windows 10.

Windows 10 changes applications

With Windows 8 Microsoft introduced "Metro" apps which failed to catch on with developers as Microsoft hoped and remain a weakness of the ecosystem. These apps were like the tablet apps on other platforms in that they were touch oriented, downloaded from an app store, and ran full screen. While there were similarities to apps that existed on Windows Phone they were distinct and came from a separate store, with different terms and conditions and administration options. With Windows 10, Microsoft has melded these into a single "Universal app" model which runs across all Windows devices (phone, tablet, PC, Xbox, and even some new types of devices). Universal apps on Windows 10 have done away with many of the clumsy issues from the Windows 8 days. Most notably when running on a PC they now run in a window alongside all other applications and are virtually indistinguishable from legacy Windows applications. This is important, because it extends the reach of these apps to traditional non-touch PC users. They are easier to install, update, and secure. They are all signed, and run isolated from other apps on your system.

Saravanan.S
M. Vishnu Manigandan
I BCA 'A'

6. FIVE REASONS WHY ANDROID WEAR HAS NOT BEEN A SUCCESS

When Google announced Android Wear, it was highly expected that Google will be able to replicate Android's mobile success and take it forward with the wearable's. But it seems like the plans have not gone according to their expectations.

Recent report on wearable market via Canalys has deemed Motorola Moto 360 as the best-selling Android Wear (AW) in the market. Which hardly comes as surprise, considering Motorola, Samsung, LG, Sony and Asus are the only brands to announce their respective wearable watch last year?

Overall, wearable business has done well with 4.6 million units sold but the fact that only 720,000 of those were running on AW is a sight of concern for Google and its wearable team. So, when AW has the most competent product in the form of Moto 360, why hasn't the supporting wearable platform been accepted by consumers across the globe? The fact that 4.6 million wearable sold is an exciting reading to gauge but how many of those actually constitute under the smart watch segment? And that is exactly the reason behind AW holding less than one-fifth of total wearable sold last year.

Here are some cases to consider for Android Wear's poor showing:

Too early into the space

Last year was seen as the birth of a new form factor and how technology was getting closer to us, day-by-day. Android Wear was supposed to enable wearable to become unified under one platform (like how mobile has become) but that hasn't proven to be the case. Taking Google's heed, Apple smartly decided to weather the initial storm and bring out Apple Watch for the public, after reading the market's traction.

Wearable's need to evolve

As you can see with the numbers, fitness band seems to have been the primary benefactors of this segment. The likes of FitBit, Jawbone etc. have rallied as they are more affordable than smartwatch (running AW). Watches right now are, not functionally worthy of its value, or too similar to fitness bands in lot of aspects.

It's not the hardware but software

While Android isn't the reason behind many manufacturer's hardware fall but same cannot be said for its wearable cousin. Lot of issues crept up with the first version of AW and similar pattern has been observed with the newer version as well. Google has to find the right formula between software and hardware to get the platform up and running, otherwise Apple might have a bigger say in 2015 with its much delayed Apple Watch (running on iOS). Brands have gotten tired with AW and they've started (or already made) software for wearables on their own.

Too much happening

Wearables were introduced purely to ease the use of your phone and offer you convenience of communicating without having to hold your device in your hand. But by adding apps, virtual keyboard, fitness and music among others, Google has somewhat lost the true essence of having a unified wearable platform. AW needs clarity, simplicity and effective functionality, all principles that the search giant preaches wholeheartedly.

Battery

Talking about AW doesn't end without referring to its maligned battery life support. Yes, with Lollipop version, things have marginally improved but wearables are meant to last (at least) for couple of days if not more but with AW (as seen on Moto 360), its case of charging once (or twice) in a day. And for its worth, you won't really bother paying anywhere close to Rs 10,000 for such a product, let along Rs 18,000 (price of Moto 360 in India).

In the end all we'd like to say is, 'dear Google we need the AW to become with wearable, just like how Android teams up with mobile seamlessly'. And before Apple manages to steal your thunder, we fully expect you to find the right balance with Android Wear (hopefully at Google I/O 2015).

MAHENDRAN .S
KIRAN RAJ .A
II BCA -A