VIVA INSTITUTE OF TECHNOLOGY
VIRAR

BOOTSTRAP
THE NEWSLETTER OF COMPUTER ENGINEERING DEPARTMENT

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Vision
To develop competent citizens who will be valuable contributors in the field of technology and science.

Mission
1. To create an environment this will stimulate research, creativity and innovation.
2. To provide students with comprehensive knowledge of the latest developments in Computer Engineering.

Program Educational Objectives
1. To equip students with solid foundation for solving hardware and software problems as per the needs of the corporate sector.
2. To develop the ability among the students to understand and interpret technical issues which is important for creating dynamic software.
3. To create an environment for inculcating leadership quality by nurturing raw talent.
4. To empower students and faculties for research and innovations.
5. To inculcate ethical, behavioral, organizational and social values.

“Each new day is a blank page in the diary of your life. The secret of success is in turning that diary into the best story you possibly can.”

ARA

Project Ara is the codename for an initiative that aims to develop an open hardware platform for creating highly modular smartphones. The platform will include a structural frame or endoskeleton that holds smartphone modules of the owner's choice,
such as a display, camera or an extra battery. It would allow users to swap out malfunctioning modules or upgrade individual modules as innovations emerge, providing longer lifetime cycles for the handset, and potentially reducing electronic waste. Project Ara smart phone will begin pilot testing in Puerto Rico later 2015 with a target bill of materials cost of $50 for a basic grey phone.

The project was originally headed by the Advanced Technologies and Projects team within Motorola Mobility while it was a subsidiary of Google. Although Google has since divested Motorola to Lenovo, it retained the Advanced Technologies and Projects group—which has since worked under the direction of the Android division. Google says the device is designed to be utilized by "6 billion people"; including 1 billion current smart phone users, 5 billion feature phone users, and 1 billion future user not currently connected. Google intends to sell a starter kit where the bill of materials is US$50 and includes a frame, display, battery, low-end CPU and Wi-Fi.

-Sumit Mangela(TE)

**SOLI**

your hands and fingers. Shaped as a chip the size of a quarter, Soli can be embedded in most wearable’s and electronic devices. The initial applications for the radar system are smart phones and smart watches.

Project Soli was revealed during Google I/O 2015 on May 29, 2015.

Soli is a 60GHz RF transmitter that uses board beam radar to measure everything from spectrogram to Doppler image to IQ. Using these information, the tiny circuit board is able to determine the hand size, motion and velocity. It then uses machine-learning to translate these movements to pre-programmed commands.

Soli functions within 60GHz radar spectrum at up to 3000 to 10,000 fps.

The software API for Soli will be released late 2015.

Features:

- Translates hand gestures and finger movements into commands for your smart devices.
- The sensor can track sub-millimeter motions at high speed and accuracy.
- Small gestures such as turning of a nub or sliding of a page work fine.
- Works through materials such as fabric.

-Dattaram Naik(TE)
**LI-FI (LIGHT-FIDELITY)**

Li-Fi, as coined by Prof. Harald Haas during his TED Global talk, is bidirectional, high speed and fully networked wireless communications similar to Wi-Fi. Li-Fi is a subset of optical wireless communications (OWC) and can be a complement to RF communication (Wi-Fi or Cellular network), or a replacement in contexts of data broadcasting.

It is wireless and uses visible light communication or infra-red and near ultraviolet (instead of radio frequency waves) spectrum, part of Optical wireless communications technology, which carries much more information, and has been proposed as a solution to the RF-bandwidth limitations. A complete solution includes an industry led standardization process.

- Nitin Daddikar (TE)

**HIKE DIRECT**

According to the company, hike direct is built ground up with a new generation of network solutions. It adds, that hike direct uses Wi-Fi Direct technology systems that help establish peer to peer network connection between two phones. To use hike direct, you need to start a conversation with a friend and choose Hike Direct from the 3 dot menu on top right of the screen. Hike automatically pairs up with the other phone and lets you chat and share files with your friends without the internet.

Users can get this feature by upgrading to the latest version of hike, version 4.0.6 and above, which is available free on the Google Play Store nowadays. Hike Direct on iOS, Windows to follow next year.

The company also announced that it crossed 70 million users last month with 20 billion
Bootstrap is a sleek, intuitive, and powerful front-end framework for faster and easier web development. Bootstrap comes equipped with HTML, CSS, and JavaScript for various web and user interface components.

Mark Otto and Jacob Thornton at Twitter developed bootstrap, originally named "Twitter Blueprint" as a framework to encourage consistency across internal tools. Bootstrap is a free and open-source collection of tools for creating websites and web applications. It contains HTML and CSS based design templates for typography, forms, buttons, navigation, and other interface components, as well as optional JavaScript extensions. It makes development of dynamic websites and web applications easy.

Bootstrap is a front-end framework, an interface for the user, unlike the server side code, which resides on the back end.

Bootstrap is compatible with the latest versions of the Google Chrome, Firefox, Internet Explorer, Opera, and Safari browsers.

Bootstrap gives you ability to create responsive layout with much less efforts. Starting with version 2.0 it supports responsive web design. In version 3.0, Bootstrap adopted a mobile first design philosophy. The version 4.0 alpha release added Sass and Flex box support.

The biggest advantage of using Bootstrap is that it comes with free set of tools for creating flexible and responsive web layouts as well as common interface components. Additionally, using the Bootstrap data APIs you can create advanced interface components like Scrollspy and Type aheads without writing a single line of JavaScript.

-Purva Mestry (B.E)

"All of us do not have equal talent. But, all of us have an equal opportunity to develop our talents.”  
- A.P.J Abdul Kalam

Computer Engineering Department salutes

|| Dr. Avul Pakir Jainulabdeen ||
**TEST YOUR APTITUDE:**

1. 15, 31, 63, 127, 255, (....)
   - A. 513  
   - B. 511  
   - C. 517  
   - D. 523

2. The value of \( \frac{0.1 \times 0.1 \times 0.1 + 0.02 \times 0.02 \times 0.02}{0.2 \times 0.2 \times 0.2 + 0.04 \times 0.04 \times 0.04} \) is:
   - A. 0.0125  
   - B. 0.125  
   - C. 0.25  
   - D. 0.5

3. What will be the day of the week 15\(^{th}\) August, 2010?
   - A. Sunday  
   - B. Monday  
   - C. Tuesday  
   - D. Friday

4. The sum of two number is 25 and their difference is 13. Find their product.
   - A. 104  
   - B. 114  
   - C. 315  
   - D. 325

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**CSI_VIVA-TECH** & with kind support of Computer Department conducted following list of events successfully:

<table>
<thead>
<tr>
<th>Month</th>
<th>Events</th>
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| January, 2015 | 1) Android Application Development seminar  
                 Lecture specially conducted for TE computer students.  
                 2) Entrepreneurship seminar conducted for BE computers. |
| February, 2015 | Present 5\(^{th}\) CSI_VIVA-TECH Newsletter. |
| July, 2015   | Guru virtues seminar on project management.                             |
| September, 2015 | TECHCHASE – 15Events under CSI_VIVA-TECH were:  
                               1) Laser Tag  
                               2) Enable Me  
                               3) Mud Race  
                               and many more …  
                               The CSI_VIVA-TECH successfully organized the second Inter collegiate Technical Festival Techchase-2015 on 3\(^{rd}\)& 4\(^{th}\) of September, 2015. |
| September, 2015 | Wordpress Seminar by Vinit Kubal, Pritesh Gentyala, Sonal Mehta. |
| October, 2015 | ADVANCE JAVA workshop |
RECENT ACHIEVEMENTS OF COMPUTER ENGINEERING STUDENTS

TECHNICAL PAPERS PUBLISHED IN INTERNATIONAL JOURNAL OF COMPUTER APPLICATION (IJCA)-15

1. Sagar Narkar, Rutuja Jamgekar, Supriya Kore & Siddhesh Doiphode—‘DTMF Based Hybrid Robot For Air And Land’ guided by Ms. Ashwini Save

2. Amol Khedekar, Pooja More, Aakash Ilag & Tatwadarshi P.N. – ‘Steganography In Audio Files Using Modified F5 Algorithm’ guided by Ms. Ashwini Save

3. Prabhodh Jadhav, Sayali Waje, Prasad Raut & Sunita Naik- ‘Image Restoration Using Digital In painting And Super resolution’ guided by Mrs. Sunita Naik

4. Subramaniam Seshadri, Ashwin Lohidasan, Rohini Lokhande & Ashwini Save –‘Opinion Mining For Hinglish Words Using Supervised Learning’ guided by Ms. Ashwini Save.

TECHNICAL PAPERS PUBLISHED IN IJERT-15

1. Harshit Damani, Ashwini Bhoir, Akshay Abhyankar & Ashwini Save- ‘Smart city reflecting municipal co-operation for human welfare’ guided by Ms. Ashwini Save.

TECHNICAL PAPER PRESENTATION

Topic :- Linux Voice Synthesizer
Presented By :- Harshal Pandit
Shailendra Nipane
Suraj Jadhav
Hiren Parmar

Achievement :- 2nd Prize
Place :- Universal College of Engineering, Vasai

TORCH - SKULL FLASHLIGHT (ANDROID APP)

Developer: - Nitin B. Daddikar (TE), Tejasvi C. Bargode (TE), Himanshu N. Wadekar (TE)

Harshit Damani (Left), Ashwini Bhoir (Middle), Akshay Abhyankar (Right) With Certificate showing their 3rd place for Smart City app in Project Exhibition at Vidyalankar college of engineering.

Toppers of Last Semester

B.E. Computer:
1st Rank – Priyesh Naik With 80.23%
2nd Rank – Sagar Narkar With 80%

T.E. Computer:
1st Rank – Palak Shah With 9.67 SGPI
2nd Rank – Sonal Mehta With 9.5 SGPI
– Inderjeet Sav With 9.5 SGPI

S.E. Computer:
1st Rank – Sumit Mangela With 9.14 SGPI
2nd Rank – Shrividhya Iyer With 8.89 SGPI

For more info http://www.viva-technology.org