

THE ZENITH

MAY 2024

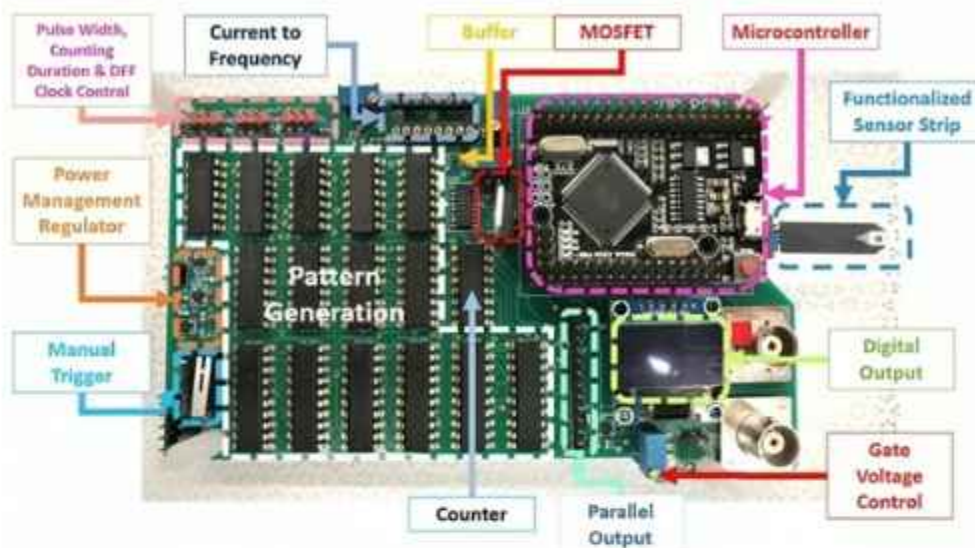
VOLUME 7: ISSUE 3



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Hand-held biosensor makes breast cancer screening fast, affordable, and accurate



The printed circuit board used in the saliva-based biosensor, which can detect breast cancer biomarkers from extremely small saliva samples in about five seconds, costs about \$5. The design uses widely available components such as common glucose testing strips and the open-source Arduino platform. Photo Credit: Hsiao-Hsuan Wan

Researchers report successful results from a hand-held breast cancer screening device that can detect breast cancer biomarkers from a tiny sample of saliva. Their design uses common components, such as widely available glucose testing strips and the open-source hardware/software platform Arduino. A saliva sample is placed on the paper strip, which has been treated with specific antibodies that interact with the targeted cancer biomarkers.

Breast cancer is on the rise, but new tools for early detection could save lives.

In *Journal of Vacuum Science & Technology B*, by AIP Publishing, researchers from the University of Florida and National Yang Ming Chiao Tung University in Taiwan reported successful results from a hand-held breast cancer screening device that can detect breast cancer biomarkers from a tiny sample of saliva. Their biosensor design uses common components, such as widely available glucose testing strips and the open-source hardware/software platform Arduino. "Imagine medical staff conducting breast cancer screening in communities or hospitals," author Hsiao-Hsuan Wan said. "Our device is an excellent choice because it is portable – about the size of your hand – and reusable. The testing time is under five seconds per sample, which makes it highly efficient." The device uses paper test strips treated with specific antibodies that interact with the targeted cancer biomarkers

Hand-held biosensor makes breast cancer screening fast, affordable, and accurate

A saliva sample is placed on the strip, and pulses of electricity are sent to electrical contact points on the biosensor device. These pulses cause the biomarkers to bind to the antibodies and alter the charge and capacitance over the electrode. This produces a change in the output signal, which can be measured and translated into digital information about how much biomarker is present. The design is revolutionary compared to its alternatives. Mammograms, ultrasounds, and MRIs are costly and invasive and require large, specialized equipment, present low-dose radiation exposure, and can take days or weeks to return test results.

"In many places, especially in developing countries, advanced technologies like MRI for breast cancer testing may not be readily available," Wan said. "Our technology is more cost-effective, with the test strip costing just a few cents and the reusable circuit board priced at \$5. We are excited about the potential to make a significant impact in areas where people might not have had the resources for breast cancer screening tests before."

The biosensor requires just a drop of saliva, and it can provide accurate test results even if the concentration of the cancer biomarker in the sample is only one quadrillionth of a gram, or one femtogram, per milliliter. "The highlight for me was when I saw readings that clearly distinguished between healthy individuals and those with cancer," Wan said. "We dedicated a lot of time and effort to perfecting the strip, board, and other components. Ultimately, we've created a technique that has the potential to help people all around the world."

Science Daily
February 13, 2024
Source: American Institute of Physics

Expert Lectures/Seminars/Courses Organised

- Department of Electronics and Telecommunication Engineering of K. K. Wagh Institute of Engineering Education and Research Nashik, Students' Association of Electronics Engineers (SAEE) in collaboration with IETE Nashik subcenter organized an Expert talk on "Let's Learn German" by Mrs. Mrunmayi M. Parchure on 16th March 2024 from 01:00 pm to 03:00pm.

K. K. Wagh Education Society's
**K. K. Wagh Institute of
Engineering Education and Research, Nashik**
Website: www.engg.kkwagh.edu.in
(An Autonomous Institute from A.Y - 2022-2023)

Department of Electronics & Telecommunication Engineering
in collaboration with IETE

Organizes
Expert Talk on

"Let's Learn German"

Ms. Mrunmayi M. Parchure
Specialized German Language Trainer

On 16th March, 2024 From 1.00 pm to 3.00 pm

Join Zoom Meeting
<https://zoom.us/j/94762813007?pwd=bbdPa1R5MFZlVWVwR0huY2FOaFlUT09>
Meeting ID: 947 6281 3007 Password: German

Dr. S. A. Patil(Ugale) U.G. Co-ordinator | Dr. D. M. Chandewkar Dean, Student Affairs, HOD, E & TC Engg. | Dr. K. N. Nandurkar Principal

- Department of Electronics and Telecommunication Engineering of K. K. Wagh Institute of Engineering Education and Research Nashik, Students' Association of Electronics Engineers (SAEE) in collaboration with IETE Nashik subcenter organized a Workshop on "Electronic Security System" by Mr. B. L. Nimbalkar (Technical Head in Sivananda, Nashik) on 23rd March 2024 from 10:00 am to 12:00pm

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Department of Electronics & Telecommunication Engineering
in collaboration with IETE

Organizes
Expert Talk on

**Electronic
Security System**

Mr. B. L. Nimbalkar
Technical Head in Sivananda Electronics, Nashik

On 23rd March, 2024 From 10.00 am to 12.00 pm
Venue: AV Hall, Third floor, E&TC Department, KKWIEER

Dr. S. A. Patil(Ugale) U.G. Co-ordinator | Dr. D. M. Chandewkar Dean, Student Affairs, HOD, E & TC Engg. | Dr. K. N. Nandurkar Principal

Expert Lectures/Seminars/Courses Organised

- Department of Electronics and Telecommunication Engineering of K. K. Wagh Institute of Engineering Education and Research Nashik, Students' Association of Electronics Engineers (SAEE) in collaboration with IETE Nashik subcenter organized an Expert talk on "Career Opportunities in Cyber Security" by Mr. Tanmay S. Dixit (Cyber Journalist & Security Researcher), on 23rd March 2024.

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Department of Electronics & Telecommunication Engineering
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Organizes Expert talk on
"Career Opportunities in Cyber Security"

Mr. Tanmay S. Dixit
Author Cyber Journalist & Security Researcher

On 23rd March, 2024 From 1.00 pm to 3.00 pm
Venue: AV Hall, Third floor, E&TC Department, KKWIEER

Dr. S. A. Pethi (Agate) U.O. Co-ordinator | Dr. D. M. Chandwadkar Dean, Student Affairs, HOD E & TC Engg | Dr. K. N. Nandjekar Principal

- Department of Electronics and Telecommunication Engineering of K. K. Wagh Institute of Engineering Education and Research Nashik, Students' Association of Electronics Engineers (SAEE) in collaboration with IETE Nashik subcenter organized an Expert talk on "Aptitude and Reasoning" by Mr. Sagar Nikam (Founder & Director, ELC Learning Center, Nashik) on 11th March 2024.

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Department of Electronics & Telecommunication Engineering
in collaboration with IETE

Organizes Session on
"Aptitude and Reasoning"

Mr. Sagar Nikam
Founder and Director of ELC Education Learning Center Pvt.Ltd, Nashik

On 11th March 2024 from from 1.00 PM to 3.00 PM
Venue: SE Class & AV Hall, E&TC Department
Attendees: SE (E&TC) Students

S.A. Wankhede Coordinator | Dr. S. A. Pethi (Agate) U.O. Co-ordinator | Dr. D. M. Chandwadkar Dean, Student Affairs, HOD E & TC Engg | Dr. K. N. Nandjekar Principal

Expert Lectures/Seminars/Courses Organised

- Department of Electronics and Telecommunication Engineering of K. K. Wagh Institute of Engineering Education and Research Nashik, Students' Association of Electronics Engineers (SAEE) in collaboration with IETE Nashik subcenter organized an Expert talk on "Advanced PCB Design Techniques" by Mr. Ashwin Bhole (IPC Certified Designer CID), on 16th April 2024.

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Department of Electronics & Telecommunication Engineering
in collaboration with IETE

Organizes Expert Talk on

"Advanced PCB Design Techniques"

Mr. Ashwin Bhole
(IPC Certified Designer CID)

On 16th April, 2024 From 10.00 am to 12.00 pm
Venue: MBA Seminar Hall, Fourth floor, MBA Department, KKWIEER

Dr. S. A. Peltigale | U.G. Co-ordinator
Dr. D. M. Chandwadkar | Dean, Student Affairs, HOD, E & TC Engg.
Dr. K. N. Mandankar | Principal

- Department of Electronics and Telecommunication Engineering of K. K. Wagh Institute of Engineering Education and Research Nashik, Students' Association of Electronics Engineers (SAEE) in collaboration with IETE Nashik subcenter organized an Expert talk on "Applications of Network Security in Practical world" by Mr. Amey Tambe (Director, Softtech Data securities, Pune) on 15th April 2024.

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Department of Electronics & Telecommunication Engineering
in collaboration with IETE

Organizes Expert Talk on

" Applications of Network Security in Practical World "

by
Mr. Amey Tambe
(Director, SoftTech Data Securities, Pune)

On 15th April, 2024 at 1.00 pm

Join Zoom Meeting
<https://zoom.us/j/98954035820?pwd=RGtUZUNqMkFFcEaxonBacGU1NF8ldz09>
Meeting ID: 989 5403 5820 Passcode: security

Dr. S. A. Peltigale | U.G. Co-ordinator
Dr. D. M. Chandwadkar | Dean, Student Affairs, HOD, E & TC Engg.
Dr. K. N. Mandankar | Principal

Expert Lectures/Seminars/Courses Organised

- Department of Electronics and Telecommunication Engineering of K. K. Wagh Institute of Engineering Education and Research Nashik, Students' Association of Electronics Engineers (SAEE) in collaboration with IETE Nashik subcenter organized a Workshop on "Applications of Software Defined Radio" by Mr. Vatsal Manish Rana, on 15th April 2024 and 16th April 2024, from 01:00 pm to 05:00 pm.



- Department of Electronics and Telecommunication Engineering of K. K. Wagh Institute of Engineering Education and Research Nashik, Students' Association of Electronics Engineers (SAEE) in collaboration with IETE Nashik subcenter organized an Expert talk on "Entrepreneurship Development" by Mr. Shreyas Shripad Kulkarni (Director, SHREESON Technologies PVT. LTD) on 20th April 2024.



Expert Lectures/Seminars/Courses Organised

- Department of Electronics and Telecommunication Engineering of K. K. Wagh Institute of Engineering Education and Research Nashik, Students' Association of Electronics Engineers (SAEE) in collaboration with IETE Nashik subcenter organized an Expert talk on "IPR and IP Management for startups" by Mr. S. Pund (Corp. Head - Innovation & IPR), on 27th April 2024.

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Department of Electronics & Telecommunication Engineering
In collaboration with IETE
Proudly organizes national workshop on
IPR and IP Management for Startups

TAKEAWAYS
- Why IPR for Business Entities
- Strategic Aspects in IPR
- IP Management practices for Startups

**On 27th April, 2024 From 10.30 am
Venue: AV Hall, E&TC Department.**

Mr. S. Pund
Corp. Head - Innovation & IPR

Dr. S.S.Morade
Program Coordinator

Dr. D.M Chandwadkar
Dean, student Affairs, HOD, E&TC Engg

Dr. K.N Handurkar
Principal

- Department of Electronics and Telecommunication Engineering of K. K. Wagh Institute of Engineering Education and Research Nashik, Students' Association of Electronics Engineers (SAEE) in collaboration with IETE Nashik subcenter organized an Expert talk on "JAVA Database Connectivity" by Dr. Nitin S. More on 22nd April 2024.

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Department of Electronics & Telecommunication Engineering
in collaboration with IETE
Organizes
Expert talk on

"JAVA Database Connectivity"

Dr. Nitin S. More
Associate Professor & Head of the Department of Electronics & Telecommunication Engineering, K. K. Wagh Institute of Engineering Education and Research, Nashik

On 22nd April, 2024 From 11:20 am to 12:15 pm
Join Zoom Meeting
<https://zoom.us/j/99873195173?pwd=ajVlUjR1YzB1NGRlZkVlVGFlwUJlbnRl>
Meeting ID: 998 7319 5173 Password: jdlr

Dr. S. A. Patil/galek
U.O. Co-ordinator

Dr. D. M. Chandwadkar
Dean, Student Affairs, HOD, E & TC Engg.

Dr. K. N. Handurkar
Principal



Training and Placement Cell (Campus Placement)

Sr. No.	Name of Student	Company Name	Package
1.	Shraddha Godse	Virtuoso Optoelectronics Limited.	2.4
2.	Neha Baviskar	Virtuoso Optoelectronics Limited.	6
3.	Lalit Pandav	Virtuoso Optoelectronics Limited.	2.4
4.	Ajinkya Manjit Avhad	Rishabh Instruments	4
5.	Kalpesh Balu Kaklij	Rishabh Instruments	4
6.	Rajshree Pandit Pingle	Rishabh Instruments	4
7.	Shivam Yatendra Shrivastav	Rishabh Instruments	4

Industrial Training / Seminar / Workshop done by Staff

Industrial Visit of SY Btech students to Indian railway Nashik Road, Nashik Conducted By Mrs. S. D. Raut on 14th March 2024 from 10:00 am - 3:00 pm.



Industrial Training / Seminar / Workshop done by Staff

Parents Teacher Meet was organized in the Department on 16th March 2024



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- Saloni Ahire

VISION

Excel in quality technical education and research in Electronics and Telecommunication (E&TC) Engineering for sustainable solution development for industry and betterment of society.

MISSION

M 1: To provide quality education for the preparation of technically and professionally competent E&TC engineers.

M 2: To create an environment to enhance life-long learning and 21st century skills

M 3: To inspire students' innovative thinking and creativity to promote research culture.