

BRACT's Vishwakarma College of Arts, Commerce and Science, Pune

Report on

“Human Pulse Detection System and Pulse Analysis”

Popular Science Lecture

Supported by BRNS-DAE

Organized by

Indian Women Scientists' Association, Pune branch

In association with

MES's Abasaheb Garware College, Pune

Computer Science Association,

Department of Computer Science

Date: 4th March, 2021

Venue: Online Webinar (Zoom)

Indian Women Scientists' Association, Pune branch In association with **MES's Abasaheb Garware College, Pune Computer Science Association**, conducted **“Human Pulse Detection System and Pulse Analysis”** at 3.00 pm Thursday, 4th March, 2021.

Guest invited:

Prof. S.A. Gangal

Professor (Retd), Dept of Electronic Science, SP Pune University, Pune

Objective of the Guest Lecture:

- To share the design and implementation of Human Pulse Detection System and Pulse Analysis.
- To encourage the students in research and innovation.

Summary of the Guest lecture:

The Guest Speaker has started the webinar with an introduction on Ayurveda including 5 elements of human body and Tridoshas – Vata, Pitta, Kapha. She also explained elements of Tridoshas and how these Tridoshas helps to determine an individual constitution (Prakruti) and their contribution to disease process (Vikruti).

Honourable Speaker continued with explaining Human Pulse characteristics according to Tridoshas and importance of Pulse examination for disease diagnosis (Nadi Pariksha). According to Tridoshas there are 3 basic Gatis of Nadis as a human pulse is pressure wave. Its movement is different for different Doshas. And analysis of these 3 Doshas was shown using Lab- View Programming.

Further she gave details of different types of commercially available sensors used for pulse examination like MLT 101 and PZT pellet. The Session was more interesting as she started explaining the comparative study of Sensors, their fabrication process, signal processing circuit and its operation.

There is certainly no doubt that innumerable seminars, events, talks and workshops are organised in various colleges on a regular basis and Our College always motivates students to attend informative sessions like this. These sessions provide education not from the books, but through practical examples and real life experiences. Eminent personalities and reputed organisations who conduct these sessions help the students to gain an insight of the outside world at an early age so that they have an idea of what the competitive world has in store for them when they step out of their comfort zone.

The students attended this session have given a good feedback. They found this session very informative and gained detail knowledge of Pulse examination and use of Electronics in it.

Students benefited – 40 Students

Conclusion

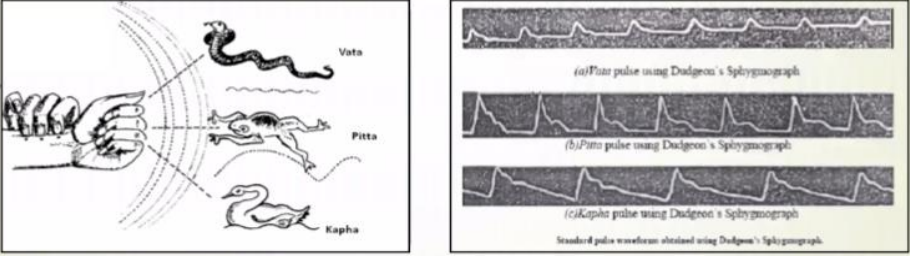
- The speaker guided participants about Human Pulse Detection System and Pulse Analysis. The main focus was on an importance of Electronics field in human health analysis.

(Faculties Present: Ms. Prajakta Lodha, Ms.Poonam Chavan, Mrs.Snehal Jadhav)

Photos

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Three basic *gatis* of *Nadis*



The diagram on the left shows a hand with three fingers (index, middle, ring) placed on the radial artery of a patient's wrist. The fingers are labeled Vata, Pitta, and Kapha, corresponding to the three basic pulse qualities. To the right, three sphygmograph waveforms are shown, labeled (a) Pitta pulse, (b) Pitta pulse, and (c) Kapha pulse. Below the waveforms, it is noted that 'Standard pulse waveforms obtained using Dodgson's Sphygmograph'.

Shashikala Gangal's screen

Pulse Examination

- Pulse examination is an essential means for disease diagnosis in Indian traditional medicine (*Ayurveda*)
- *Nadi-Pariksha* is done at the root of the thumb by examining the radial artery.
- Ayurvedic physician (*Nadi Vaidya*) examines the patient by placing his three fingers at three points on radial artery on the wrist to detect the *vata*, *pitta* and *kapha* dominance.

