INDIAN ACADEMY OF SCIENCES
Bengaluru
34th MID-YEAR MEETING

7 - 8 July, 2023

Venue: Auditorium, Biological Sciences Building, Indian Institute of Science, Bengaluru

Special Lectures

Friday, 7 July 2023, 9.30 - 10.10 h

Speaker

K Kesava Rao,
IISc, Bengaluru

Defluoridation of drinking water

Defluoridation refers to the removal of excess fuoride from water. Water and food are the main sources of fuoride ingested by people and animals. Excess intake of fluoride over a prolonged period leads to a disease called fuorosis that affects many people in India and other countries. During the past eight decades, various methods such as coagulation, adsorption, reverse osmosis, solar distillation, and electrocoagulation have been used for defluoridation, but every method has its drawbacks. Following a brief discussion of fuorosis and methods to combat it, some attempts to treat the reject rejected water from a reverse osmosis unit installed by the government at Yellampalli village will be described. Results related to rainwater harvesting will also be presented.

Watch live on You Tube:
https://youtube.com/live/THe7oCrqbVk?feature=share

Saturday, 8 July 2023, 9.30 - 10.10 h

Speaker

J N Chengalur,
TIFR, Mumbai

Gas and galaxy evolution

As galaxies evolve, they convert their gas into stars. On a cosmic scale, it is well established that the star formation peaked about 10 billion years ago (redshifts ~ 2–-3) and that the average star formation rate of the universe has declined sharply since then. Atomic hydrogen is the primary fuel for star formation. Stars form as the gas cools to become molecular hydrogen, and then cools further and collapses under self- gravity. Hence, understanding the evolution of the atomic hydrogen content of galaxies is hence key to understanding the evolution of the star formation rate with cosmic time. Unfortunately, because of the difficulties in detecting atomic hydrogen emission (via its best tracer, the 21-cm spectral line), until recently very little was known about the evolution of the gas content of star- forming galaxies using the upgraded Giant Metrewave Radio Telescope will be presented. These have significantly added to our understanding of the evolution of the baryonic content of galaxies.

Watch live on YouTube:
https://youtube.com/live/WRJUyzD-xCU?feature=share

Public Lecture

Friday, 7 July 2023, 18.00 - 19.00 h

Speaker

Kavery Nambisan
A Surgeon and Novelist

Health, education and communities: The future of a nation

Kavery Nambisan who has worked as a surgeon in rural India for several decades explains how a rural career can be professionally enriching. It can also provide a unique opportunity to engage with the many urgent needs of village communities that go beyond health into education and many other imaginative and enterprising pursuits. And not the least, it provides a unique opportunity to create ripples of harmony that connectedness that strengthen the tenuous bonds between communities

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