



International Animation Day

International Animation Day brings the world together to celebrate the magic of animation on October 28th every year. This special day marks the anniversary of the first-ever public performance of animation by Charles-Émile Reynaud in Paris in 1892. It's a day when everyone, from kids to adults, can enjoy the creativity and innovation behind animated movies and shows. The day was officially started by ASIFA (Association Internationale du Film d'Animation) in 2002 to honour this unique art form. It often combines technology, storytelling, and visual art to capture people's imaginations, worldwide.

#PHYSICS

New Laws For The Flow Of Fluids

"We found that sipping through a straw defies all the previously known laws for the resistance or friction of flow through a pipe or tube," says Leif Ristroph



Researchers have uncovered new laws governing the flow of fluids through experiments on a technology that's thousands of years old, a drinking straw. What they learned could be useful for improving fluid handling in medical and engineering applications. "We found that sipping through a straw defies all the

previously known laws for the resistance or friction of flow through a pipe or tube," says Leif Ristroph, an Associate Professor at New York University's Courant Institute of Mathematical Sciences and an author of the study in the *Journal of Fluid Mechanics*.

"This motivated us to search for a new law that could work for any type of fluid, moving at any rate through a pipe of any size."

Pipe-Flow Problem

Flows of liquids and gases through pipes, tubes, and ducts occur in many situations in nature and industry, such as with blood flow and in oil pipelines. "The pipe-flow problem has always been one of the most basic and important in the study of fluid mechanics, and in many ways, the field was developed to address this problem," says Ristroph, Director of NYU's Applied Mathematics Laboratory, where the research was conducted.

However, in their work, Ristroph and his colleagues found that all known laws relating pressure and flow rate were accurate only under certain conditions. To reach

this conclusion, they conducted a series of experiments, measurements of flow rate and pressure for metallic pipes of different lengths and diameters using several types of liquid. The goal was to determine how these factors relate to the frictional resistance of the flow going through the pipe. "Our data showed that the famous and classical laws for flow friction are only accurate for some combinations of flow speeds and pipe sizes," explains Ristroph. "We mapped out the conditions when the existing laws don't work well, and we found a good example right under our noses, drinking through a straw."

Varied Straws

Drinking straws are thought to have been used as far back as 5,500 years ago in the early Mesopotamian civilization of Sumeria. But the hydrodynamics of their operation was not previously studied. The researchers expanded their study to include several kinds of straws, a thin coffee stirrer type, a regular soda type, and a wide bubble tea type, and they performed experiments to determine the friction for flow rates that are typical during drinking. The data on straws and similarly sized pipes did not match any of the known laws, which are named for their discoverers, the scientists, Evangelista Torricelli and Jean Léonard Marie Poiseuille, among others.

The researchers found that each classical law failed because it assumes that the pipe is either very short or

very long, and that the flow is either very slow or very fast. The in-between cases, including straws, involve complicated factors such as how the flow changes along the length of the pipe and whether it becomes smooth and laminar or rough and turbulent.

Modelling such effects allowed the team to derive a single mathematical formula, and its predictions matched the experimental measurements for all pipes and straws and for all fluids and flow speeds that were tested.

"A universal formula could be very useful, for example, in understanding and modelling blood flow in the circulatory system," Ristroph observes. "Our veins, arteries, and capillaries are basically pipes with many different diameters, lengths, and flow rates."

The Doctor Who Got The Ashoka Chakra

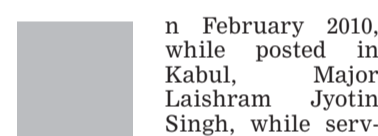
In the melee, the five unarmed officers took shelter in one of the rooms which was subjected to a grenade attack and the fire on its roof spread consequently to the bathroom where another group of five officers were sheltered. On hearing shouts of the five officers, Major Laishram Jyotin Singh crawled out from under the debris of his room and charged with bare hands at the armed terrorist. He pinned him down to ensure that the terrorist could no longer lob more grenades or direct fire at the officers cornered in a burning room. He continued to grapple with armed terrorist and did not let him go till the terrorist panicked and detonated his suicide vest, resulting in the instantaneous death of the terrorist and Major Laishram Jyotin Singh along with him.



Major Laishram Jyotin Singh's brother receiving the Ashoka Chakra from then President Mrs Pratibha Patil.



Maj Gen Jagatbir Singh, VSM (RETD)



On February 2010, while posted in Kabul, Major Laishram Jyotin Singh, while serving as part of the Indian Medical Mission in Afghanistan, laid down his life in the highest traditions of the Indian Army, when he protected five of his colleagues by grappling with a terrorist when their mission was subjected to a heinous terrorist attack. He was awarded the nation's highest peacetime gallantry award, the *Ashoka Chakra*, posthumously and is the only recipient of the same from the Army Medical Corps.

Born on 14 May 1972 in Nambal, Bishnupur District of Manipur, his parents were Shri Laishram Markanda Singh and Smt. Iheyaima Devi. Major Jyotin was the third among the four highly accomplished siblings with two sisters and a brother. His sisters, Bina Kumari Devi and Ragini Devi, work as a Doctor and a

Lecturer in Mathematics, respectively. While his youngest brother, Boeing, is a Professor at Indian Institute of Technology, Guwahati. Major Laishram Jyotin Singh completed his schooling from Manipur Public School, Imphal, and MBBS from the Regional Institute of Medical Sciences (RIMS), Imphal in 1996. Later, he completed a two-year Post-Graduate Diploma in Sports Medicine from Baba Farid University of Health Sciences, Patiala in 2001. He was commissioned in the Army Medical Corps as a Short Service Commissioned Officer on 15 February, 2003 and granted Permanent Commission on 26 April, 2007.

Major Laishram Jyotin Singh was initially posted with the Border Roads Organization and was then posted to the Military Hospital in Agartala. He was also part of the Fourth Military World Games at Hyderabad in 2007 and the Commonwealth Youth Games

at Pune in 2008. Jyotin worked very diligently and was always

#VALOUR



Four Army Doctors, (left to right) Captain Ch Keishing, Captain Laishram Jyotin Singh, Captain M Athikho & Lt Col L Manongba, all from Manipur & alumni of RIMS joined the Army Medical Corps in the same month.

For his act of exemplary courage, grit and valour in the face of a terrorist attack and the self-sacrifice that he made to save his colleagues, Major Laishram Jyotin Singh was awarded the *Ashoka Chakra posthumously*. He is the first-ever doctor to receive the Ashoka Chakra.



Major Laishram Jyotin Singh.

ready for any task, even beyond the call of his regular duty. While working as a Medical Officer at the Military Hospital, Agartala, he also provided specialist services to the Government Hospital and College. He was also an excellent football player and body-builder.

On 13 February 2010, he was selected for deputation to the Indian Medical Mission in Kabul. During his tenure in Kabul, on 26 February 2010, at 06:30 hours, a guarded residential compound of the Indian Embassy in Kabul, housing six Army Medical Officers, four paramedics and two other Army officers of the English Language Training Team (ELTT) was attacked by heavily armed and determined suicide bombers. A terrorist, after detonating a Suicidal Vehicle Borne Improvised Explosive Device

(SVBIED) and killing three security guards, entered the compound with the aim of killing any survivors. The terrorist started firing bursts of Kalashnikov rounds and throwing hand grenades into individual rooms.

In the melee, the five unarmed officers took shelter in one of the rooms, which was subjected to a grenade attack, and the fire, on its roof, spread consequently to the bathroom where another group of five officers were sheltered. On hearing shouts of the five officers,

English teacher at the Afghan Military Academy, Shri Nitish Chhibber, Assistant, Consulate General of India, Kandahar, Shri Roshan Lal, Constable of the Indian Tibetan Border Police (ITBP), a Security Guard at the Consulate General of India, Herat, Shri Bhola Ram, Deputy General Manager, Power Grid Corporation of India Ltd. (instrumental in setting up Pul-e-Khauri to Kabul transmission line and Chintala sub-station, which brought electricity to Kabul), and Shri Nawab Khan, Tabla player (member of an Indian Council of Cultural Relations - sponsored cultural troupe visiting Afghanistan).

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B. Singh. His courage, valour and sacrificing his life for the sake of his colleagues remain inspirational for the future generations.

MEMORIAL

- Bust of Late Major (Dr.) Laishram Jyotin Singh at the Jyotin Memorial Park in Leimakhong, Manipur.
- The Army Medical Corps (AMC) Centre & College in Lucknow has honoured this bravest son of India by dedicating its main auditorium in his name, Major Laishram Jyotin Singh, AC, Auditorium.
- The Army Medical Corps (AMC) Centre and College in Lucknow has honoured this bravest son of India by dedicating a roundabout to his gallantry within its campus, Major Laishram Jyotin Singh, AC, Chauraha.
- In order to pay tribute to the supreme sacrifice of Major Laishram Jyotin Singh, a New Residential Jyotin Block and bust was inaugurated at Command Hospital by his mother, Mrs. Laishram Iheyaima.
- Indian Railways introduced an electric engine in the name of Major Laishram Jyotin Singh, Ashoka Chakra (Posthumous) to honour his supreme sacrifice.

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Army conducts Major Jyotin Singh Football tournament.

#J'ADORE

Accessorize Your Workdays!

Accessorising is always the best way to make an impressive fashion statement



You got to love office wear! Blouses, trousers, turtle necks, shirts, pencil skirts, blazers, and the list goes on. There is something for every shade of smart and sophisticated! Accessorising is always the best way to make an impressive fashion statement, and the workplace is no different! In

Good Set of Rings

Ring sets are always in fashion. Hence, they make for an apt investment. For office wear, in particular, metal ring sets add to a very polished, smart, and

sleek look, elevating your day-to-day formal looks. They not only bedeck your fingers but also enhance the simplest of shirt-trouser combinations.

In this article, we will take you through *office wear jewellery trends*, that are tried and tested in their

ability to elevate your workplace looks and lend an air of elegance, even on the most hectic workdays.



A Pearl Necklace

Another addition to the timeless jewellery cohort, a *pearl necklace* conveys equal parts of grace and poshness. What else do you need in your office wear? It's also highly versatile. You can pair it with a formal dress, a simple blouse, or an elaborate pantsuit.



A Tennis Bracelet

If fitness, luxury and class had a one-stop destination, a *tennis bracelet* would be that. They come in a variety of metals and precious stones, suitable for every taste and outfit choice. The innate subtlety and beauty of this bracelet make your entire formal outfit a class above the rest!



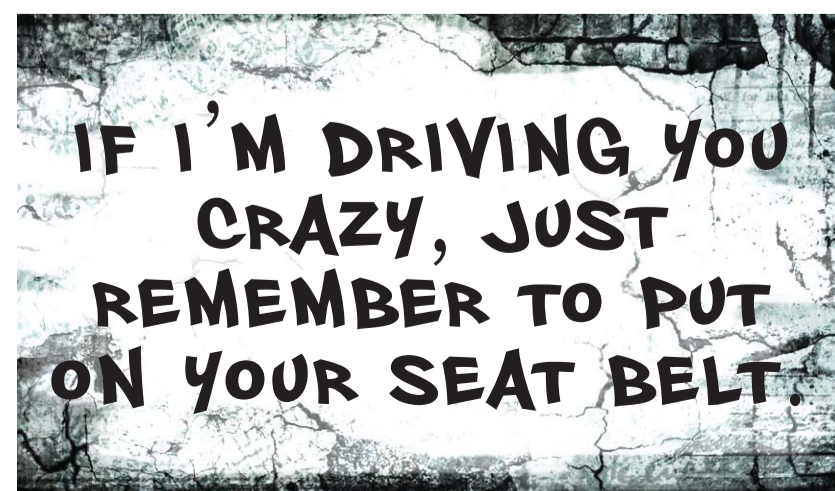
Gold Hoops

Small to medium-sized *gold hoops* look quite professional, contrary to the prevailing perception of hoops being too hip or party-wear. Gold hoops fill the accessory void without the need to pair them with any more accessories and, thus, are very efficient for casual office wear. You could also try out contemporary earrings.

Minimalistic Rose Gold Jewellery

Rose gold is extremely subtle and elegant as a colour in itself. It will most certainly refine and stylise your persona, paired with a formal outfit. *Minimalistic rose gold* jewellery can come in a dainty bracelet, chunky earrings, a simple pendant, or even a basic choker. There is plenty of variety available for everyone's preference.

THE WALL

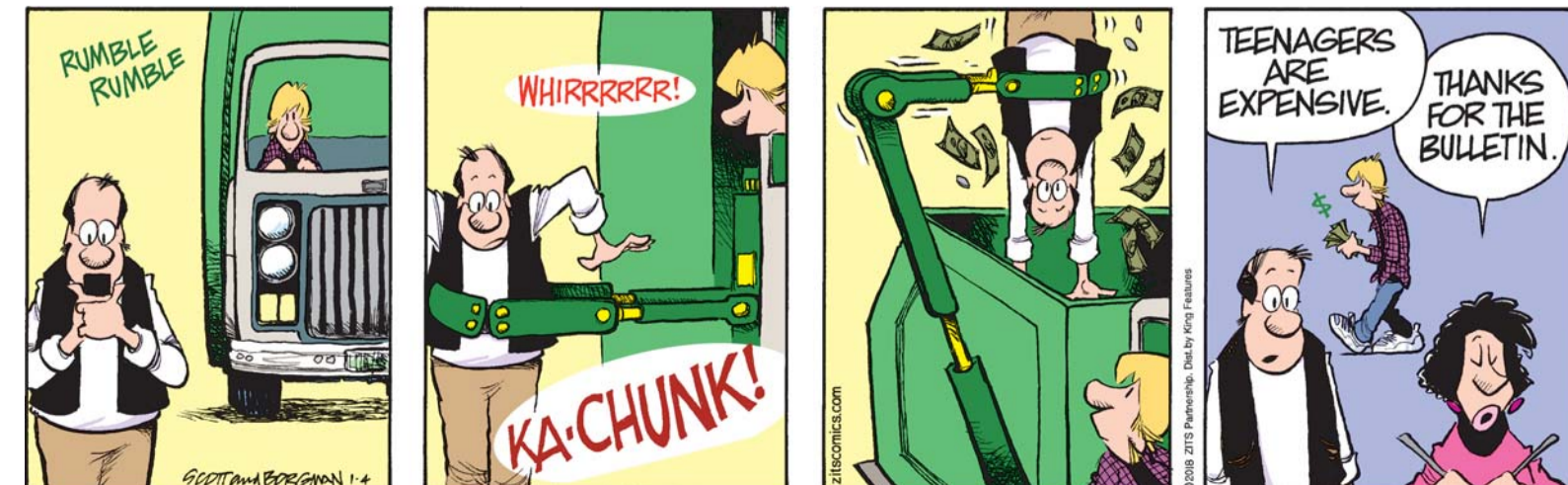


BABY BLUES



By Rick Kirkman & Jerry Scott

ZITS



By Jerry Scott & Jim Borgman

