The 34th IULTCS Congress was inaugurated today (6th February, 2017) with the ceremorial parade at the Rajendra Hall, ITC Grand Chola, Chennai. As the IULTCS anthem began playing, Dr Dietrich Tegtmeyer (President-IULTCS), carrying the IULTCS flag led, the procession of celebrities comprising Dr. T. Ramasami (Congress President), Shri Rafeeqe Ahmed (Chief Patron), Shri Mukhtaurul Amin, Shri Aqeel Ahmed, Shri Shafeeq Ahmed, Shri M Israr Ahmed (Guests of Honor), Dr B Chandrasekaran, Director CSIR-CLRI, Shri Arnab Jha, President ILTA, Dr Campbell Page, Secretary IULTCS, Dr S Rajamani, Working President, 34th IULTCS, Shri NR Jagannathan, Working President, 34th IULTCS and Dr N K Chandrababu, Congress Convenor, 34th IULTCS, into the Hall amidst a rousing ovation. As the excitement subsided and the delegates settled down in their seats, Dr. B. Chandrasekaran, greeted the gathering. His warm words of welcome were followed by the lighting of the ‘Kuthuvilakku’ (Indian traditional lamp) by the dignitaries on the dais. This set the pace for the events to begin. The first was the play-back of the video recordings, the inspiring messages about the Congress by each of the above dignitaries. Dr. Dietrich Tegtmeyer, Dr Campbell Page and Shri Ramesh Kumar, IAS added great value and thrust with their live speeches. Dr. Dietrich Tegtmeyer later introduced Dr Mariliz Gutterres, IULTCS merit awardee followed by the latter’s acceptance speech. Finally, Shri Arnab Jha proposed vote of thanks. The event concluded with the national anthem.
Leather Stalwarts on the 34th IULTCS!!

T Ramasami, Congress President, 34th IULTCS

"Let the 34th IULTCS pave a way for science and lead a way for sustainability of leather processing in the only planet that the humanity has known to survive and prosper in. Best regards!"

Rafeeq Ahmed, Chief Patron, 34th IULTCS

"The Congress has been a festivity to all the members of the leather world, as they could understand what has eventuated in the recent past and what might supervene in the future. Warm regards!"

Arnab Jha, President, Indian Leather Technologists' Association

"The Congress will create an ambiance to form strong linkages between intelligence, research and industry to achieve the goal of developing and establishing feasible Science and Technology processes and systems towards sustainability of leather".

S. Rajamani, Working President 34th IULTCS

"I thank all your support in the endeavor of IULTA in association with CLRI, CLE, LSSC, IULTCS, UNIDO, Asian International Forum & Liaison and others to make this event a memorable and grand success!"

Dietrich Tegtmeyer, President IULTCS

"We have three busy and intensive days to exchange and discuss new ideas and conceptual approaches besides being introduced to the vibrant Indian cultural life by our Indian colleagues. Looking forward to the meet!"

N.K. Chandrababu, Congress Convener

"I would like to thank our lead partner, the Indian Leather Technologists Association (ILTA) and leather fraternities from India and abroad, for supporting this network and bringing people here from all over the world".

Dr. B. Chandrasekaran, Director, CSIR-CLRI

"While the Congress aims to address the technological challenges towards sustaining the leather manufacturing activity, key points such as raw material availability and ensuring low environmental footprints from the industry will also be deliberated!"

Shri NR Jaganathan, President, ILTA (South)

"We thank the Program Chair for brilliantly organizing the technical program; the Scientific Committee for thorough and timely reviewing of papers, and our sponsors for helping to keep down the costs of IULTCS 2017!"

Shri Mukhtarul Amin, Chairman, CLE

"The congress theme, Science and technology for sustainability of leather is quite relevant as we have a great challenge in making leather industry sustainable in today's context. I wish the congress a great success!"

Shri N Shafeeq Ahmed, Chairman, IFLMEA

"The theme designed to provide R & D focus of research institutes, chemical companies and organizations around the world for sustainable development of the leather sector shall witness the Congress addressing various technological challenges!"

Shri PR Aqeel Ahmed, Vice Chairman, CLE

The Congress includes eminent and renowned personalities from around the globe to deliver lectures, to enrich our knowledge. Chennai is an excellent venue for a perfect meeting, cherished and enduring thoughts, friendship and memories.

Heidemann Lecture 2017: Probing collagen structure and function

John A M Ramshaw, Melbourne, Australia, while stating that knowledge of the diverse properties of collagen can be used to fully derive economic benefits, referred to its historical sequences that helped establish the structure and biosynthesis. G.N. Ramachandran offered the innovative concept of the triple helix (1954) by which the structure of collagen became accepted and the repeating 'triplet' sequence found to be essential. Wilhelm Heidemann's pioneering research on peptides and polypeptides. Alternative to synthetic peptide chemistry is the recent recombinant systems, especially for production of non-animal bacterial collagens. The absence of hydroxyproline in these products offers great feasibility for mass production. He concluded by indicating that many areas are yet to be well understood for instance, the processes involved in fibril and fibre bundle formation, organization of collagen in tissues, etc.

Fundamentals of leather science, Anthony Covington, Northampton, United Kingdom

Rethinking of the manufacturing is essential. In the modification of current processes for creating new technologies, it is essential to consider processing within a three-component system: substrate, reagent, and solvent. Direct confirmation of the lock-lock theory would be useful along with available supporting evidence.

Program for change has three causes namely development, innovation and revolution. Sustainability can be achieved through these three aspects. In development, innovation, revolution, leather science must also monitor unintended consequences such as the alleged formation of chromium (VI) from chromium (III) tanning agents. The future of leather science will bank on the availability of leather scientists from a changing cohort of supporting researchers. India and China needs to focus on publishing than science based articles than technology related ones. Closer involvement of the industry in education is an imminent need.

Site-specific interaction of polyphenols on collagen using model collagen peptide

Madhavan B, Chennai, India

The site-specific interaction of polyphenols on collagen using model collagen peptide (MDSCP), which mimics the triple helical native nature of collagen. Polyphenols interact with MCDP primarily in the vicinity of ionic (positive and negative) amino acid residues, which have proline or hydroxyproline in the vicinity, and hydrophobic amino acid residues. Further, polypenol interacted only with triple helix, not with monomer of MCDP.

Measuring the heritability of traits in sheep and deerskin

Richard L Edmonds, Palmerston North, New Zealand

Heritable traits imparted in sheep and deerskins were investigated using both traditional methods and the latest SNP (single nucleotide polymorphism) techniques. The animals had been genotyped with Illumina SNP platform, identifying thousands of SNPs.

Linking skin traits to other traits with existing markers already existing helped identify a route to an economic benefit from improved pelts for New Zealand. A more traditional approach was applied to deerskins.

The insight derived for improving the properties of skins on the back of the animal has wide-ranging benefits for other animal types including cattle, where SNP chip technology is in an advanced stage of development.

Chrome-tanned leather shrinkage probed with modulated temperature differential scanning calorimetry

Richard L Edmonds, Palmerston North, New Zealand

The shrinkage reaction of chrome tanned collagen leather was studied using a new technique of modulated temperature differential scanning calorimetry (MTPDSC). By modulating the temperature treatment of the sample, rather than treating it to the flat temperature ramp as normally applied in DSC, the transitions that occur can be separated into reversing and non-reversing transitions. The chrome shrinkage reaction has been explored using MTDSC and the shrinkage reaction characterised as wholly non-reversing. This contrasts with glass transitions and melting transitions, which are characterised as reversing.

Influence of naphthalenesulfonic acid derivatives on the properties of the hide, part II

Elga Ballús, Quimipiel S.L.

The first part of this study used the influence of the composition of, on certain characteristics of the hide. The influence of different types of naphthalenesulfonic acid derivatives, used in the neutralization phase on the same hide characteristics, used as dye auxiliaries has been evaluated. It was confirmed that greater the molecular weight of the naphthalenesulfonic derivative, the better the anionicity and the dye penetration with two different dyes, greater the degree of softness, the physical resistances and the grain tightness. Color intensity is observed to be slightly decreased with both dyes.

Surface area gain of leathers dried under different conditions

Hüseyin Karavana, Izmir, TURKEY

Different drying methods in the footwear upper production affect the surface area of the leathers. Surface area gain has a great significance since the footwear upper leathers are sold depending on the surface area. The wet-togge and vacuum drying methods are used for making footwear upper leathers and the area compared. The wet-togge for the drying of footwear upper leathers is preferable because of the better surface area gain provided by the method.
1. What was first instance you attended IULTCS congress? Versailles, France, 1979

2. Can you recall and share anything interesting about your previous congresses? The most memorable one is the centenary congress at London, 1997 when I was the President, IULTCS, very well attended and held in the Queen Elizabeth Hall. Dinner was in a very historical building next to Downing Street, the ceiling exotically painted, the room from which Charles the First stepped from the window onto the scaffold to be executed.

3. In your opinion, what are the significant outcomes that you like this IULTCS to bring about? International cooperation, networking and friendship.

4. Is there any one session you are looking forward to attend as a scientist? I suppose it is about ‘Fundamentals of leather technology’ but it is always worth going to all the sessions, as there might be always something of interest.

5. Anything, that you opine the society (IULTCS) may endeavor other than what it is doing presently? I think there is a subtle shift in this one even though it has been ‘Technology’ and ‘Advances in Technology’ in the previous ones while science was a bit neglected. We need to bring the creative minds in science together to make bouncing of ideas understand the fundamentals better.

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Interview with Dr. Anthony Covington

How long have you been associated with IULTCS? Since 1987 and the first congress I visited was in 1989 Philadelphia, USA.

What is your opinion about the theme Science and Technology for the sustainability of leather of the present congress? I think it is the right topic for the leather industry as it is the main issue to make the direction right for the future and this is the right venue to exchange the ideas towards achieving more sustainable processing methods.

In your opinion what the leather Industry should do as the immediate initiative to move towards sustainability? A number of more sustainable solutions already available and use of organic ways could bring more sustainability into existing processes.

What is the right strategic research avenue for the leather technologists in your opinion? To look for smart and intelligent solutions especially utilizing sustainable and renewable resources.
At this juncture of the 34th IULTCS congress being conducted in India, it is fitting to bring about the experience of the blast from the past. The term of tanning was derived from the medieval Latin word tannum, which means oak bark. South Asian inhabitants of Mehragarh, situated near Bolan pass were understood to have practiced tanning between 7000 and 3300 BCE. People of stone age practiced brain tanning and smoking processes. Agastya, a revered Tamil sage writes in a mantra to neutralize poison and it reads 'I deposit the poison in the solar orb like the leather bottle in the house of vendor of spirits'. This is indicative of the fact that leather had been made in India about 4400 years back. The moccasin-like shoe was found in a cave in Armenia, which dates back to 3500 BCE. This demonstrates the use of leather for footwear during that period. Leather products had been used widely during Emperor Alexander’s period. During Cleopatra’s rule, colorful sandals were used by women. Alum tanning had been in practice during the Hellenistic period (323 to 31 BCE). There are many mentions in The Bible suggesting the use of leather for various purposes during the biblical period.

Leather had been extensively used by the Mauryan military. Leather products were exported to Roman Empire during the Sangam age (350 to 400 CE) from India. It was one of the important materials during Mughal’s period. Leather tapes were used prior to Akbar, for land measurement. He replaced leather tapes with bamboo sticks on account of the elastoplastic nature of leather. Mohammed bin-Tughluq introduced currencies made of leather. Marco Polo in his writings indicated that in 1290 CE, curing of skins and manufacture of leathers were important industrial activities of Gujarat. Leathers and leather products, particularly sandals embroidered using gold and silver threads were exported to Arabia in ships from the countries in the Indian subcontinent. The principal occupation of a denomination of medieval Andhra called Madiga was tanning. They were also involved in making of footwear and leather tools for agriculture. The tanning method practiced by them could have been the precursor process of the modern East India tanning (EI). They migrated from Andhra to Samayavaram (near Tiruchirappalli in Tamilnadu) along with their king Somasera around 1300 CE and practiced using baulb bark. Based on similar evidence, recently about 53 tanneries in Trichy and Dindigul were awarded geographical indicator for EI tanned leather. In 1857, the first modern tannery of India was established in Kanpur under the leadership of Captain John Stewart of British East India company. In 1895, chrome tanning was introduced in India (Madras) by Alfred Chatterton. The commercial scale practice of chrome tanning was started in Pallavaram (Chennai) in 1903 and then in Bombay (Mumbai). In 1913, there were 22 large scale tanneries in India. These were spread across West Bengal, Bombay, Orissa, Bihar, and Madras. At that time, there were 17 tanneries in Madras. In 1941 there were 56 tanning units, 23 footwear units and 25 leather goods units in India. The total value of export of leather and leather products in 1944-45 was Rs. 825.85 lakh. After independence, in 1951, the export of raw hides and skins was banned. In 1972, Dr. A Seetharamaiah committee presented its report recommending the export of finished leathers in lieu of raw hides and tanned leathers. In 1948, Central Leather Research Institute was established with the aim of holistic development of leather and leather products industry in the country.

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Welcome to Tamilnadu