

5th Annual SURE Network Undergraduate Research Conference 2022

Science Undergraduate Research Experience (SURE) Conference Schedule,
St Laurence's Grangegorman, TU Dublin
October 14th, 2022

9:30-9.55 Registration

Session Chair: Dr. Gemma Kinsella, TU Dublin

10.00 (streamed): Opening by Dr Therese Montgomery, Chair of the SURE Network

10.05 (virtually): Address by Dr Mary Meaney Registrar & Deputy President TU Dublin

10.15 **Keynote 1:** The Irish Pharmaceutical Industry, what I learned so far. Derek Kenny, Associate Director Takeda

10:40 –12.45 Undergraduate research Oral Presentations (10)

12.45-12.50 Audience Voting for Best Oral Presentation

12.45- 14:00 *Lunch and poster review / Audience voting for best poster*

Session Chair: Dr Cormac Breen, TU Dublin

14.00 (streamed): Updates from the SURE Network:

1. Learn from SUREbyts, by Dr Ciarán O'Leary, Head of Learning Development, Faculty of Computing, Digital and Data, TU Dublin
2. Publish in SURE-J by Dr Anne Friel, TUS-MMW Athlone

14:10 Audience Voting for Best Poster Closes

14:10 **Keynote 2:** Your career beyond your PhD Noor Abdulhussain, VSL National Metrology Institute

14:30 Presentation of Prizes Dr Ciarán O'Leary, Head of Learning Development, Faculty of Computing, Digital and Data, TU Dublin

14.50-15.20 Postgraduate Opportunities Workshop – Chair Prof Mary McNamara



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- 1.1 Laid-back breastfeeding: Knowledge, Attitudes, and Practices of Midwives and Student Midwives in Ireland by Margaret McGuigan (Dundalk Institute of Technology) Supervisor Patricia Larkin.
- 1.2 The Effect of Breastfeeding On Weight Status In Children And Adolescents (1-17 Years) Living In Ireland by Nada Akl (Technological University Dublin) Supervisors John Kearney and Daniel Hazley
- 1.3 SARS-COV-2 disease severity according to Vaccination status and vitamin D deficiency amongst hospitalised Covid-19 patients by Martyna Sanecka (Technological University Dublin) Supervisors Modar Youssef, A Al Lawait, S.I. Shah, M Abdulsalam, A Qadeer, Daniel McCarthy, John Foul.
- 1.4 DNA barcoding as a tool for species identification of commercial tuna products concerning seafood mislabelling by Valeria De Santo (Atlantic Technological University–Galway) Supervisor Luca Mirimin
- 1.5 Exploring the relationship between the menstrual cycle and markers of physical performance in intercounty Ladies Gaelic Football players by Colette Collins (Atlantic Technological University-Galway) Supervisor Siobhan Leahy
- 1.6 The use of forensic alternate light sources for the location and identification of temporary (stick-on) tattoos in identifying unknown individuals by Rachael Carey (Atlantic Technological University-Sligo) Supervisor John Cassella
- 1.7 A qualitative analysis of women’s postnatal experiences of breastfeeding supports within the maternity unit or during homebirth in Ireland by Niamh Lawlor (Technological University Dublin) Supervisor Liz O’Sullivan
- 1.8 The association between diet quality and sleep quality in Irish undergraduate students by Emer O’Sullivan (Technological University Dublin) Supervisor Mairead Stack
- 1.9 An investigation into polyphenolic variation within forage crops in Ireland by Brian Jordan (Technological University Dublin) Supervisor Nissreen AbuGhannam
- 1.10 Modelling of oxides and polymer based anti-reflective layers for Si-based PV cell using AFORSHET by Angel Oliveira Lira (Technological University Dublin) Supervisor(s) George Amarandei, John Doran.

Poster details will be available in Gathertown on the SURE Network website in advance of the event

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List of poster presentations by undergraduate researchers:

- 1.1 Cognito – Trust-Based Social Network with Spam Detection by Eoghan Martin (Technological University Dublin)
- 1.2 Comparison of Bioactivity of Hemp Seed Oils and Tea Tree Oil by Marietta Lakatos (Technological University Dublin) Supervisors Julie Dunne, Samuel Obengapori, and Furong Tian
- 1.3 Transitioning to Sustainable Healthy Diets in Malta: Key Foods and Consumer Challenges by Sarah Hannan (Technological University Dublin & University of Malta) Supervisors John Kearney and Claire Copperstone
- 1.4 Formulation of Cinnamon Oil Loaded Nano-carriers for Food Packaging Applications by Megan Byrne (Technological University Dublin) Supervisor Swarna Jaiswal
- 1.5 Replication Study: Acute Enhancement of Jump Performance, Muscle Strength, and Power in Resistance-Trained Men After Consumption of Caffeinated Chewing Gum by Cian O'Keeffe Tighe (Technological University Dublin) Supervisors Jennifer Murphy and Joe Warne
- 1.6 The Use of Pollen as an Indicator of Atmospheric Pollution by Tegan O'Donnell (Atlantic Technological University Sligo) Supervisor Paul Hamilton
- 1.7 What does healthy and sustainable eating mean to students? by Alix Mooney (Technological University Dublin) Supervisors Daniel Hazley and John Kearney
- 1.8 An Investigation into the Prevalence & Usage of Caffeine Supplementation in Elite Female Powerlifting Athletes by Gemma Johnston (Technological University Dublin) Supervisor Richard Kelly
- 1.9 The Potential of Microalgae in Creating a more Environmentally Sustainable Pharmaceutical Industry: A Thematic Analysis of the Literature by Laura Oates (Atlantic Technological University Sligo) Supervisor Geraldine Duignan
- 1.10 The Use of and User Experience of Data at Senior Level Gaelic Games by Kate Kavanagh (Technological University Dublin) Supervisor Kieran Collins
- 1.11 Forensic Identification of Individuals: The novel use of Tattoo Location and Identification using Alternate Light Sources by Karla McKiernan Oates (Atlantic Technological University Sligo) Supervisor John P Cassella
- 1.12 Magnus Effect Wind Turbines: Computational and Experimental Models by Szymon Pietka (Technological University Dublin) Supervisors Aaron Mac Raighne and Derek Kearney
- 1.13 Rational Design, Synthesis, and Characterisation of novel metallo-antimicrobials by Charlane Beatrice Zambrano (Technological University Dublin) Supervisor Ziga Ude
- 1.14 Use of genetic markers for forensic fingerprinting and anthropological purposes: VNTRs, mtDNA, amelogenin and Alu markers by Sally Webb (Atlantic Technological University Galway) Supervisor Benoit Houeix

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- 1.15 The Impact of Stress On Food Choice Amongst Third Level Students In The Republic Of Ireland During The Covid-19 Pandemic by Shannon Spain (Atlantic Technological University & Michigan State University) Supervisors Robin Tucker, Chen Du, and Laura Keaver
- 1.16 Determination of the Presence of Saliva Using Fluorimetry by Shaina Fernandes (Atlantic Technological University Galway) Supervisor John Keary
- 1.17 Physical Activity and Obesogenic Risk Factors in Competitive Athletes and Non-Competitive Athletes by Aedín Caverly (Technological University Dublin) Supervisor Oscar McCananey
- 1.18 Development of A Protocol To Identify Unknowns In Forensic Science From Mass Spectral Data On DrugsData.org by Rebecca McNamara (Atlantic Technological University Sligo and Trinity College Dublin) Supervisors Pierce Kavanagh and Geraldine Dowling
- 1.19 Healthy Diet Perceptions of Irish CrossFit Coaches A Qualitative Investigation by Oisín Nolan (Technological University Dublin) Supervisors Daneil Hazley and John Kearney
- 1.20 Potential Utilization of Wildflower Pollen As An Environmental Indicator For Atmospheric Pollution by Harry Reynolds (Atlantic Technological University Sligo) Supervisor Paul Hamilton
- 1.21 The Rise of The Machines: Will Artificial Intelligence Algorithms Replace The Human In Forensic Drug Chemistry? The Use Of Structure Elucidation Tools And Mass Spectral Libraries by Roisin O Mahony (Atlantic Technological University Sligo and Trinity College Dublin) Supervisors Pierce Kavanagh and Geraldine Dowling
- 1.22 Titanium Alloys for Biomedical Applications by Nicole Murray (Technological University Dublin) Supervisors Anne Hopper and Susan Warren
- 1.23 An Exploration of Cultural Competence And Awareness In A Sample Of Mental Health Professionals Partaking In A Professional Meeting Entitled "The Race for Mental Health" by Siobhan Lynam (Dublin City University) Supervisors Lorraine Boran and Ray O'Neil
- 1.24 Detection of Recently Handled Materials In Latent Fingerprints Using FTIR by Laura Regan (Technological University Dublin) Supervisor Reeta Joshi
- 1.25 The Role of pKa on Physicochemical Properties of Antibiotics And Antivirals by Flora Mwale (Technological University Dublin) Supervisor Maeve Scott
- 1.26 Adolescent Females Awareness of Peak Bone Mass – An Investigation into Bone Health Knowledge, Dairy Consumption And Factors Influencing Consumption by Aishling Keane (Atlantic Technological University Galway) Supervisor Paul Conroy
- 1.27 The Impact of Algae-Based Omega Supplements On The Mental Health Of Irish Vegans, A Pilot Randomised Control Trial Study by Tara Mc Cormack (Atlantic Technological University Galway) Supervisor Paul Conroy
- 1.28 Analysis Of The Level Of Nutrition Education Within Healthcare Professionals' Third Level Education Programmes In Ireland by Eimear Harte and Kayleigh Heron (Atlantic Technological University Galway) Supervisors Gemma McMonagle, Laura Keaver, and Lisa Ryan