



MAKING AN IMPACT

Blockchain Masterclass

Cheryl Nolan, VistaMilk Site Manager Insight

On the 18th of November VistaMilk SFI Research centre held a Masterclass on the topic of "Blockchain in Agriculture". This virtual event was hosted by Prof John Breslin and his team at NUIG. With over 100 people registered, and a fantastic line-up of speakers, it didn't disappoint. After an introduction on Blockchain by John Breslin, a number of topics were discussed around its capabilities and uses. John Keogh, Founder and managing principal at Shantalla (Figure 1) gave an enthralling keynote presentation where he gave a balanced perspective and placed blockchain in the context of other crucial food supply chain technologies such as artificial intelligence, machine learning, and the internet of things. A panel discussion concluded the day's events, and our knowledge was enhanced by the efforts of our attendees who asked challenging questions throughout.



Figure 1: Keynote speaker John Keogh, CEO of Shantalla

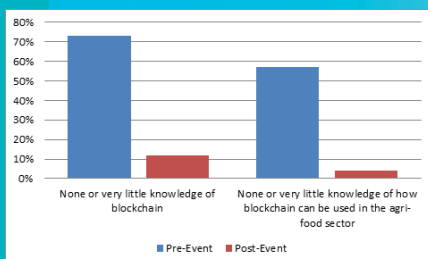


Figure 2 Survey results before and after the Blockchain Masterclass

no knowledge" of the subject in advance of the Masterclass as compared to only 12% post the event. Similarly, 58% reported they had "little to no understanding of how blockchain can be used in the agri-food sector" in the pre-survey, and this decreased to 4% post the event. We are looking forward to our next Masterclass hosted by Tyndall National Institute in April 2021 which will be about the topic of sensors in agritech. We look forward to sharing the agenda and registration details in the New Year. The full recording of the Blockchain Masterclass can be found on the VistaMilk YouTube channel.

A pre and post survey demonstrated a significant shift in understanding around Blockchain as a result of the Masterclass. For instance, 73% of participants claimed to have "very little to

MEET THE RESEARCHER

Name: Ian Seymour

Host: Tyndall National Institute

Role: Postdoctoral Researcher

Education: I completed a BSc in Chemistry and a MSc in Analytical Chemistry in University College Cork. I completed my PhD in Tyndall National Institute under the supervision of Dr. James Rohan and Dr. Alan O'Riordan, with a thesis entitled "Nanowire and Microband Arrays for Enhanced Electrochemical Sensing".



Role at VistaMilk: I am a postdoctoral researcher working in platform 1 – Advanced Nanosensors and Systems. My work focuses on the development of a versatile sensor device that can be used to facilitate analysis of a wide range of chemical and biological species. These devices can be portable while retaining high sensitivity, ensuring high quality results at a fraction of the time and can be applied to a multitude of applications, from testing for contamination in water and milk, to disease and infection detection in cows.

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NEW STAFF



Top (L-R)

- **Hannah Kate Masterson**, PhD student, TP 7 Dairy Processes
- **Ciaran Hearn**, PhD student, TP3 Pasture Breeding
- **Keeley O'Brien**, PhD student, PL8 Deployment
- **Oluwadurotimi (Tim) Ajibola Onibonoje**, Research assistant, PL3 Data

Bottom (L-R)

- **Orla Skillington**, PhD student, TP9 Nutrifunctional Milk
- **Paula Palma**, PhD student, PL8 Deployment
- **Satya Prakash**, Research assistant, PL3 Data
- **Rachel Keirse**, Research assistant, TP3 Pasture Breeding

FUNDING OPPORTUNITIES

- [European Green Deal calls](#): Now open, deadline January 26th 2021. €1bn worth of calls to respond to the urgency and ambition of the [European Green Deal](#) objectives, including €74M for [Farm-to-Fork](#). Calls topics [here](#). Irish info day presentations available [here](#).
- Irish Research Council's [Postgraduate](#) and [Postdoctoral Enterprise Partnership](#) Schemes for research with industrial partners. Deadline December 2nd 2020.
- Irish Research Council's [Employment-Based Postgraduate Programme](#) for research based at industrial partners. Deadline December 2nd 2020.
- DBEI's [Disruptive Technologies Innovation Fund](#): 3rd call now open for projects over €1.5M involving industrial partners. Deadline December 17th 2020.
- Irish Research Council's [COALESCE Research Fund](#): for interdisciplinary research addressing societal challenges and projects with Irish Aid's partner countries. Deadline December 22nd 2020.
- [2nd Career-Fit+ call](#): Marie Curie funding for Enterprise Ireland Tech Centres and Gateways only. Post-doctoral projects to work with an Irish industry partner. Deadline December 31st 2020.
- [European Space Agency space-centred services against food and beverage fraud](#) funding for teams looking to investigate the technical feasibility and economic viability of space-based applications for the prevention, detection and fight of food and beverage fraud. Deadline January 19th 2021.
- [Interreg North-West Europe 2nd call for capitalisation](#): the call targets existing project partnerships with grounds for additional activities and where continuation of cooperation brings significant added value. Deadline January 29th 2021.
- Irish Research Council's [Ulysses Scheme](#) providing funding for travel visits to foster new collaborations between Ireland and France-based researchers. Deadline February 4th 2021.
- Event: [Digital Transformation of the Agricultural Value Chain](#) – Opportunities, Challenges and the Role of Science. Online European conference hosted by the Federal Ministry of Food and Agriculture and EURAGRI. December 2nd and 3rd. Register [here](#).

PUBLICATIONS

Extracting Pasture Phenotype and Biomass Percentages using Weakly Supervised Multi-target Deep Learning on a Small Dataset

Badri Narayanan, Mohamed Saadeldin, Paul Albert, Kevin McGuinness, and Brian Mac Namee
<https://www.researchgate.net/publication/344871892>

Effect of temperature on raw whole milk density and its potential impact on milk payment in the dairy industry

Puneet Parmar, Nicolas Lopez-Villalobos, John T. Tobin, Eoin Murphy, Frank Buckley, Shane V. Crowley, Alan L. Kelly, Laurence Shalloo
<https://doi.org/10.1111/ijfs.14869>

The effects of sustained fitness improvement on the gut microbiome: A longitudinal, repeated measures case-study approach

Wiley Barton, Owen Cronin, Isabel Garcia-Perez, Ronan Whiston, Elaine Holmes, Trevor Woods, Catherine B. Molloy, Michael G. Molloy, Fergus Shanahan, Paul D. Cotter, Orla O'Sullivan
<https://doi.org/10.1002/TSM2.215>

OTHER NEWS

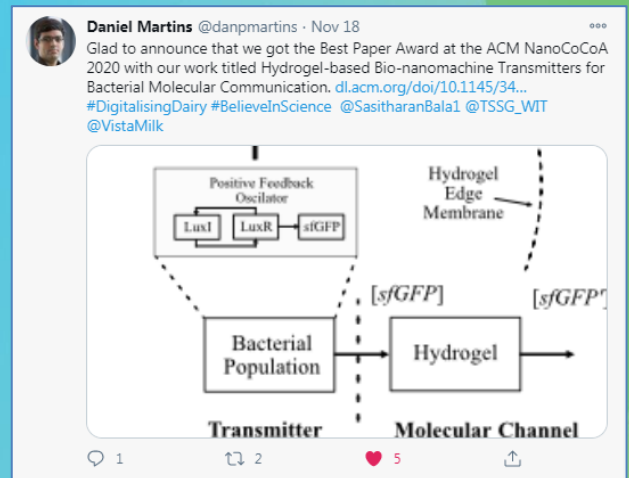


Figure 3 Best paper award for Daniel Martins, TSSG



Figure 4 Scientists from across VistaMilk dialling into over 100 classrooms all over the country during science week 2020

Our EPE manager Eimear Ferguson has been busy helping to coordinate H2020 project, [Cork Discovers](#) activities culminating in over 10,000+ children engaging with school science kits and activities across the country.

Investigators Paul Cotter, Orla O'Sullivan, Catherine Stanton and Seamus O'Mahony all recently featured in the highly cited list from Clarivate earlier this month. The full list can be found [here](#).

Congratulations are also in order for Tomas Turbitt who recently defended his PhD entitled "Differential dry matter production, nutritive value and grazing utilisation of perennial ryegrass varieties and mixtures evaluated within intensive grazing regimes".



Figure 5 Dr. Tomas Turbitt