



# CREATOLOGY: PATTERNS IN DIGITAL CREATIVE ARTS

Special Track  
Introduction



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# CreaTology Track

PATTERNS 2020



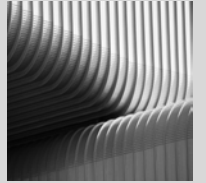
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## CHAIRS AND COORDINATORS

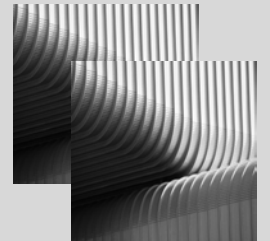
**Goldsmiths**  
UNIVERSITY OF LONDON

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**ABERYSTWYTH**  
UNIVERSITY

# Short Bio's



- Ida and Jackie both obtained their PhD's from Warwick University, UK, but didn't overlap then. They finally met at the University of London through their interest in stringology and its applications along with the design and analysis of combinatorial algorithms. They both regularly participate in the EPSRC AlgoUK network, King's LSD & LAW workshops, and international StringMasters problem solving meetings. Following their doctoral studies:
- Ida is a Lecturer in Computer Science at Goldsmith's College and has served as Director of postgraduate studies. She leads the Algorithms and Computer Networks research group, is a member of the Artificial Intelligence group, and a London University PhD examiner. Ida is also a keen musician and composer and organizes chamber music ensembles.
- Jackie was a visiting Lecturer at Royal Holloway and King's Colleges followed by appointments at Aberystwyth University: a Lectureship at the Mauritius branch and currently a Research Fellow in Wales. Jackie enjoys photography and art classes.



# Patterns in Digital Creative Arts

- Temporal pattern analysis & inference related to the creative digital arts
- Patterns in graphs & networks for digital creativity
- Artificial Intelligence (AI) for artists
- Creative computing applications related to big data
- Data structures / algorithms arising in interactive digital art forms
- Stringology issues related to the digital arts
- Internet/interface issues for the digital arts and virtual reality



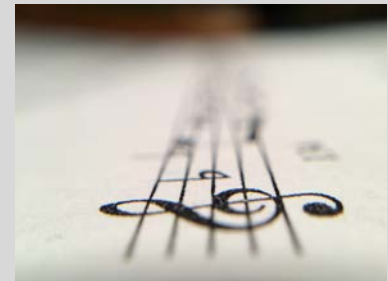
# Patterns in Digital Creative Arts Ctd.

- Digital creativity management systems
- Databases for digital media
- Visualization systems for creative computing
- Interdisciplinary applications/approaches to digital art, media and audio
- Physiology derived data patterns arising from performance in the arts
- Patterns associated with digital technology
- Quantifying art-science interaction



# International Research Network

- ❖ Centred on the design and complexity analysis of randomised, parallel, probabilistic and average case algorithmics for various application areas:
  - Data communications and mobile ad hoc networking
  - Geometric distortions in image processing
  - Social networks and responsive algorithms
  - Stringology, data compression, and indexing
  - Music analysis
  - Parallel generation of combinatorial structures



# Outline of the CreaTology Track

## Introduction

- *Diffusion Patterns of Social Network Posts* by Alexander Gubanov and Yuliya Mundrievskaya, Tomsk State University and Ida Pu, Goldsmiths, University of London
- *Spambots: Creative Deception* by Hayam Alamro and Costas Iliopoulos, King's College London
- *Concepts for Computing Patterns in 15<sup>th</sup> Century Korean Music* by Sukhie Moon, Soongsil University, Jacqueline Daykin, Aberystwyth University, and Ida Pu, Goldsmiths

## Discussion

# Futuristic Challenges in Digital Arts

- ❖ The internet is predicted to be extended to space. Consider issues:
  - Diverse and unexplored environments
  - Adaptability, scalability, reliability & accessibility
  - Exploiting transdisciplinary innovation
  - Research governance: ethical and legal issues
  - Disruptive research in creativity

