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**HIT SCRAPE CLICK DRAG: ANALYSIS AND APPLICATION OF  
COMPOSITIONAL METHODS AT THE INTERSECTION OF CONSERVED AND  
EMERGENT TECHNOLOGIES**

A thesis

submitted with a DVD in fulfillment of the requirements for the award of  
the degree of

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at

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by

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2007

School of Creative Arts

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(.....)

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## ABSTRACT

The creation of music incorporating emergent technologies has occurred throughout history across a range of styles. In the past fifty years advances in electronic and, more recently, digital technologies have led to a range of new music making practices. Most recently, rapid advances in computer technology have enabled the results of complex digital manipulations of sound to be heard in real time, allowing the computer to become a powerful live performance and composition tool. As new technologies emerge, new musical forms based on various levels of synthesis of pre-composed and improvisation based composition methods are developed. This research seeks to identify, define, categorise, explore and develop compositional methods in which traditional composition techniques and emergent technologies intersect.

The research has historical, analytical and personal practice components and is situated in the fields of music analysis, music technology and composition. The deficiencies of existing analytical methodologies are discussed with particular reference to emergent technologies, music creation, recording practice, and interdisciplinary theoretical issues. A text-based, parametric analysis method is developed and applied to thirty-six selected key works in electronic/electroacoustic, improvised, rock and electronic dance music (EDM) genres. The works analysed originate from the USA, Europe and the UK and span the past seventy years. The analytical method considers the processes, shaping factors (i.e., contextual or extramusical elements) and inputs (i.e., textual or musical elements) involved in the creation of works and is intended to address both conserved and emergent technological elements. Observations made by the researcher are included alongside those from the literature.

The detailed analyses of the thirty-six selected key works are included as an Appendix, with a summary mapping of genre terrain included in the thesis. Whilst some generalisations about works within genres and between genres are made, the compositional methods identified constitute a complex and diverse set of music making practices. In general terms, in electronic, rock and EDM genres, traditional roles of composer, performer, producer and engineer are blurred, with individual artists moving between such roles. In improvised works a distinction between performer/composer and engineer is apparent. In more specific terms, the use of historically emergent sound sources distinguishes most of the electronic works at a timbral level. In some cases in the electronic genre, the sound source is an important conceptual driver for the structure of the works. In other genres, emergent sound sources often lead to an expansion of existing forms or used to supplement, or substitute for, traditional instrumentation.

The research makes a direct and explicit link between music analysis and music creation. The insights gained from the analyses are applied to the creation of eight new musical works: four genre-specific studies and four major works. Recordings of the practical works are presented, alongside video documentation of the rehearsal, performance and recording of the major works, on an accompanying DVD. A compartmentalised and hybridised approach to composition is utilised, drawing directly from the parametric analysis method. The practical works feature both solo and group ensembles and incorporate traditional instrumentation and digitally sampled and synthesised elements. A range of individual and collaborative ‘top down’ and ‘bottom up’ processes are explored. A computer based performance instrument (CBPI) is developed using the software Max/MSP. The CBPI embeds compositional elements identified in the analyses (relating to sound source, sound processing, rhythm, pitch,



texture, and spatial elements), and is utilised in the creation of the major works. The compositional approach crystallises and extends many aspects of past personal practice. The eight practical works represent some of the possibilities of both the CBPI and the analysis/creation model.

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