**GRADUATE RESEARCH CONFERENCE (GRC)**

Thursday 19 February 2015

Building 516, Brunswick campus

**Josephine Aboagyewaa-Ntiri - PhD**

**The diffusion of Adinkra symbols in the Modern Ghanaian Clothing and Textiles Industry**

This study is on diffusion of Adinkra symbols in the Ghanaian clothing and textiles industry. Adinkra symbolic craft is a dying art and for these symbols to be embraced by the modern Ghanaian society the meanings will need to be understood. Fashion is a psycho-social mechanism which could allow for the penetration of concepts that have didactic meanings. This research has used an empirical study involving mixed methods to identify barriers and facilitating factors that would promote the diffusion of Adinkra art for modern use. To guide the analysis, a conceptual framework was applied that focused on five key factors such as, knowledge, technology, relationship, absorptive capacity and consumer culture. The research has taken a holistic approach to identify the views from the supply network.

Keywords: Adinkra symbols, natural dye, cloth, artisans, innovation through technology

**Sonya Kraan – PhD**

***Dis*-ease state – Illness embodiment in fashion practice**

This doctoral research project seeks to understand, uncover and develop the unique methodologies of chronically ill fashion practitioners.

Reflecting on my own experiences as a fashion designer, living and working with chronic migraines, I propose the value of making and creativity is far deeper than cathartic and serves as both a channel for reframing illness perceptions and enhancing bodily awareness. This research is particularly interested in illness that is invisible. These patients face a distinctive set of challenges and often rely solely on verbal symptomology to communicate their illness experience. How can the process of making help materialize the internal dialogues of the sick body? Can illness embodiment provide new awareness about methodology and reflective practice?

These questions will be investigated by a series of qualitative, reflective and creative research projects.

Key Words: Chronic illness, Reflective practice, Materiality, Methodology

**Arsheen Moiz - Masters**

**Modification of the surface of a polycotton fabric with thermoplastic polyurethane, polydimethyl siloxane and trimethylated silica to produce superhydrophobicity**

In this research, a two-stage knife coating approach using thermoplastic polyurethane, and a combination of polydimethyl siloxane and trimethylated silica, was investigated for the surface modification of polycotton fabrics to impart superhydrophobicity. This paper reports on the potential use of a polyurethane coating system as an alternative to fluoropolymer compounds. The water repellency and durability of the surface coatings were analysed by measuring the water contact angle of the coated fabrics after laundering and crocking of the samples. The coated fabrics showed high resistance to wetting and water penetration and a contact angle of 142° was achieved. These approaches can be applicable for the future advance technologies involving superhydrophobic and self-cleaning materials in many fields.

Key words: Thermoplastic polyurethane, trimethylated silica, polydimethyl siloxane, polycotton, superhydrophobicity, contact angle, knife coating.

**Siti Hana Nasir - PhD**

**Therapeutic gloves for patients with arthritis**

Therapeutic gloves are used as a rehabilitative treatment for arthritis patients to reduce arthritic symptoms and improve hand functioning. However, limited research exists to quantify the effectiveness of these gloves. In addition, there is no considerable body of research that addresses glove performance attributes, as well as materials that substantially influence their performance. The aim of this research is to design and engineer a therapeutic glove with an improved fit, comfort and functionality for an individual with arthritis. As an exploratory phase, extensive background research and patients survey study were carried out to gain greater insight into therapeutic benefits of existing gloves, as well as into patients’ experiences, attitudes and perception towards existing therapeutic gloves. Further, investigations into physical and mechanical properties as well as into tribological characteristics of existing suitable commercial fabrics and gloves were carried out. Analysis of the effect of hand movements on skin strain distribution; and interface pressure induced to the hand of the wearer were conducted to establish quantitative relationships for glove conceptual design. As a result of this research, a prototype glove with improved fit, comfort and functionality will be developed and evaluated.

Keywords: arthritis, therapeutic gloves, hand therapy, functional design, glove fit, comfort

**Adele Varcoe - PhD**

**Fashion Affects**

This PhD by project aims to reveal, understand and amplify how fashion affects social experience. Yuniya Kawamura and Ingrid Brenninkmeyer who speak of ‘fashion as a belief that is manifested through clothing’ are used as a starting point to investigate ways of feeling and understanding fashion as something other than or beyond clothes.

This research explores fashion as an intangible, imaginary or immaterial phenomenon that affects human behavior both psychologically and socially. To understand fashion in this capacity I intervene in everyday situations, introducing garments and actors into scenarios and analyze the affects. The situations test the physical and psychological affects of fashion through human interaction by putting a mirror in front of the subtleties that occur in everyday life.

Key words: Situation, Dress, Fashion, Affect, Behavior.