

# Dr. Michaella Janse van Vuuren

P.O.Box 1799, Faerie Glen, Pretoria, 0043, South Africa

michaella@nomili.co.za

Cell: +27 (0)73 173 0750

Fax: +27 (0)86 672 9820

## EDUCATION

Post Doctoral Fellow. The Central University of Technology, Bloemfontein.

PhD in Electrical Engineering. The University of Cape Town.

BSc in Electrical Engineering. The University of Cape Town.

Pretoria Art Music Ballet and Drama High School.

## AWARDS

Postdoctoral Fellowship Bursary (NRF) 2007.

PhD Scarce Skills Scholarship (NRF ) 2002-2003.

De Beers Bursary 1999-2003.

NRF Funding 1999-2002.

Santam Art Bursary awarded to top 10 Matriculants.

## PROFESSIONAL PROFILE

Proficient in design for 3d manufacturing technologies.

Digital designer with skills in both geometrical and organic 3d modelling.

Researcher with extensive experience in image processing and pattern recognition.

Excellent creative problem solving skills.

Good communication skills in spoken, written language and visualisation.

Fluent in Afrikaans and English.

Computer proficiency:

Software Packages: Microsoft Word, Excel, Power Point, Lyx, Latex, Adobe

Photoshop, Dreamweaver, Illustrator, Premier, 3D MAX, MIMICS, MAGICS, Rhino, Zbrush, Wings.

Operating Systems: Windows, UNIX and Linux.

Programming Languages: MATLAB, Python.

Multimedia designer, including website design, illustration, rendering, 3D modelling, Additive manufacturing.

## WORK EXPERIENCE

**Established the company NOMILI** as a vehicle for promoting 3D engineering, fine art and design work.

**Postdoctoral Fellowship at the Central University of Technology in Bloemfontein.** The research focused on the development of custom implants using computer-aided design (CAD), computer aided manufacture (CAM) and Rapid prototyping (RP) methods utilizing CT and MR-scan data as reference. The main area of work involved the processing of CT scan data for Rapid prototyping.

**Researcher at the Council for Scientific and Industrial Research (CSIR),** Meraka Institute on the National Accessibility Portal (NAP), an innovative and efficient information and communication system that will enable people with different disabilities to access information and services, to interact and communicate irrespective of age, gender, language and level of literacy. My primary focus was to research the current state of the art in technologies concerning hearing loss, particularly toward a system that could automatically translate text into South African Sign Language (SASL) and to recognise SASL gestures in video sequences.

**The development of a system for automatic human pose and action recognition.** The project required that a database be constructed consisting of a professional blue screen studio, 7 cameras and camera operators as well as eight actors. These elements had to be coordinated to produce a 24-hour video database filmed over four hours.

**Consultant on an Image Database to de Beers.**

**The construction and outfitting of a permanent bluescreen studio** at UCT.

**The development of a human eye detection and tracking system.**

## **TIMELINE**

### **2010**

April: The Chrysanthemum included in the .MGX by Materialise collection launched in Milan at the Salon del Mobile.  
April: Michaella Janse van Vuuren and Lucas Thobejane selected as joint festival artists of the Klein Karoo National Arts Festival.  
March: Collateral group exhibition at the FRIED Contemporary Art Gallery, a collaboration with Gordon Froud.  
February: Exhibit at the Design Indaba 2010 expo as NOMILI.

### **2009**

December: Group Exhibition at ARTSPACE warehouse.  
September: Diptych art Exhibition at the Association of Arts in Pretoria.  
March: The Chrysanthemum centrepiece voted as Design Indaba 2009 Most Beautiful Object in South Africa competition.  
February: Exhibit at the Design Indaba 2009 expo as NOMILI.

### **2008**

June: KYK gallery's Artificial Light group exhibition, Pretoria.  
Open Lab II exhibition at the Design Quarter, Johannesburg.

### **2007**

November: Group exhibition of Pretoria Jewellers at the South African Association of Art  
Final selection in the VISI Haute Lumière Lighting competition.  
Postdoctoral fellow at the Central University of Technology, Bloemfontein.

### **2006**

Postdoctoral fellow at the Central University of Technology, Bloemfontein.

### **2005**

Researcher at the Meraka Institute, CSIR.

### **2004**

Completion of PhD in Electrical Engineering; Human Pose and Action recognition using Negative Space Analysis.

### **2002**

Consultant on the construction of a video database for De Beers.  
Awarded Scarce Skills Scholarship (NRF), National Research Fund Bursary and De Beers Bursary for research in computer vision.

### **2001**

An investigation into the relationship between art and image processing toward the development of computer vision systems.  
Construction of a gesture database comprising 7 actors from six different camera angles.  
Awarded (NRF) National Research Fund Bursary and de Beers Bursary for research in computer vision.

### **2000**

The development of an interactive world: An animated character automatically mirrors the actions of an actor in a bluescreen studio.  
Upgrade Masters to a PhD.  
The construction a bluescreen studio at UCT for research purposes.  
Awarded (NRF) National Research Fund Bursary and De Beers Bursary for research in computer vision.

### **1999**

Commence Masters studies in Electrical Engineering.  
The development of a vision system for the automatic detection and tracking of eyes in video sequences.  
Awarded (NRF) National Research Fund Bursary and De Beers Bursary for research in computer vision.

### **1995-1998**

BSc Electrical Engineering.

### **1994**

Completed 1st Year Computer Science UNISA.

### **1992-1993**

Hirt and Carter DTP Course. Photoshop, Quark Express and Adobe Freehand.  
Freelance Artist, Live Performance Artist, and Mural Artist.

### **1991**

Michaelis Art School, uncompleted.  
1986-1990 ProArte High School for Art Music Ballet and Drama.  
Two Distinctions for Art in Matric. Specialized in Painting, Sculpture, Puppetry, Body Sculpture and Video Art.  
Santam Art Bursary awarded to the top ten matriculants in art of that year.