

Margaux Hayes

p: 0404 454 140

e: margaux.hayes@gmail.com

w: margauxhayes.com

Product Design Engineer
Educator

Melbourne, Australia

Core Software:

Solidworks

Adobe Creative Suite

KeyShot

Other Skills:

Fabrication

Basic Web Design

Project Management

Business Management

EDUCATION

2007 – 2011

Bachelor of Engineering (Product Design Engineering)

Swinburne University of Technology, Hawthorn

Completed December 2011

2012

Certificate IV in Small Business Management

RMIT University Melbourne

July – August 2011

Global Design For Kids

EAFIT Univeristy, Colombia

2 week intensive design collaboration with students from Denmark, France, the Netherlands, Colombia and Australia.

2005 – 2006

Bachelor of Science

University of Melbourne, Melbourne

(Leave of absence, then transfer to Product Design Engineering at Swinburne)

EXTRA-CURRICULAR

2009

Treasurer – Engineers Without Borders (Swinburne Chapter)

Over 2008 and 2009 I assisted in the establishment of Swinburne's chapter. As a small chapter and a very new chapter the few core members shared many roles, such as events management, publicity, liaising with the national office and administrative tasks.

2008

Vice President – Engineers Without Borders (Swinburne Chapter)

EMPLOYMENT

November 2012 – Current

Founding member, treasurer, administrator and studio manager at Norm

www.normwarehouse.com.au

Norm is a not for profit organization in Melbourne which is home to a community workshop, tool library and studios. The project grew out of a desire to have an open workshop for non-professional designers and makers to realise their ideas. It is now a much bigger beast. We liaise frequently with other arts and events operators, local councils and community groups. My role here has given me experience in project planning and management, financial management, business (particularly in setting up a not-for-profit), OH&S standards and systems, and communication.

February 2014 – current

Sessional Lecturer at RMIT

www.rmit.edu.au

Writing and delivering a new subject in materials and manufacture, delivered to first and second year industrial design students. The role involves some collaboration with other teaching staff but is largely independent. It has been necessary to explore methods for effective communication and knowledge transfer, whilst making an effort to explore and highlight the relationship between technical knowledge and good design practice with the students.

July 2012 – Current

Product Design Engineer (contracting) at Tricycle Developments

www.tricycledesign.net.au

I sometimes have the pleasure of working alongside Trike's incredibly experienced, clever and capable team. The role includes research, concepting, detail design, prototyping, testing, documentation, etc. for a variety of clients. Design for various manufacturing types, thorough material knowledge and excellent communication are always necessary here.

June 2015

Product Design Curriculum Development Educator at Princess Nora University, Riyadh, Saudi Arabia

for Monash University Art Design & Architecture

A second visit to PNU focused on introducing the staff to new prototyping technologies, as well as discussing and developing curriculum for their planned Product Design degree.

EMPLOYMENT

January 2015

SolidWorks Educator at Princess Nora University, Riyadh, Saudi Arabia

for Monash University Art Design & Architecture

A customised one week course for the staff at PNU. The course content was developed during 2014 and finally delivered as part of Monash University's workshop series in January of 2015. The course covered an introduction to using SolidWorks as well as practical exercises in using the software for emerging design technologies such as 3D printing and laser cutting.

September 2013 – October 2014

Vice President of the Brunswick Tool Library

www.brunswicktoolibrary.org

After a year as a general board member I took on the role of Vice President, underneath the organization's founder, Joleen Hess. I took on presidential responsibilities while Joleen was absent in addition to providing tech support, volunteer engagement and establishing day-to-day systems for the tool library. I have since returned to a general board position as I focus on managing the finer details of Norm. The board collaborates to guide the tool library through its continued growth into a stable and sustainable future.

July 2014 – December 2014

Contributor to a Handbook for Community Projects

A collaboration with a small team of people from not-for-profit and community ventures in Berlin, Germany. Initially conceived as a step-by-step guide for setting up a project in the sharing or solidarity economy, the document finally became a collection of examples of established projects. We met throughout the process to gather ideas for the handbook, organize crowd-funding and organize the content. I was responsible for typesetting the document and also contributed a chapter on Norm and the Brunswick Tool Library.

September 2013 – November 2013

Design, Construction and Curating of The Tabernacle

www.tabernaclearts.com

In collaboration with two others, we designed and constructed a portable venue which first appeared at The Village Festival in Melbourne, November 2013. The project was completed on a tight budget and timeline, additionally meeting various standards and permits set by the festival and the local council that governed the use of the festival site. I was also involved in the web design, lighting, tech, artist liaison and stage management.

EMPLOYMENT

February 2012 – January 2014

Musical Instrument Design for Neil McLachlan (Melbourne University) and Harmonix Instruments.

Design and prototyping of tuned percussion instruments for professional performers and classroom music education.

March 2011 – July 2012

EvacuLife Evacuation Chair – Evacuation Chairs Australia

Initially my final year project, this project continued independently into 2012 with Evacuation Chairs Australia to develop an improved evacuation chair for an Australian market. The chair allows the easy evacuation of the mobility impaired from multi-story buildings. The scope of project covered an analysis of the market and prior art, detail design, CAD, FEA, prototyping and testing.

July 2012

Research Assistant – Christine Thong at Swinburne University

Literature review, interviews, observation and analysis of data. Australian cable-tray manufacturer EzyStrut has requested an analysis of the current products and practice in the industry, seeking to determine if there is room for innovation in the industry.

June 2011 – June 2012

Volunteer – Playground Ideas

<http://playgroundideas.org>

A voluntary role. Designing cheap, low-tech tools and methods for material processing in developing communities.

Creating step-by-step visual instructions using sketchup and illustrator for existing playground designs. These were to be pictorial, communicating accurately the construction of various structures without relying on language or literacy. The role involves online collaboration with an international team.

EMPLOYMENT

March - June 2010

Internship - DEAM Corporation

<http://www.deamcorporation.com>

A paid internship for a small company based in Amsterdam. My primary project was a hysteroscopic tool. This included field research, exploration of ergonomic and functional requirements, the integration of DEAM's technology into a working prototype, CAD modeling and technical drawings.

I also worked alongside a small team on other projects, including the design and redesign of parts for general laparoscopic tool and a neurosurgical tool.

2010 - 2012

Set Design, CAD and Technical Resolution

Realising the concepts for a variety of installations with Russell Lloyd which have appeared in various popular contexts such as sculptures of paper boats for the Falls Festival 2010-2011

March 2010

CAD and design for manufacture

In 2010, the Ruhr area of Germany was the European cultural capital. As a part of this, some pieces of public artwork were commissioned in the city of Dortmund. I assisted on two of these projects:

- CAD and engineering consultancy to Lena Schmidt for "Fallshirm"
- CAD and design adaption for laser cutting to Christine Böse

SKILLS

Technical

I am very computer literate and familiar with Windows, OSX and Linux operating systems. I enjoy knowing my tools well and am comfortable using command lines when the usual GUI doesn't give enough control. I have plenty of experience sharing data across networks, exploiting new developments in file sharing and version/revision control systems.

Software capabilities:

- **SolidWorks** Very capable in both modeling and technical drawing generation. Skills include sheet metal design and FEA. I can comfortably manage complex assemblies, sub-assemblies and configurations.
- **SketchUp**
- **Keyshot** Preferred rendering programme
- **3DS Max**
- **Microsoft Office**
- **Open Office**
- **Adobe Illustrator**
- **Adobe Photoshop**
- **Adobe Dreamweaver**
- **Adobe InDesign**

Research

Research is one of my favourite parts of the design process, especially scoping studies into products, technologies and materials. I've got a good knowledge of available resources, augmented by strong report writing skills. Those skills feed well into other areas such as product testing.

Fabrication

Various projects have given me reason to explore a wide range of fabrication techniques. The workshop that I set up with the team at Norm (see employment) has provided continued access to the necessary tools to develop increasingly better building and fabrication skills.

Broadly, the areas which I have some experience in are:

- **Woodwork**
- **Welding**
- **3D printing, Laser cutting, etc.**

REFERENCES

Mathew Trainor
Director – Tricycle Developments
e: mat.trainor@trike.com.au
p: +61 3 9326 5365

Joleen Hess
Founding Member – Brunswick Tool Library and NORM board
member e: joleen@brunswicktoollibrary.org

Judith Glover
Professor - RMIT
e: judith.glover@rmit.edu.au
m: +61 413 617 392