

STEPHEN SCOTT NURSE, B.E. Mech, M. Des.  
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Born: 30th May 1960, Married with one son  
<https://www.instagram.com/stevenurseau/>



2<sup>nd</sup> from left, representing Wecycle at a Darebin volunteers event, and in an OzHPV race with a trike I designed & built.

WORK ASPIRATIONS: Enjoy work, learn, grow and contribute to society

PEER REVIEWED RESEARCH PAPERS written for conferences and websites since 2004, before, during and after an Industrial Design Research Masters at Monash University. Some samples:

[In-Hub Gearbox Front Wheel Drive Cycles](#) at hupi.org

[Leaning Trikes using Rear Axle Pedal Crank Mechanism](#) at hupi.org

[Evolution of Cycles from Front Wheel Drive to Delta Tilting Trike](#) at atrf.info

[Tilting Human Powered Trikes: Principles, Designs and New Developments](#) at atrf.info,

[Simple Leaning Trikes](#) Industrial Design Master Thesis

More papers, publications, Cad file downloads at this [website](#).

#### STRENGTHS

- \* Quick to understand, model and express engineering information
- \* Capable in workshop (ie Lathe, Carpentry, 3D printer operation, Braze Welding)
- \* Articulate and able to write concise English
- \* Proficient in 2 & 3d CAD, spreadsheets, wordprocessing, research skills including accessing research papers online and citing using Endnote.
- \* Industrial and academic work experience

#### COURSES AND QUALIFICATIONS

2020: [TAE40116](#) Certificate IV in training and assessment from Melbourne Polytechnic, study activities completed March 2020 but full assessment is pending.

2017 Monash “Validator” Business startup course.

**2017 Industrial Design Master’s Degree, Monash University (m. Des)**

2011 Regal Beloit Green Belt Qualification (Manufacturing Efficiency)

2005 Welding Course, Richmond Tafe (30 contact hours)

1996 Plastics Design Course, Casey Tafe (108 Contact Hours)

1995 Grad. Dip. Advanced Manufacturing Technology, Monash University, Quality / ISO9001, Cad/Cam, Statistical Process Control

1989 Mittelstufeprüfung, Goethe Institut German Language Qualification

**1982 Mechanical Engineering Degree, Melbourne University (B.E. Mech)**

1977 Higher School Certificate, Melbourne Grammar School

#### PATENTS AND DESIGN REGISTRATIONS

Applied for six Australian cycle-related patents, named in two Australian Electric-motor-related Patents, three registered designs for Tribo construction set. Details [here](#).

#### PROFESSIONAL WORK

Current and July 2017 to November 2018: Home based carer. My wife Christine has chronic illnesses, is unable to drive and I assist her with everyday tasks.

November 2018 – March 2019: Engineer improving documentation of procedures and machine operation for transfer of aluminium diecasting operations from Regal Beloit Melbourne to Thailand. Writing and editing spreadsheets and word documents, photographing diesets for shipment, writing diecasting maintenance documents.

Jan 2015 – July 2017 Scholarship funded Monash University Student, building, documenting and riding 6 leaning trikes (Human Powered Vehicles) answering the research question “Can DIY leaning trikes lead to sustainable transport?” [Link to assessment exhibition notice](#).

Aug 1994 - Dec 2014 Regal / CMG: Engineer, Electric Motor Design and Manufacture  
\* Manager for design of plastic body 1.5 kw axial flux pool pump [motor](#) including \$600,000 budget, travel to Thailand, 3d Cad, rapid prototyping & tooling, electronics manufacturing.  
\* Design of Steel, Plastic and Aluminum machined / moulded / cast parts and finished products using AutoCAD LT and Solidworks, [Speedmaster](#) motor design  
\* Sourced parts for motors, produced BOMS & manufacturing instructions

Apr 2000 - Jan 2002 Trimcast Rotomoulders Design Engineer

\* Assisted with design of 7 metre diameter, six trolley rotomoulding machine  
\* Design of rotomoulded boxes and NC Routed foam for storage of aviation, military and medical equipment.

Jan - July 1994 Monash University (Caulfield), AutoCad Instructor, Part Time

\* For 3rd year Mechanical Eng students, lecture / set / mark assignments and course content

Jun 1993 - Aug 1994 Creating Quality Documents/Cad Drafting, So-Rite Engineering: Metals Fabrication 20 hours per week, ISO quality, calibration, maintenance procedures / CAD work for production (HP ME10) / Operation and repair of machinery

Nov 1989 - Aug 1994 Mechanical Engineer, Wajax Australasia: Pump Manufacturer, Full Time, Writing ISO9002 quality procedures, Manually drawing pump-related components & assemblies, Testing and commissioning diesel and electric pumpsets

Mar 1984 - Mar 1989 Technical Assistant and Fitter Heidelberg Australia, Full-Time (sellers, importers and servicers of printing machinery.) Project management, repair and installation of printing machines, Technical correspondence with German Principals, German Language and machine-related training with Goethe Institut and Manufacturers in Germany

#### OTHER WORK

- \* Draftsman, Markhall Engineering. Steel Building Fabrications
- \* Printers Assistant, Brown Prior Anderson
- \* Student Engineer, Alcoa, Pt. Henry & Vicrail Newport.
- \* Computer Operation and Management, Typing 2000 (partnership with my wife Christine)

#### NON-ACADEMIC WEB PUBLICATIONS:

Website: [Modular Bikes](#), Cycling related

Blogs: [Modular Bikes](#), Cycling related

[Tribo 3d](#), Design and 3d printing related.

YouTube : [Films](#) featuring homemade cycles and 3D printed items

Instagram: [News](#) of new blog posts and events

Cad Files: [Free Downloadable STL](#) and other files of my designs

#### PUBLICATIONS / COMPETITIONS / EXHIBITIONS / INTERVIEWS

2020 OzHpv Newsletter, "[Huff](#)": Current Editor, numerous contributions since 2005.

2017 - 2019: Leaning trikes, table, construction set displayed in Fringe Furniture 31 - 33

2017: [Timber Leaning Trike](#) entry in Dangerous Designs timber design competition

2009: Self-Published book "[An Illustrated Guide to the Cycle Zoo](#)", ISBN 9781921488085

2004: [Spezi Folding Recumbent Competition](#) in GernersheimGermany

#### PERSONAL and COMMUNITY INTERESTS:

Bicycling: Volunteer and Committee Member for [WeCycle](#) cycle charity (refurbish cycles for those who need them) and [OzHpv](#) Human Powered Vehicles (Ex-President / newsletter editor / committee member, organised National Championships, 2014, 2017, official at record attempts), distance cycling (Audax) on recumbents I've made, ie 200k per day and above.

Surfing: Keen Amateur Surfer

Reading: Novels and technical magazines

Home Renovation and Maintenance, Gardening

***Please ring or email if REFEREES are required.***