

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



With my students at back2bikes, Racing on a trike I designed.

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

STRENGTHS

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

COURSES AND QUALIFICATIONS

2021: Volunteer assisting Back2bikes bicycle mechanics course under Mike King.

2021: Victorian working with children check passed, Card # 2120808A-01

2020: [TAE40116](#) Certificate IV in training and assessment, Melbourne Polytechnic

2017 Industrial Design Research 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

PROFESSIONAL WORK

Feb 2022 to Dec 2022, 1 day per week at Back2bikes, running the bikes for the needy program, providing free refurbished bikes for those that need them. Work Includes training & supervising volunteers, selecting bikes for repair and communicating with community support agencies. During the year I supervised refurbishment and rehoming of 203 unwanted bikes.

July 2017 to October 2022: Home based carer. I supported my wife Christine until she passed away recently. She had chronic illnesses and was unable to drive. She had National Disability Insurance Scheme carers but I assisted her with everyday tasks.

February 2021 to April 2021, 3 days per week: Diecast Australia engineer improving die labelling, documentation and machine operation for a zinc / aluminium diecasting factory. Writing documents and spreadsheets, photographing diesets, writing diecasting maintenance procedures, compiling asset register.

November 2018 – March 2019: Regal Beloit diecasting engineer, improving documentation, maintenance and machine operation for transfer of aluminium diecasting operations from Melbourne to Thailand. Writing documents and spreadsheets, photographing dies.

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 parts and 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
* Designed boxes and 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: Pump Manufacturer, Writing quality procedures, Manually drawing pump parts, testing & commissioning diesel and electric pumps

Mar 1984 - Mar 1989 Technical Assistant / Fitter Heidelberg Australia, (printing machine distributors) Project management, repair and install printing machines, 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)

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](#).

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:

[Circles for Maths, Art, Play and the Circular Economy](#) (Aust Maths Education Journal)

[On Mutual Bicycle Aid](#) (Green Agenda)

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

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

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

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

2021: Self-Published Book "[Cycle Zoo](#)", ISBN 9780648925248

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

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

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

PERSONAL and COMMUNITY INTERESTS:

Bicycling: Volunteer and Committee Member for [WeCycle](#) charity (refurbish bicycles for those who need them) , and [OzHpv](#) Human Powered Vehicles (Newsletter editor), 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.