

Robert Q. Riley Biographical Sketch

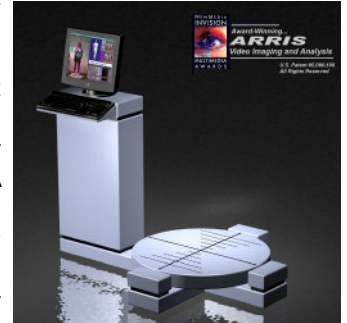
Robert Q. Riley is an author, industrial designer and a mechanical engineer with successes in a wide range of product categories.

His automotive experience includes vehicle styling, packaging, and power train design. He has produced energy-efficient, high-performance three-wheel road vehicles, electric and hybrid cars, and conventionally powered automobiles of 128-mpg fuel economy. Recently, an early diesel design, the Centurion, entered the Toyota Green Grand Prix (2014, 2015, 2016) and turned in over 200 mpg (250 mpg in 2015).

Mr. Riley pioneered the automotive application of FRP/foam composite, designed GM's Drive I electric car, and developed the urban car now on display at the American Museum of Science and Energy at Oak Ridge, Tennessee. Today, he is considered one of the world's foremost pioneers in the design of low-energy-demand passenger cars. His most recent work in the automotive field is the 125- to 200+-mpg XR-3 Hybrid.



his early work in revitalizing the highly efficient but largely forgotten recumbent bicycle. At the beginning of the new millennium, he again advanced the state of the art in recumbent design with the release of his cutting-edge Ground Hugger XR2 carbon fiber machine. A solar-assist version of the XR2 won first place in its category and third place overall in the 2001 Australian World Solar Cycle Challenge.

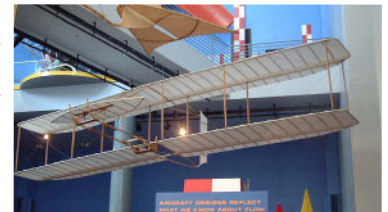


Arris Imaging System

Mr. Riley consults on new product design and strategies. He writes and speaks on sustainable energy and alternative automobile design. He has led conference workshops and speaks at industry, scientific, and academic events. He consulted on the Different Roads automobile exhibit at New York's Museum of Modern Art and was the lead speaker at the museum's daylong symposium on the future of the automobile. He was one of two U.S. technical consultants selected by Delcan Corporation to contribute to Transport Canada's *Sustainable Transportation Technology Forecast*, a study on transportation solution options for Canada's Sustainable Development Strategy.

Other Noteworthy Accomplishments

- Author of *Alternative Cars in the 21st Century: A New Personal Transportation Paradigm* (Society of Automotive Engineers, 1994; Second Edition 2003), and *Alternative Fuels for Spark-Ignition Engines* (for a volume on Motor Gasoline in the series, *Critical Reports on Applied Chemistry*, Royal Society of Chemistry and the Society of Chemical Industry, U.K., 1995).
- Produced more than 20 special-publication products for Fawcett Publications, CBS Publications, Hearst Magazines, and Times Mirror Magazines, and over 30 feature articles for magazines such as The Futurist and Popular Mechanics.
- Co-inventor and developer of The Lean Machine home fitness system, which pioneered the programmable-resistance, low-inertia exercise system in the consumer market.
- The first to build and fly a full-size replica of the Wright Brothers' 1902 Glider. The glider is now on permanent display at the California Science Center at Los Angeles, California.



XR3 Hybrid Prototype

Mr. Riley is also a prolific designer outside the automotive field. His non-automotive designs range from high performance watercraft, submersibles, hovercraft and human powered vehicles to fitness and medical products such as the Numo and the award-winning ARRIS medical imaging system. He has been referred to as the "father of the modern bent" for



Numo Fitness System

**ROBERT Q. RILEY
ENTERPRISES**
Product Design & Development

P. O. Box 12754
Chandler, Arizona U.S.A 85248
Mobil: 602-412-7951
robert@rqriley.com
www.rqriley.com

Robert Q. Riley SERVICES

Industrial & Mechanical Design

Styling and Theme Development
Sub-System and System Design
Vehicle Dynamics
Manufacturing and Assembly Processes
Packaging Design



Remotely-monitored modular commercial reverse osmosis system developed for Cirqua Customized Water, Camarillo, California. Quick-change modules allow for servicing by technicians having minimal technical knowledge.

CD-ROM & Print Media Development

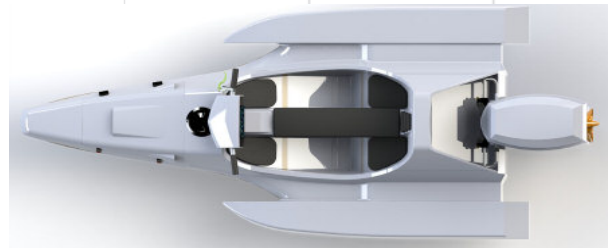
Technical, Assembly and User Manuals
Design and Layout
Technical Writing
Graphic Art
CD-ROM Authoring



XR2 carbon fiber recumbent bicycle designed as an in-house project. Winner in category of 2001 Australian World Solar Cycle Challenge.

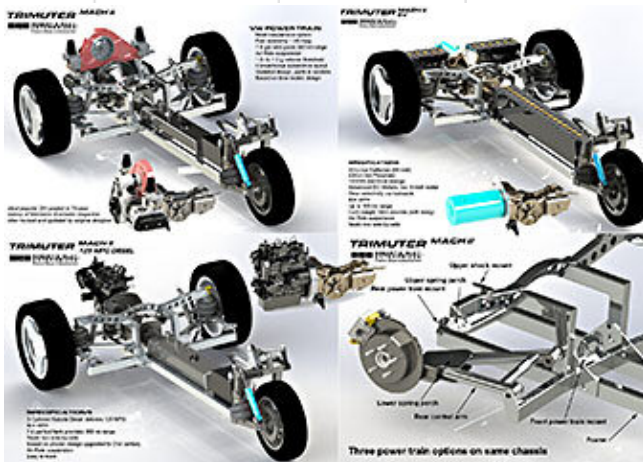
3D Modeling

SolidWorks
Rhinoceros

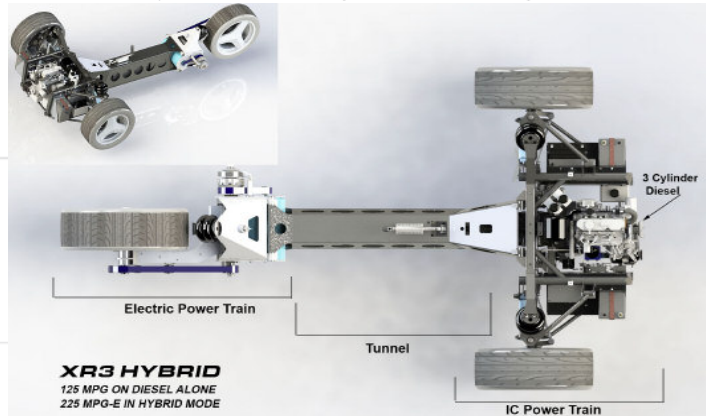


HydroRunner...unique tunnel-hull outboard-powered PWC

Ultra-Efficient Passenger Vehicle Power Train, Packaging & Layout



Trimuter Mach-II chassis. Choice of power systems on same chassis



XR3 Hybrid shown. May be battery-electric or ICE powered only.

**ROBERT Q. RILEY
ENTERPRISES**
Product Design & Development

Robert Q. Riley
P. O. Box 12754
Chandler, Arizona U.S.A 85248
Mobil: 602-412-7951
www.rqriley.com - robert@rqriley.com