

# How to roundly put the wind up the AFL: a better ball

CHRIS JOHNSTON

DR FIROZ ALAM is an academic engineer — aerodynamic research into planes, trains and automobiles is his area — so his instinct is to want things perfect. "That is my ideal in life," he says. "But I can never get it."

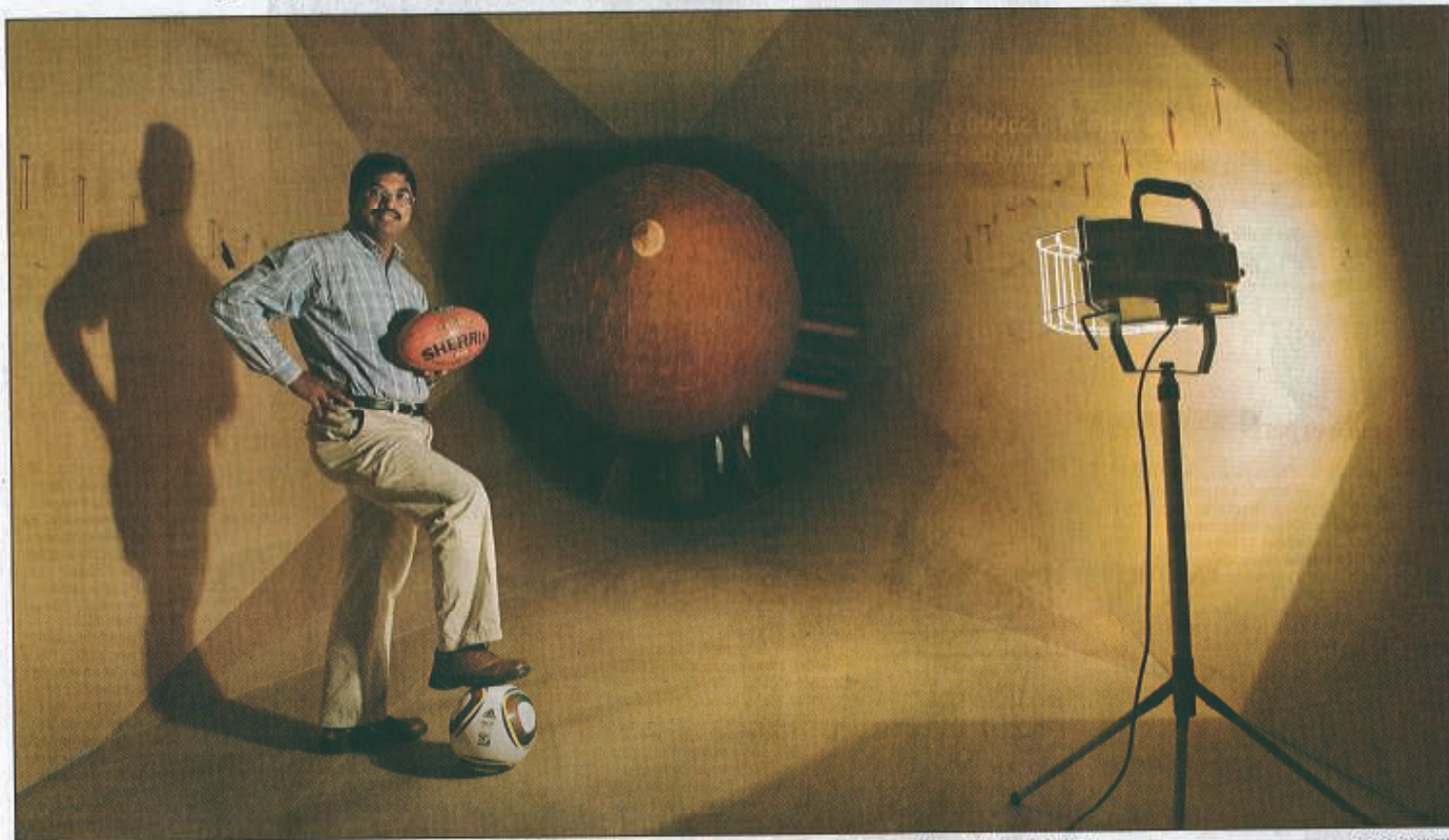
At his wind tunnel at RMIT's Bundoora campus he also investigates the aerodynamics of sports balls: cricket, golf, tennis and all the football codes. It is one of the few such research labs in Australia. The wind tunnel itself is the second biggest in the southern hemisphere. This week he got his hands on the newest soccer World Cup ball, the adidas Jabulani, made of only eight "thermally bonded" and "spherically moulded" panels and, according to the manufacturer, the roundest and most accurate soccer ball ever.

Soccer balls send Dr Alam into raptures. "So balanced, so predictable and perfect, so... spherical," he says. "It is an absolutely beautiful object. It is very difficult to achieve absolute spherical geometry and very difficult to achieve ball behaviour, which I would call 'fundamental'. So I like it very much."

Australian rules footballs are another matter. The Bangladeshi-born, Russian-educated engineer hasn't actually seen a footy match live and his right foot is not what you would call familiar with a solid drop punt, but he dislikes the ball. He distrusts it. It's nothing personal. It's just that it doesn't always do what it should.

Dr Alam says based on his aerodynamic research the ball — the Sherrin — flies inconsistently and should be modified. There have been no significant changes to the ball for 40 years but it would fly truer if the seams were moulded, the stitching concealed and the laces and bladder port "flush" with the ball, he says.

The game would not change, but kicking would be more accurate, resulting in "higher scores, higher interest in the game and higher participation". Goal-kicking would be affected more than kicking between players because less human error was involved. But player-to-player kicks would become more pinpoint; Dr Alam estimates accuracy could improve by up to 15 per cent.



Tunnel vision: Engineer Dr Firoz Alam at the RMIT wind tunnel, where he researches the aerodynamics of sports balls such as the new World Cup soccer ball and the Sherrin football.

PICTURE: VINCE CALABRO

He has an ally in Carlton 1970 grand final player Ted Hopkins, a sports data analyst who has written at length on the topic in the *AFL Record* magazine this week-end. Hopkins says he got interested in the aerodynamics of the footy not when he kicked four in that famous premiership win over Collingwood but in 1993 when controversy erupted over the McDonald's logo being printed on to the AFL game-day Sherrins. It was possible the logo affected its flight, he wrote in *The Age* at the time.

Hopkins says the spectre of "ugly, defensive football",

congested play and a rising hand-ball count could in part be broken by a better ball. "The best weapon against those things is for a player to run and kick," he says. "It's a better option than mucking around with the rules. I look at the soccer ball. It gives you a sensual invitation to kick because the flight and control have been continually improved."

"It would still be a football," he says. "I'm as fond of my Sherrin as anyone. But I think it could feel and perform better."

A spokesman for the AFL said the league would "rather not commit to a comment."



## BALLS, AIRFLOW AND AERODYNAMICS

### Soccer ball

A round ball flies more accurately because it does not have asymmetric air-flow separation — i.e. the air comes off the sides of the ball equally, making it less likely to deviate or wobble. A 14-panel ball — as used in the 2006 World Cup — has "turbulent" air flow around the ball. The eight-panel soccer ball, to be used in next month's World Cup, has less turbulent air flow so it will travel an estimated 2 per cent faster and will also be more accurate. A soccer ball, however, travels the least distance of all footballs in controlled RMIT tests.

### Australian rules football

Travels further than other balls when propelled using the same force in the same conditions and at the same weight because of its "projectile" or "shell" shape. The laces and bladder port on the ball, and the stitching, creates an asymmetric air flow around the ball. Therefore it's flight can be "unpredictable and erratic" even in calm wind conditions. According to RMIT's projections, a modified Australian rules ball could make its flight trajectory 10-15 per cent more accurate.

SOURCE: RMIT UNIVERSITY (WWW.RMIT.EDU.AU), AIRFLOW, ACCURACY AND IMPACTION ENGINEERING



## You could buy two Ferraris for this Falcon

MARK RUSSELL

A 1971 Ford Falcon muscle car is expected to sell at a Melbourne auction for more than double the price of a Ferrari.

The Monza green Ford XY Falcon GTHO Phase 3 will have a price range of between \$260,000-\$320,000 when it goes under the hammer at the end of this month, compared to the asking price of between \$110,000-\$130,000 for a collectable 1988 Ferrari.

The Phase 3 Fords have reportedly fetched more than \$700,000 in the past, but the market has dropped following the global financial crisis.

Shannons Auctions spokesman Michael Browning said the car, which for many years was Australia's fastest four-door production car and



Last of a breed: The Ford XY Falcon GTHO

won the 1971 Bathurst 500 motor race with Allan Moffat behind the wheel, was much prized by collectors. Only about 300-400 were built with just over half believed to still be in vintage condition.

The car will be one of four supercars for sale at the Shannons Melbourne Winter Classic Auction on May 31.

A metallic blue 1988 Ferrari Testarossa coupe is expected to sell in the \$110,000-\$130,000 range; a 2000 black Porsche 911 GT3 Touring coupe for \$100,000-\$115,000; and a silver 1977 Lamborghini Espada Series III coupe for \$55,000-\$65,000.

But the star will undoubtedly be the 1971 Ford XY Falcon.

Mr Browning said the car was "one of the last glorious dinosaurs of the racetrack".

"The value in these cars is unquestioned. They were the last of a breed of cars the like of which won't be built again," he told *The Sunday Age*.