

# REAL ESTATE

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## CURVED SPACE

*A team of architects, builders, software modelers and craftsmen have created a truly unique Lawrence Park house ■ H4*

**This house in Toronto was designed by architecture firm Bortolotto for client/builder Farhad Kazmian. It has been dubbed the Bézier Curve House in honour of French engineer Pierre Bézier, who was a pioneer of computer-aided curve design. TOM ARBAN**



The kitchen and dining areas of this Toronto home were created with rich textures, including ribbed brass panels that enrobe the bar area. PHOTOS BY TOM ARBAN

## The house with mathematical curves on the outside, and a human touch on the inside

Fed up with the sameness of 21st-century design, Toronto builder and architect teamed up for a modern home with a striking twist

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Yes, one could declare “Here’s a house that throws a curveball” or “This is architecture that takes a dramatic turn.” but that’s just too, well, predictable for this Lawrence Park house.

No, this one was a dance. A dance between the architects at Bortolotto; client/builder Farhad Kazmian; innovative modeling software called *Grasshopper*; a dead French engineer named Pierre Bézier; and a group of very alive and talented framers. And that dance produced one heck of a sexy roof that, on the outside, blends very complex mathematical curves into something almost slithering and snake-like, and, inside, has the randomness of human touch.

“That’s exactly what happened, did you hear the story?” asks Mr. Kazmian, perched on the edge of his armchair, the excitement evident in his voice even two years after construction. Just then, however, a thunder-like rumble interrupts our chat. Tania Bortolotto and Mr. Kazmian laugh it off, however, since it’s just sunlight-softened snow doing exactly what it’s supposed to do: fall along the house’s zinc-shingled valley into a cone-shaped pile near the front door.

As he looks up at the opposite side of that valley, here clad in warm wood, Mr. Kazmian picks up the story. He tells of sturdy steel beams that met at right angles on this L-shaped house, and how the framers, using Bortolotto’s drawings, installed an LVL beam (Laminated Veneer Lumber) between two of those beams and “strapped it back” to bend it. Then, once the proper curve had been achieved, they used plain old string to determine where to place each rafter.

“We were across the street saying ‘No, a little bit to the left,’” Mr. Kazmian says with a laugh. One has to wonder if Mr. Bézier (1910–1999), a pioneer of computer-aided curve design, would’ve enjoyed witnessing that very un-mathematical process?

Ms. Bortolotto counters that there was, indeed, plenty of math: “The software was able to create these triple curves,” she says. “If you’re working in AutoCAD, there’s no way that when you’re looking at it in plan, in two-dimensions ... you’d be asking yourself: ‘Is this right?’ [Using *Grasshopper*] is like getting Plasticine or foam ... and deciding whether it’s going to be feasible or not, spatially.”

In tribute to Mr. Bézier, they have dubbed the structure the Bézier Curve House.

This roof, it should be noted, came into existence owing to a number of factors. First, the 1950s home Mr. Kazmian purchased (with wife, Narges Karbasi) in 2011 came with an unusual front-yard lap pool and, since one



**Above: Inside, the great room matches the curves of the roof with an equally curvaceous staircase to the private bedroom wing. The home’s distinctive shapes were created with the assistance of a modelling software called *Grasshopper*.**

would never receive permission to build that feature today, any design from Ms. Bortolotto (and Alex Horber) would seek to retain it; this necessitated an L-shaped home to “cradle” the pool, Ms. Bortolotto says.

Next, Mr. Kazmian, owner of home-builder Abond Homes, not only wanted a calling card he could live in, he was fed up with the sameness of 21st-century design: “There was a point in time that all the contemporary designs started looking the same, everything was a box in glass,” he says.

And, since most of his street-mates had replaced their postwar houses with larger, faux-historic designs – some with complex rooflines sprouting turrets – he decided a gable or mansard roof, but one with a modern twist, would blend well. When he found Ms. Bortolotto’s “House in Kings Cross” online, he knew he’d found his architect.

But that’s not to say their

dance was a quickstep: “It was a very collaborative [process], tons of meetings, back-and-forth,” Mr. Kazmian says, flashing a smile at Ms. Bortolotto. “It was six months to do the concept and ideation because I was very picky and difficult and I was pushing back in some areas; but I was glad that she was almost stubborn at some points.”

One feature Ms. Bortolotto pushed for was the asymmetrical A-frame. By slicing off the western leg of the A and pulling the eastern leg down very low, kinetic energy – a frozen dance if you will – has been achieved.

Further, but tucking the “real” load-bearing wall behind glazing and allowing thin fins to express the A shape to passersby, the roof possesses a Fred Astaire-like lightness and grace. This, laughs Mr. Kazmian, “was a lot of work and money, but worth it.”

However, not describing what’s under this roof would do this dancing dwelling a disser-

vice.

Clean lines, creamy-white walls and 12-foot-plus ceilings dominate upon opening the front door. And while a visitor is confronted with a lot of volume, Mr. Kazmian has provided coziness via scale, colour and texture.

To wit: Rather than just rows of stark pot lights, the addition of canisters and task lights change things up; rich, sexy texture abounds in the kitchen and dining areas, where sculpted surfaces clad the kitchen island and ribbed brass panels enrobe the bar area; the bar top, too, is crafted from warm walnut that invites touch; in the small sitting room facing the lap pool, enormous windows welcome cedars, sculpture and the ipe deck inside.

The real showstopper, of course, is the great room, where the underside of Bézier’s curve acts as yin to the yang of an equally curvaceous, sculptural staircase to the private bedroom wing. Here, with tall windows set at second-storey level (the garage is underneath), this four-member family can feel both semi-private and semi-public; indeed, Mr. Kazmian says last December’s enormous Christmas tree was placed right against the window so all could enjoy it.

Interestingly, the choice was made to make bedrooms – even the master – somewhat smaller in this more-than-5,000-square-foot house in order to enlarge the walk-in closet, create a large master bath and provide a guest bedroom.

Over all, the Bézier Curve House didn’t cost that much more than similar-sized square boxes that, frankly, stick out like sore thumbs in traditional neighbourhoods. The key is research: “There’s a need in the market for a little bit of education,” Mr. Kazmian says. “If you want a house that’s not like those guys, it’s not that your only choice is an ugly glass box.”

Find a partner like Ms. Bortolotto, and, well, one’s dance card will be filled for decades to come.