

# Gloria Tonon-Kozma, P.E.

## 1. Personal details

LAST NAME: Tonon-Kozma (Maiden name: Galantay-Kozma)  
FIRST NAME: Gloria  
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E-mail: [gloria@tononeng.com](mailto:gloria@tononeng.com)  
WEB PAGE: [www.tononeng.com](http://www.tononeng.com)  
TITLE 1: Sole Managing Member, Lead Structural Engineer, and Owner  
COMPANY: Tonon USA: Engineering, Measurements, and Testing, LLC  
COMPANY ADDRESS: 2028 E Ben White Blvd., #240-2660  
Austin, TX 78741, USA  
PH: +1-512-200-3051

TITLE 2: Sole Managing Member, and Owner  
COMPANY: Laboratorio Rocce e Ricerca Tonon, SRL  
COMPANY ADDRESS: Via Nazionale 206  
38123 Mattarello, TN, Italy  
PH: +39- (334) 678-7472

## 2. Education

1997-1999 M.S., Civil Engineering, Technical University of Budapest (Hungary). Thesis Title: Design and construction of cyclist/pedestrian bridges. Advisors: Dr. Istvan Bodi (Tech. University of Budapest), Prof. Dr. David Lloyd Smith (Imperial College) and Dr. G. Somerville (Imperial College).

1994-1997 B.S., Civil Engineering, Technical University of Budapest (Hungary).  
Additional Studies: (i) "Basic Design for Stability – Columns and Frames", AISC/SSRC Seminar, New York, NY, USA, 2003 (ii) Bridges, Imperial College, London, United Kingdom, 1999, advisor: Dr. G. Somerville (Director of Engineering); (iii) Statics and Mechanics, University of Padua, Italy, 1998, advisor: Prof. Dr. Schrefler.

1989-1993 High School Degree: Jozsef Attila secondary school

## 3. Professional Registrations

Professional Engineer: Texas (107799)

## 4. Experience profile

19 years of experience in structural engineering with projects completed in the America and Europe. She has worked 11 years at Parsons Brinckerhoff which is one of the world's leading transportation engineering firms. From 2006 to 2012 she worked as structural engineer in the Bridge Service Center of Parsons Brinckerhoff's (PB) Austin office (supervisor Joe Tejidor P.E. Supervising Engineer), although from 2004 to 2005 she worked in PB's Salt Lake City office, USA (supervisor Dan Church P.E. Project Manager/Professional Associate, Supervising Structural Engineer), and from 2001 to 2004 she worked in PB's world headquarters in New York City, USA (supervisor Michael J. Abrahams P.E. Senior Vice President, Manager Structures Department, Parsons Brinckerhoff Quade & Douglas, Inc.). Tasks include structural engineering design and analysis, with an emphasis on bridges and tunnels. Performed on-site structural inspections and prepared their follow-up documentation. Performed as-built

and as-inspected load ratings of several kinds of undergrade bridges, viaducts, culverts and tunnels as well as design/build design of prestressed concrete girder bridges. She has worked in bridge rehabilitation projects as well as in EIS studies to determine required structures including retaining walls, bridges, underpasses, and overpasses and to develop their cost estimate. She has completed over 30 bridge designs including prestressed concrete and steel bridges. Currently she is working with her husband Fuvio Tonon together at their own companies.

## 5. Relevant experience

2012-present  
CEO, Lead Structural  
Engineer,  
Tonon USA and  
Laboratorio Rocce e  
Ricerca Tonon

Professional Engineer. Areas of expertise: tunnel, structural, and bridge engineering.

2006-2012  
Structural Engineer,  
Parsons Brinckerhoff  
Austin

- I-69 Section 2 Segment 6, Indiana: design of three multi-span bridges (BR 2-34, BR 2-32, BR 2-41). Involved in all stages of the design, such as determining the location and size of the bridges, economic analysis, cost estimates and the actual bridge design.
- Dallas-Fort Worth (DFW) Connector Project, Tarrant County, Texas: involved in the design of two multi-span bridges (BR 1-45, BR 1-47).
- She developed a spreadsheet for the Inverted Tee Cap Design. The spreadsheet is in accordance with the AASHTO LRFD Bridge Design Specifications, 4th Ed.(2007) and the 2008 Interim Revisions as prescribed by TxDOT LRFD Bridge Design Manual (July 2008). She used the spreadsheet to design the Inverted Tee Cap for the following bridges:
  - Franz Road and Morton Road Overpass, Grand Parkway Segment E, Harris County Toll Road Authority.
  - Keith Harrow Road Overpass, Grand Parkway Segment E, Harris County Toll Road Authority.
  - Beckendorff Road Overpass, Grand Parkway Segment E, Harris County Toll Road Authority.
  - Longenbaugh Road Overpass, Grand Parkway Segment E, Harris County Toll Road Authority.

She also developed several spreadsheets to calculate elevations and foundation loads (considering wind and vertical loads) for the same bridges. Some of the bridges had cross slope with breakpoint.
- She performed the bridge geometric design with TxDOT Bridge Geometry System (BGS) for the following bridges:
  - Southbound Frontage Road over Creek of President George Bush Turnpike for the North Texas Tollway Authority (NTTA).
  - Northbound Frontage Road over Creek of President George Bush Turnpike for the NTTA.
  - Northbound Liberty Grove Overpass of President George Bush Turnpike for the NTTA.
  - Ramp C Highway FM 2818 in Brazos County, Texas for TxDOT.
- Bridge No. 1875, Eastbound Elberon Avenue Ramp, Hamilton County, Ohio and Bridge No. 1881 Eastbound Warsaw Avenue Ramp, Hamilton County, Ohio: QA/QC of these continuous composite steel plate girder bridges with reinforced concrete deck, stub abutments and T-type piers.

The four spans of Bridge No. 1875 are 180 feet (54 meters), 228 feet (69 meters), 171 feet (52 meters) and 121 feet (37 meters) along reference chord, with a 30-foot (9-meter) roadway. Bridge No. 1881's five spans are 172 feet (52 meters), 155 feet (47 meters), 116 feet (35 meters), 192 feet (59 meters) and 172 feet (52 meters) along reference chord, with a 30-foot (9-meter) roadway. Both bridges have vertical and horizontal curves. She checked these bridges mostly for constructability issues and the accuracy of the design. She performed an independent check of the girders and diaphragms. She checked the girders for lateral buckling between braces, the brace (cross frame) stiffness, buckling strength of the entire girder, lateral buckling of the braces, and girder stresses between braces at the critical points against the allowable stresses. She checked the bearing seat elevations, piers and foundations and their constructability.

- Preliminary Design for 126th Street Bridge over US 31, Indiana: this is a two-span bridge with vertical curve and no horizontal curve. Both spans are 99 feet (30 meters). She performed the girder analysis, cost estimate and analyzed 3 possible options: AASHTO type IV girder option, the Indiana Department of Transportation (INDOT) bulb-tee girder option and a steel plate girder option. She calculated minimum clearances and performed a barrier warrant analysis.
- QA/QC (Quality Assurance/Quality Control) of the following bridges:
  - FM 2818 Overpass, Brazos County, Texas: three spans at 57 feet (17.6 meters), 133 feet (41 meters) and 116 feet (35 meters), Type IV beams and a 94-foot (28.6-meter) roadway.
  - Ramp C Direct Connector, Brazos County, Texas: seven-span Type IV prestressed concrete girder bridge with a total length of 702 feet (214 meters) and a 26-foot (8-meter) roadway.
  - DGNO Railroad Overpass - Rockwall County, Texas (three-spans: 60' - 80' - 60', 200' Prestressed Concrete Beam (Type C) Unit and with an overall width of 100 feet).
- IH 30 Bridge L, Dallas County, Texas: This is a 17-span bridge with the longest span of 118 feet (36 meters). The overall width of the roadway is 28 feet (8.5 meters). She designed the superstructure which was composed of an 8.5-inch (0.2-meter) thick deck and four Tx54 prestressed concrete I-girders. She designed a Hammerhead Bent Cap with the TxDOT Bent Cap Analysis Program (CAP18). She used PCACol for the column design and checked the results with her own hand calculations.
- IH 30 Bridge Q, Dallas County, Texas: This is a 10-span bridge with the longest span of 94 feet (28.6 meters). The client wanted to use prestressed concrete U-beams. She designed the cross section for the longest 94-foot (28.6-meter) span using PGSuper and back-checked the design with PSTRS14. She designed a multi column bent cap with the TxDOT Bent Cap Analysis Program (CAP18).
- SH 6 Underpass Bridge Design, Brazos County, Texas: bridge design in accordance with AASHTO LRFD bridge design specifications, 4th Edition 2007, Texas Department of Transportation (TxDOT) Bridge Design and Detailing Manuals. This is a prestressed concrete girder AASHTO Type IV bridge with two 120-foot (36.5-meter) spans and one 100-foot (30-meter) span
- North and South Bound K-61 over South Tributary, Kansas: QAQC (Quality Assurance/Quality Control) and independent design check of a three-span (24 feet-32 feet-24 feet) Reinforced Concrete Haunched Slab Bridges with 40 feet Roadway.

- North and South Bound K-61 over North Tributary, Kansas: QAQC (Quality Assurance/Quality Control) and independent design check of a three-span (36 feet-48 feet-36 feet) Reinforced Concrete Haunched Slab Bridges with 40' Roadway and 45° Skew.
- 8<sup>TH</sup> Avenue over K-61, Kansas: QAQC (Quality Assurance/Quality Control) and independent design check of a four-span (65 feet-104 feet-104 feet-65 feet) Continuous Prestressed Concrete Girder (Type K4+2") Bridge with a 32' Roadway.
- SH 66 (Lakeview Parkway) Underpass WB & EB, Texas: QAQC (Quality Assurance/Quality Control) and independent design check of a two-span Type IV Prestressed Concrete Girder Bridge with a total length of 173 feet.
- SB Merritt - Liberty Grove Connector, Texas: QAQC (Quality Assurance/Quality Control) and independent design check of a three-span Type IV Prestressed Concrete Girder Bridge with a total length of 250 feet.
- NB Merritt - Liberty Grove Connector, Texas: QAQC (Quality Assurance/Quality Control) and independent design check of a three-span Type IV Prestressed Concrete Girder Bridge with a total length of 250 feet.
- Main Street Underpass, Texas: QAQC (Quality Assurance/Quality Control) and independent design check of a two-span Type IV Prestressed Concrete Girder Bridge with a total length of 222 feet.
- US-183 over Saline River, Kansas: QAQC (Quality Assurance/Quality Control) and independent design check of a four-span (43 m - 2 @ 57 m - 43 m) Spliced Girder Bridge with Pile Bent Abutments and Column Bent Piers and 13.4 m Roadway.
- Bridge Rail Modification for 4 bridges in Kansas: Wassall over Gypsum Creek Tributary, K-15 NB & SB over Wichita Drainage Canal, Mosley over Chisholm Creek, 31<sup>st</sup> St. South over Big Slough Tributary.
- 13<sup>th</sup> Street Bridge over Little Arkansas River, Kansas: QAQC (Quality Assurance/Quality Control) and independent design check of the bridge rehabilitation of this seven-span (32'-35'-38'-41'-38'-35'-32') historic bridge. In order to preserve the historic look of the bridge the exterior girders were untouched and left in place and the interior of the superstructure was removed and replaced with K2 type prestressed concrete girders.
- ICM Project (St. Louis office) – Ethanol Production Facility: Structural design of the foundations for process and support buildings in Council Bluffs, IA and other locations.
- Barron Interchange, Texas: Final design of a three-span (120'-120'-100') prestressed concrete AASHTO type IV Beam Bridge.
- Wilson Road Bridge over Cow Creek, Kansas: QAQC (Quality Assurance/Quality Control) and independent design check of a three-span (62' - 82' - 62') Post-Tensioned Concrete Haunched Slab Bridge with Pile Bent Abutments and Piers.
- Central Avenue Bridge over North Fork Ninnescah River, Kansas: QAQC (Quality Assurance/Quality Control) and independent design check of a five-span (55' - 3 @ 72' - 55') Post-Tensioned Concrete Haunched Slab Bridge with Pile Bent Abutments and Piers.
- 71<sup>st</sup> Street South Bridge over Ninnescah River, Kansas: QAQC (Quality Assurance/Quality Control) and independent design check of a six-span (95' - 4 @ 105' - 95') Continuous Prestressed Concrete Beam Bridge with Pile Bent Abutments and Column Bent Piers.
- Cuatro Vientos, Laredo District, Texas: QAQC (Quality Assurance/Quality Control) for Chacon Creek bridge structural details.

- I-69 Connector in Lincoln, Jefferson & Cleveland Counties, Arkansas. Preliminary design for 7 bridges: continuous composite steel plate or rolled girder.
- I-80 Coalville Structure Replacement, Utah: a cast-in-place concrete box culvert was designed to replace the existing bridge. Prepared the structural drawings, designed the culvert and the necessary MSE walls at four locations, each about a 100 feet (30 meters) long.
- Bridge Replacement near Scofield Reservoir, Utah: The replacement structure is a single span prestressed girder bridge with a total length of 42 feet (13 meter) and a varying width from 35 feet (11 meter) to 46 feet (14 meter). The design was performed in accordance with AASHTO LRFD and detailed in MicroStation. The prestressed girders were designed with Conspan program. Design of either the substructure or the superstructure.

2005  
Structural Engineer,  
Parsons Brinckerhoff  
Murray, UT

- Bridge widening for I-295 over US-17 and S.C.L.R.R. (Bridge No. 720126) in Tampa, FL: the existing bridge is a four-span steel girder bridge with a total length of 284 feet (87 meters). The bridge widening design was performed according to the Florida DOT Structures Manual and AASHTO LRFD Bridge Design Specifications, 3<sup>rd</sup> edition. Design of the widened portion of the superstructure using Excel Spreadsheets and MicroStation.
- Design for KY 3005 (Ramp C – Flyover) Bridge I-275/KY 212 Interchange in Boone County, Kentucky: involved in the substructure design (abutments and piles) for this 8-span precast segmental box girder bridge with a total length of 1,530 ft (467 m).
- Bridge Rehabilitation Project for C-307, SR-56, 0.5 miles east of Modena, Utah: The bridge is a 3-span steel girder bridge with a total length of 201 feet. Design of new concrete deck with 25 feet long approach slabs and addition of abutment diaphragms using AASHTO LRFD. Designed and detailed the needed substructure rehabilitation.
- Western Transportation Corridor (WTC) project, Utah: The purpose of WTC is to develop an Alternatives Analysis (AA) and Environmental Impact Statement (EIS) that evaluates transportation issues and solutions for approximately 40 miles in western Salt Lake and northern Utah counties, and to subsequently obtain a record of decision (ROD). Determined the structures required, including retaining walls, bridges, underpasses, and overpasses and developed their cost estimate on a square-foot basis.
- US-189, Wildwood to Deer Creek State Park project, Provo Canyon, Utah: The Project is approximately 5 miles long and includes new bridge structures at four locations, pedestrian/wildlife crossings at two locations and requires construction of retaining walls as well. Her tasks included the shop drawing reviews.

2004  
Structural Engineer,  
Parsons Brinckerhoff  
Murray, UT

Legacy Parkway, Salt Lake City, Utah (design/build): final design of 3 simply-supported prestressed concrete girder bridges (spans of 45 m) at the southern interchange future ramps for I-15 NB to Legacy Parkway NB and Legacy Parkway SB to I-15 SB. Prepared all bridges' design and their design/build drawings from Level 1 to Level 4 using Conspan program, EXCEL spreadsheets and MicroStation.

2004  
Structural Engineer,  
Parsons Brinckerhoff  
New York, NY

Metro-North Railroad – GCT Leak Remediation - Emergency Utility Vault Inspection and Support Design in Grand Central Terminal, New York City. This project provided engineering services to furnish MTA Metro-North Railroad with inspection, evaluation and design of an external structural support system for

twenty utility vaults located in Grand Central Terminal and the Park Avenue Tunnel from 42nd Street to 97th Street. Member of a two-person team to perform: (i) emergency visual inspection, review of temporary shoring, collect and review existing Con Edison data (ii) in-depth inspection of each of the 20 vault locations that have been identified to ascertain dimensions, clearances and obstructions that was necessary to design an independent support system for each vaults (iii) preparation of the design documents.

2002-2003  
Structural Engineer,  
Parsons Brinckerhoff  
New York, NY

Long Island Rail Road (LIRR) Comprehensive Assessment – Inspection and load rating of: (i) undergrade bridges and viaducts for the Montauk, Port Washington and West Hempstead lines in Long Island, for a total of 244 undergrade bridges and 12 viaducts totaling 657 spans; (ii) 76 culverts for the Montauk and Port Washington lines in Long Island; (iii) 7 miles of tunnels along Atlantic Avenue in Brooklyn. The undergrade bridge types analyzed included: trusses, thru-girders, deck plate girders, concrete arches, reinforced concrete and prestressed concrete girders, masonry arches, and rigid frame concrete boxes. Load ratings were performed using EXCEL spreadsheets with macros for generating live loads.

2002  
Structural Engineer,  
Parsons Brinckerhoff  
New York, NY

New York State Department of Transportation (NYSDOT) – Long Island Transportation Plan (LITP) 2000, New York: Downstate Rail Clearance portion of *LITP2000*. This project assessed the existing vertical and horizontal clearance obstructions along various rail lines east of the Hudson River in New York State. Developed conceptual designs and cost estimates to mitigate clearance obstructions and incorporated them into a GIS data-base for use by NYSDOT in future capital planning. Performed field inspections and prepared detailed rail-line reports for potential expansion of rail freight.

2001  
Structural Engineer,  
Parsons Brinckerhoff  
New York, NY

Jamestown-Verrazzano Bridge, Newport, Rhode Island – In-depth bridge inspection and evaluation of this post-tensioned segmental concrete box-girder bridge with precast AASHTO girder approach spans. The main bridge and trestle spans are approximately 6,400 feet (1,950 meters) long. Team member for the on-site structural inspection. Responsibilities: (i) inspection of the exterior surfaces of the bridge superstructure using an under-bridge inspection unit; (ii) inspection of the interior of the superstructure using scaffolding; (iii) preparation of follow-up documentation, including the preparation of the Rhode Island Department of Transportation (RIDOT) database and the inspection report text, and the inspection findings drawings generated in AutoCAD.

2000  
Building Structural  
Design Assistant,  
Solis Betancourt,  
Washington, DC

Architectural design of residential houses.

1999-2000  
Structural Engineer,  
Galantay Structural  
Engineers,  
Budapest, Hungary

Design of the steel structures for a 3,230-square-foot (300-square-meter) manufacturing facility, including calculations and design drawings.

1999

Responsible for the design of reinforced concrete structures for a two-story

Structural Engineer, shopping mall with a total area of 10,800-square-feet (1,000-square-meters).  
Mertek Co.,  
Hungary Budapest

## **6. Professional memberships**

Associate member of the American Society of Civil Engineers (ASCE).

## **7. Languages**

English, Italian, Hungarian (mother tongue).

## **8. Computer skills**

Word, Excel (spreadsheets), AutoCad, Microstation, STAAD, PSTRS14, PGSuper, LEAPBridge (Conspan), CAP18, Wincore, PCACol, BGS-RDS, MDX

## **9. Publications**

Research Paper: "Investigation into the Appropriate Construction Methodology for Combined Cyclist/Pedestrian Bridges," Budapest, Technical University, 1999.

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Gloria Tonon-Kozma

