Poems and Problems
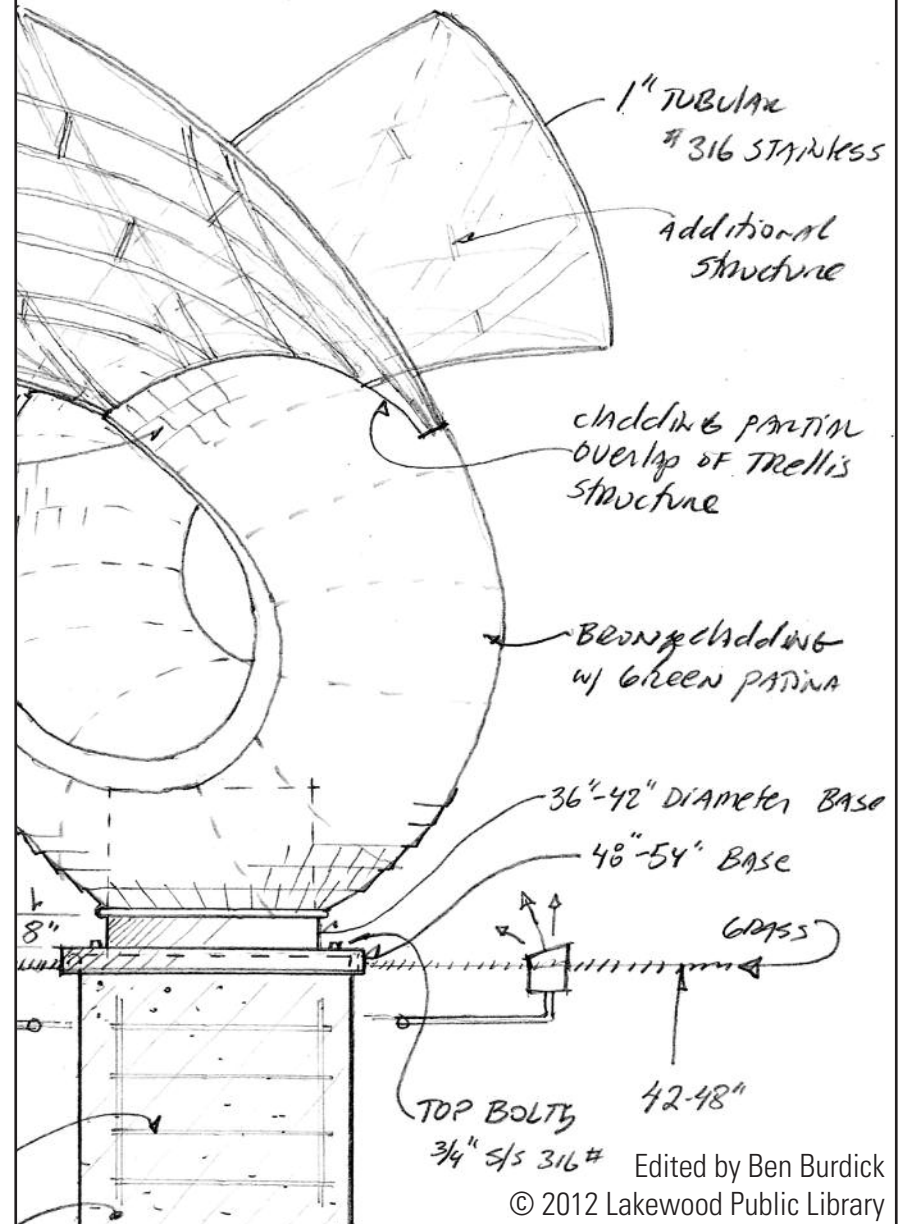
INSPIRED BY PETER DIEPENBROCK'S TRANSVERSION

Poems and Problems

INSPIRED BY PETER DIEPENBROCK'S TRANSVERSION

1" TUBULAR
#316 STAINLESS

additional
structure

cladding partial
overlap of Trellis
structure

Bronze cladding
w/ Green Patina

36"-42" Diameter Base

48"-54" Base

Grass

8"

R

42-48"

TOP BOLTS
3/4" S/S 316#

Edited by Ben Burdick

The Problem with Transversion

The odds were stacked against the poets from the very beginning.

When the Lakewood Public Library Foundation set out to commission a freestanding piece of public art on the Main Library's northwest lawn, the Art Selection Committee decided early on that they wanted something that could not easily be expressed in words. After sending out invitations to thousands of artists all across the country and sifting through hundreds of proposals, they knew they wanted something better than a monumental stack of books or another statue of Mark Twain.

Books and literature are still important, of course, but Lakewood Public Library means so much more than that to the people who pass by and through every day. The Library is a symbol of Lakewood's commitment to enlightenment through learning and teaching, through community engagement, through quiet contemplation and boisterous song. Its mission is bigger than art or science or even commerce. And however we may define it today, it will surely grow beyond our imagining tomorrow.

In other words, whatever the sculpture was going to be, it had to be something remarkable and surprising— better than the expected.

No taxpayer dollars were used for this project. All funding was raised through private donations by the Lakewood Public Library Foundation. The members of the Art Selection Committee volunteered their time at long, long meetings where they debated the merits of each applicant and discussed the purpose of public art. There were many viewpoints, but no heated exchanges. Instead, their diverse experiences became their strength as they considered the architecture, the land, the Library as an institution, Lakewood as a community, the controversies of art, the relationship between truth and beauty and the practical matter of getting the thing in the ground before the ground froze. Thank you, Mary Anne Crampton, Dan Cuffaro, Tiffany Graham, Marcia Hall, Nancy Seibert, Lucy Sinagra and Ruth Weible.

I was lucky enough to witness these deliberations as a happy bystander, smoothing over technical difficulties and running small errands. Library Director, James Crawford, was there, too. He had no vote, but he often sat in to represent the Library as an institution. During the artists' final presentations, we sat together in the back. We saw the mocked-up design of Transversion first! But I'm getting ahead of myself... Hailing from the Rhode Island School of Design, Peter Diepenbrock is a sculptor and industrial designer with twenty-five years of experience turning personal visions into concrete realities. His passion for lifelong learning and his reputation for designing sculptures that unlock the potential of their environment put him over the top. He has designed everything from large, outdoor works that redefine their surroundings to delicate ornaments for the White House Christmas tree.

Transversion (in case you're wondering) is a term that the artist borrowed from the science of genetics. Whereas a transition mutation is a relatively straightforward affair, a transversion throws open the doors of possibility—utterly unpredictable and often furiously beautiful. It's hard to imagine a better name for this still and solid hunk of metal that gives the illusion of constant motion. Framed against the façade of the old Library, Transversion brings teeming new life and texture to a formerly anonymous stack of bricks. It can be defined by one color, yet it contains all colors. It twists. It turns. It splashes about.

The remarkable thing about Diepenbrock's design is its inexhaustible beauty and the endless number of ways it can be viewed and experienced. Far from being some dry intellectual exercise, this is art that a child can marvel at. And as that child grows into adulthood and even old age, she will always be able to find refreshing new perspectives. It will be an old friend and a font of new ideas.

Long before he sparked his welding torch or even put pen to paper, Diepenbrock made a visit to the Library to get a feel for the project and meet the director. Hours later, Mr. Crawford was pleased to find the artist still studying the Library and the community around it. In his application, Diepenbrock said, "With a strong basis in design, I approach all sites with a fresh eye, and intentionally avoid preconceived solutions. I look at pedestrian vantage points, and movements, architectural and landscape features and look for the opportunities inherent in a site."

On that cold, drizzly Sunday afternoon, he was stunned to learn that the Library was even open on a weekend. (Most aren't these days.) He took time to stroll through the crowds. So much activity! The people buzzing around him were carrying armloads of books, racing for the computers, heading downstairs for a concert, chatting with neighbors, enjoying their time. There were children making crafts, hipsters hunting through movies and CDs and people of all stripes simply reading.

Diepenbrock already wanted the job. He'd always liked public libraries. But his experience that day cemented his admiration and deepened his resolve. Despite the weather, he studied the future site for hours. He walked and drove around it and made sure that he saw it—really saw it— from all angles. He was determined to come up with something really special... He succeeded.

For those who want to know what happened next, I suggest visiting lakewoodpubliclibrary.org/art where you are invited to see a short, nearly wordless film about the construction and installation of Transversion. (Special thanks go to Peter Diepenbrock for sharing his personal photos and to Lakewood's Mike Jacobs for composing the music.)

Transversion went into the ground on an unseasonably warm day in November 2011—though it was still pretty chilly for those of us who stood outside all day. The action of unloading, craning, bolting and drilling was a work of art in itself—a busy Detroit Avenue ballet. Throngs of Lakewoodites stopped by to witness the dance.

For many, the sculpture was an immediate hit. For others, it took a little more time to see how this bronze curve fit into their city. Some people still don't get it, but that's art. The most rewarding part of the experience for many of us has been the reactions of the children who immediately embraced Diepenbrock's vision. Transversion is strong, beautiful and free—it comes with no expectations and plays by its own rules. No wonder the kids loved it!

In December, as the first snows fell on Transversion, we were inspired to sponsor a poetry contest to harness the wide range of emotions brought out by the newest Lakewood landmark. We received a heartwarming number of responses throughout National Poetry Month, but only one could win. So what else could we do? We decided to print this book in recognition of some of our favorites.

We've also enjoyed chewing over the problems posed by Lakewood High School's AP Calculus students who were assigned to devise challenging brainbusters that somehow made use of Transversion's challenging form. Kudos goes to their instructor, Robert Sedlak, for guiding an impressive gathering of young minds towards such a ticklish end. We have included their efforts to keep things lively. Unfortunately, because I was an English major, there is no answer key. Those who simply must know the solutions are advised to enroll at a nearby college or university—or you can simply email Mr. Sedlak at Robert.sedlak@lakewood.k12.oh.us to ask for guidance.

Ben Burdick
Lakewood, Ohio
2012

Transversion
by Tom Baskerville Rowland

Having escaped its husk, the good seed
Spread up from Lakewood grass, it gasped
Coming out in bronze strokes, in sunlight,
Like new earth it stood, with a steel truss
Of twisted hands, waiting to be mapped.
It gulped. It waited for benediction.

It stood a bit doleful at first, offering
Both hands dramatically to the sky, an
Odd and quiet plant dreaming in its vase, a
Newcomer painted the green of old wars, then

Like an empty pew, it would appeal to lost souls—
You might see them in reading rooms or walking
Hunched in hoods and wool layers on Detroit,
Softly as they go, they might quote Bellow,
"More Die of Heartbreak" and think of someone
Long gone and watch the Transversion—

A child pulling a new face each second,
It isolates, connects, restores us
Like music in a lonely car.

Transversion
by Judith E. Divoky

It catches my attention
as it strikes its quiet pose,
that solid base of rounded strength,
its meaning no one knows.

Observation leads me
to the graceful arms above.
Foundation has been opened
in a gesture of pure love.

It's like a family's anchor
holding solid to the ground
while children can have freedom
for wherever they are bound.

The ties remain connected
though space is opened wide
to go beyond ground zero
and move from side to side.

The base remains a platform
for returns and plans anew.
It's steadfast in all seasons
and strengthens all we do.

Non-Calculus I

Here's the first batch of problems devised by Lakewood High School's AP Calculus students. They should be solvable using trigonometry, geometry, probability, algebra, or arithmetic.

The skin of Peter Diepenbrock's sculpture was created from sixteen sheets of bronze, cut into 2240 pieces. If each piece is 5.5 inches x 3.5 inches, what is the area of one of the sheets of bronze?
Dani Witri, SR

A Lakewood resident does not like the color of Transversion and has secretly decided to apply a coat of purple paint, late at night. First, however, he needs to make some calculations. The area that needs to be painted is approximately 200 square feet. Here are the two problems in need of solving: (a) if one quart of paint covers 90 square feet, how many quarts must be purchased to cover the entire 200 square feet, and (b) if paint costs $8.00 per quart and the tax is 7.5%, exactly how much money should the rascal bring to the store?
Nina Pizzo, SR

Come up with a system to estimate the number of tiles on the sculpture without actually counting them. The average tile is 3.5 inches x 5.5 inches in size. Describe in detail how you arrived at your approximation.
Zach Dick, SR

If circumference of the base of the sculpture is 183.0625 inches, then what is the area of the grass that has been uprooted? Answer to the nearest hundredth of a square foot.
Kelly McKee , SR

Transversion, stands approximately 4 meters high at its tallest point, 2.8 meters wide at its widest point and 2.2 meters deep at its deepest point. Find the volume of the smallest box that will fit the entire sculpture inside of it. Answer to the nearest whole number.
Eric Kunze, SR

Standing seven feet away from the sculpture, the angle of elevation to the top of the art piece us 63.7   . What is the height of the sculpture?
Katie Reading, SR

The base of the sculpture is made of two cylinders. The circumference of the larger cylinder is 183 inches and the smaller one, 114 inches. If you look at the base from above, you should imagine two concentric circles. What is the area of the space between the two circles?
Veronica Cole, SR

Untitled
by Edward Verhosek

In nascent –helix formation
pristine lattice bearing emergent knowledge
boldly thrust across expansions of space-time
beyond colorful Earth's mystic waters
to pause here in momentary solace
---the motion suspended
   In anticipation
   that each exploration
   invites some subtle change---
before the next inevitable twist
exquisitely occurs.

Untitled
by Jonathan Tarase

Neptunian conch
Twisting strange cup
Collecting strained winds
With lips unfurled

To record the proud
Tidal blast of Erie,
Transverted trumpet
Warped Aeolian harp

Gathered as Teresias's bowl
The tired raindrops
To disperse like dreams
On Detroit's dreaming motes

Echoed in sad thoughts
Of rainclouds and smokestacks
Rising like unraveling curls
Of cerulean blue

Non-Calculus II

Ready for more? Beware! Sometimes when a problem seems easy, it's a sure sign that you've lost your way. Solve these using trigonometry, geometry, probability, algebra, or arithmetic.

Find the entire surface area of the base of the sculpture, given the radius is 29.135 inches, and the height is 6.25 inches. Answer should be expressed to the nearest hundredth of an inch.
Clarissa Kos, SR

The sculpture takes its name from a process of DNA replication. One can see how the ends spiraling out, look like incomplete stands of DNA waiting to be filled in and attached. Associated with the Lakewood Public Library, the piece takes on a new meaning: The process of learning is eternally incomplete, constantly being constructed. Let us suppose that in two years, everyone has learned everything. As a result, the Library decides to "complete" the sculpture by filling in the incomplete parts. Let us assume that the unfinished portion on each end of the sculpture is a rectangular prism dimensions of about 1 foot x 6 foot x 9 foot, and that each tile's dimensions are 1 foot x 1 foot. How many tiles are needed to complete the ends of the sculpture? (Hint: Keep in mind that the narrow end of the rectangular box is attached to the sculpture, and does not need tiling.)
Derek Dashiell, SR

You're golfing in front of the Lakewood Public Library and are challenged to hit the ball through the middle of the sculpture from 60 feet away. Assuming the ball follows a straight path with a constant velocity, what is the minimum angle required to hit the ball through the sculpture, if the bottom of the opening is 3 feet from the ground?
Anthony Gilbert, SR
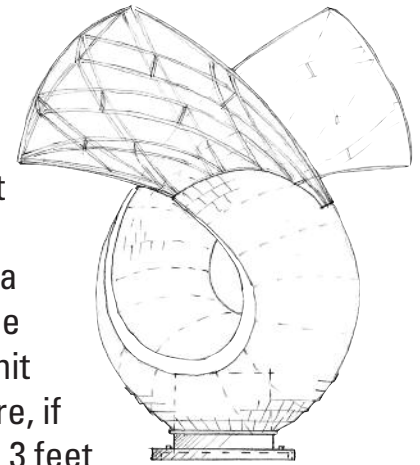
In the description of the making of Transversion, the artist, Peter Diepenbrock, states that it took 2240 pieces of bronze, 1200 feet of 3/8 inch stainless steel rods, 600 welds, and "over 900 hours of perspiration" to complete the sculpture. It took Diepenbrock 5 minutes to complete a weld on the bronze, and 2 minutes to complete a weld on the pipes. If it took the artist 4000 welds to complete the bronze, what percentage of the time did he spend welding?
Jimmy Mathieson, SR

If there is a 35 foot flagpole, directly east of the sculpture, and the piece of art is 15 feet tall, how far back must a person stand to the west, in order to have line-of-sight vision with the top of both objects? Assume the eye level is 5 feet 8 inches.
Robert Meyer, SR

What Is It?
by Bill Knittel

It has been a couple of months now,
Since that sculpture caught my eye,
In front of Lakewood Public Library,
Whenever I'd drive by;

That sculpture is so different,
And I don't quite understand,
Is it some unknown planet,
From some very distant land?

Or it could be from Africa,
From a royal tribe I've seen,
And that could be the headdress,
of a Royal African Queen;

It could also be a present,
Tied up with a special bow,
For a very famous person,
That all of us would know;

Then maybe it's a lady's pin,
The kind they call a broach,
Or something from a fairy tale,
Like Cinderella's Coach;

Or two sweethearts that are embracing,
Having been parted for many years,
You can feel their love and happiness,
You can almost see their tears;

Maybe it's a dough nut,
I don't know, don't ask me why,
And sitting right on top of it,
A great big butterfly;

A fancy stopper from some bottle,
Like something belonging to a king,
Or maybe two crossed fingers,
Then it might also be a ring;

This really peaked my interest,
Yes, I really had to know,
And I knew where to find the answer,
Oh I knew just where to go;

To the Library's director,
James Crawford is his name,
I knew he would have the answer,
I knew how to play this game;

When I asked he kind of smiled,
Then he winked and said to me,
The answer is quite simple,
It's whatever you want it to be.

The End!

QUESTIONS
by R. Harmicar

Transversion?
an alien invasion?
what's its mission?
there's much suspicion
about the new Detroit Avenue attraction.
this scaly blue orb with silver antlers defies description.
it may, however, be more than a twisted metal mutation.
could this recent Lakewood Library acquisition be an invitation?
a portal to enter the world of unfamiliar information?
a timely reminder of our potential for positive reinvention?

800 pounds of stainless steel in base
1200 feet of 3/8 rod in the frame
16 sheets of bronze cut into [2240] pieces
4000-6000 welds.
320 linear feet of polished tubing
3 kilos of epoxy mortar
15 gallons of distilled water
10 tanks of propane
30 ounces of wax
900 hours of perspiration $\frac{600}{320}$ + Desi me
Total weight 3000 pounds
Calendar time to build: 4 months.

25 sanding discs
75 belts
2# polish
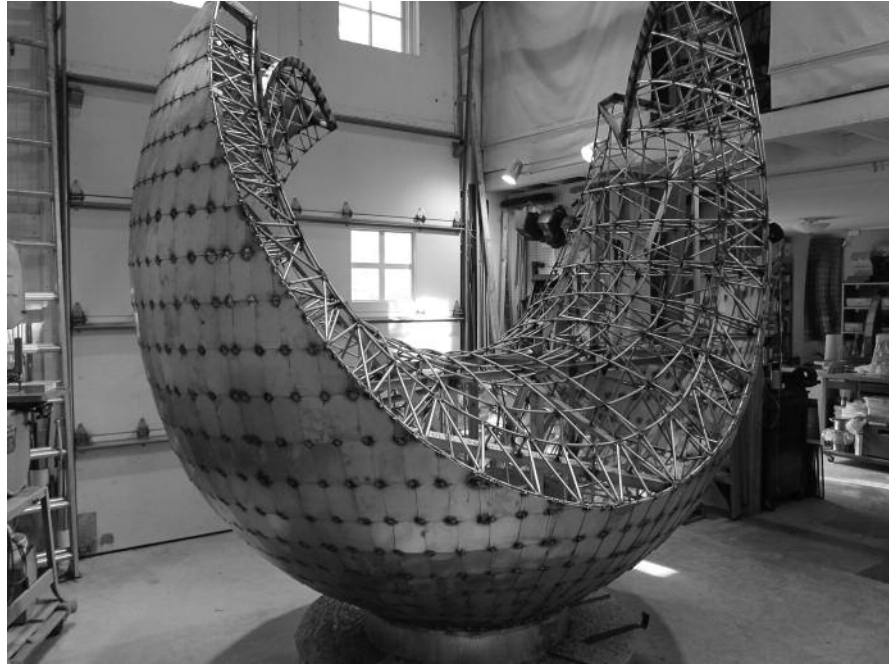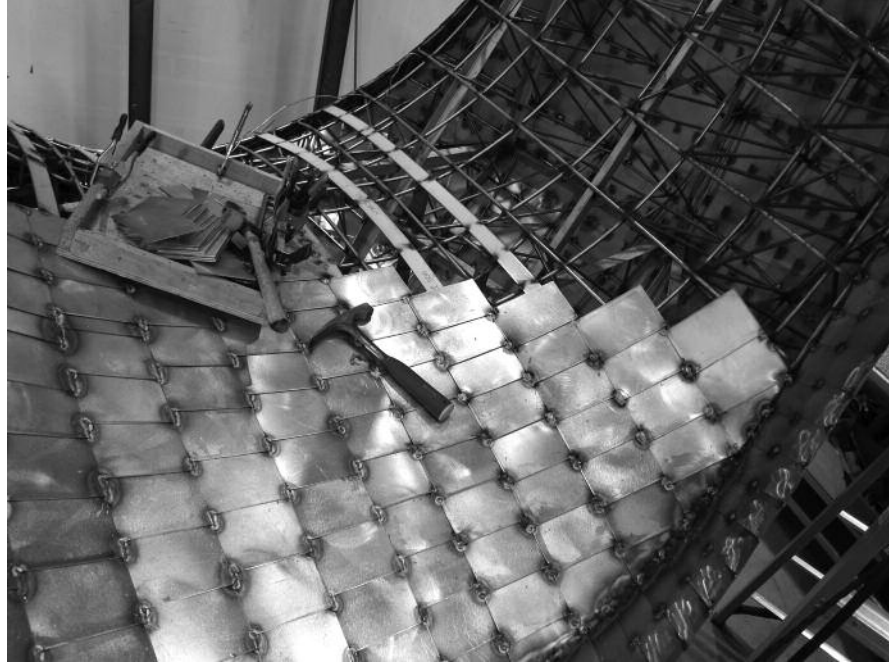
Transversion Conversion
by Christina Mack

The conversion of a sinner to a saint
Requires more than just immersion into greasepaint and stardust.
A pilgrim thrust into the battle between lies and pure veracity
May endure the firefight if the light of truth and beauty
Shines like a beacon through the night.
So the transversion of steely fingers reaching ever upward
Lingers in my psyche,
Forcing me to confront the possibility of immortality
On the information highway of my soul.
Imagination soars, as scores of books and literature
Open an aperture in my mind,
Allowing me to find all the joy and sorrow
In every written word,
And realize the voices heard in every line and chapter
Continue to capture my imagination
And will nurture every generation
With a burning desire for the poetry of learning
That will burst the chains of mediocrity
And quench the thirst of a city parched for knowledge.

suspended relief
by Bree Zlee

lifted by the sky itself structured
hammocking, back to square one,
close yr eyes on the beach of womb
which bleaches the shadows of fatigue,
carried to term, transversed, rebirthed
100,000 leagues over why worry the bed
when out is out there, evermore as it has
been despite and never in
spite of you, take comfort in this
suspended second

Trance-version
by Eva Xanthopoulos

Organic unity and poise betwixt the city sounds and daily noise,
the hue of earth. Fusion of green and blue growing from grass
like gracious tree, man-made-mother-nature-fusion, genuine beauty.
Reminder of our roots amongst the buildings and houses, and books
encased in beautiful brick building for Lakewood minds to embrace.
Transversion, your elegant design tells me of all things benign,
accentuating the appreciation of knowledge through artistic means,
A striking piece attracts eyes from afar, leads one to a palace of
closed books pleading to become ajar. Your curvaceous gamma
shape, reminder of embracing arms. Enclosing a circle, on-going.
Infinite, you are.

Calculus I

Submitted for your approval, here's the first batch of Calculus problems. We can't solve them either, but they sure are fun to think about!

A fly is crawling up the side of Transversion. The path of the fly follows the curve of the sculpture which is described by the equation: $f(t) = \sqrt{t} + \sin t$. From the time t = 0 to t = 5 seconds, what distance in meters has the fly traveled. Answer to the nearest hundredth meter.
Nina Pizzo, SR

A body builder competition is coming to Lakewood. One of the events is to lift Transversion over their heads. If Robert, one of the body builders, is 71 inches tall, and his arms extend an additional 27 inches over his head, how much work does it take for him to lift the 3000 lb sculpture? Answer should be expressed in pound-inches.
Dani Witri, SR

The sculpture is 15 feet tall, and the surface from y = 12 to y = 15 (as viewed from the front) is the function $y = -x^2 + 15$. Assume the function is rotated around the y-axis. What is the rate of change of the distance of the tangent line from a point on the function to the ground?
Robert Meyer, SR

Find the volume of the base of the sculpture by asumming accumulated areas of rectangles. Assume the radius to be r = 29.135 inches and the height to be h = 6.25 inches.
Clarissa Kos, SR

Suppose that the profile of the sculpture can be approximated by the smooth curve $y = kx^{.5} - d$ and $y = -kx^{.5} + d$. Write but do not evaluate a formula for finding the length of the sculpture if it was laid flat.
Jimmy Mathieson, SR
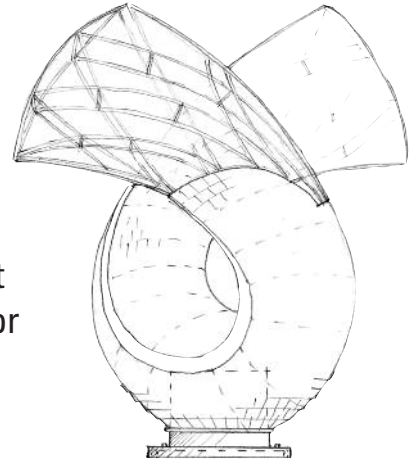
Suppose Transversion is in the shape trapped between equations $f(x) = -11 * \sqrt{(1 - x^2/14.44)}$ and $f(x) = -6.7 * \sqrt{(1 - x^2/14.44)}$. Find the volume of the sculpture using cross-sectional ellipse slices, with the short side parallel to the y-axis. Assume that the radius of the long side is twice the length of the radius of the short side. (Area of an ellipse is Area = $\Pi*A*B$, where A = long radius and B = short radius) (Note: The equation given does not match exactly the actual equation for the shape. It was altered for evaluating purposes. Thus, the calculated volume is only an approximation.)
Kelly McKee, SR
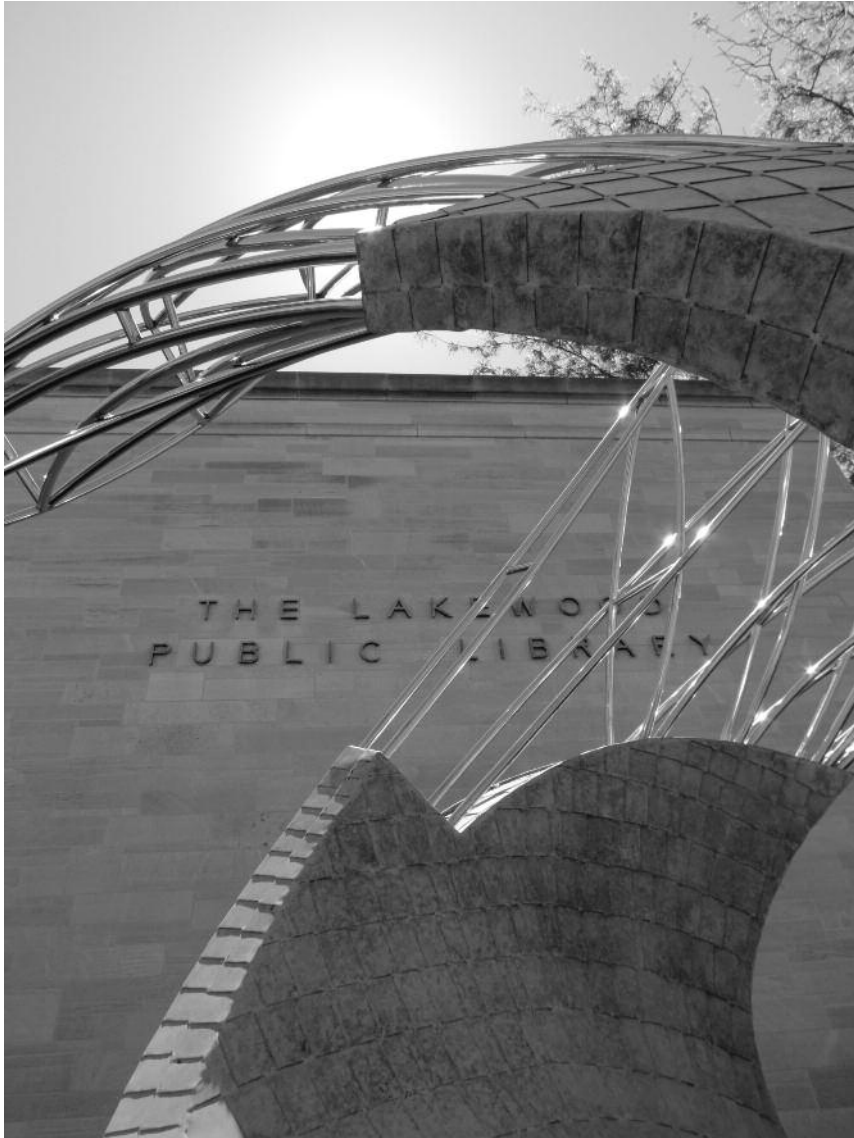
Transversion
by Joan E. Brown

It is life at its best
A twist, a turning
A love of learning
It is life at its best

Always moving - always there
Beauty in the light
Beauty of the night
Always moving - always there

Give birth our earth
To wondrous fields of grain
Mountains majesty
Give birth our earth

Gift of time
In the lines
Our beings are born
Gift of time

Transversion
by Kimberly Steele

In the heart of our great city,
Is a work of fiction
in the form of a structure.

The base of this structures' story
is where the good part gets going.
Green is for go, and the going will only get better.

As this structure's story grows,
it starts getting to the great parts;
Green is now replaced with Gold.

With every work of fiction,
the story twists and turns;
and each direction asks the reader which twist is better.

Finally, the structure stops the right at the breaking point;
where the story has wound it's final revelation:
I am completed.

Calculus II

This final selection of problems makes us wish that we'd spent more time listening in class and less time writing love poems--but we have no regrets!

Your company manufactures cone-shaped containers for shipping large objects. The height of the cone can be at most 20 feet. You need to minimize the volume of the cone container to reduce the amount of padding used inside for protection. The sculpture will be flipped upside down. The sculpture follows the equation (in inches), $f(x) = 157 - x^{5/4}$, where x is the largest radius at a point. What are the dimensions of the minimum size cone container that will house the sculpture? Indicate radius of the base and the height to the nearest hundredth inch.
Anthony Gilbert, SR

Assume Transversion is made entirely of bronze with a density of 8.66 cubic centimeters per milliliter and has half the volume of a box, 4 meters x 2.8 meters x 2.2 meters, that would contain the sculpture. Calculate the work needed to lift the sculpture just above the box.
Eric Kunze, SR

How much work does it take to lift the sculpture's 3000 pounds to the top of the roof, at a height of 30 feet? Express the final answer in joules.
Veronica Cole, SR

In the afternoon, the rate of change of the angle that the sun makes with the sculpture is d /dt=0.302 degrees per minute. If the height of the sculpture is 170 inches, and the measure of the angle at 2:31 PM is 45.6 , the shadow cast is 173.6 inches long. What is the rate of change of the shadow?
Katie Reading, SR

The artist who must tile the sculpture has a bad memory. He does remember that the general equation for his glue's strength in newtons is $f(x) = -2x^2 + 8x - 6$, where x = time elapsed since application of the glue. Each tile requires a minimum of 1 newton of force to hold it in place. What is not remembered is when the glue's force is the greatest. At this moment, does the glue have enough force to hold the tiles in places?
Derek Dashiell, SR

The surface of Transversion will eventually discolor due to pollution and light. Using a spectrophotometer, determine the change in surface reflection by measuring wave-length emissions from the surface of the tile. Use at least six measurements staggered
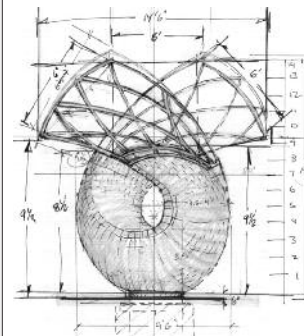
over a period of three years to determine a rate of change and express it as a differential equation using the formula $f(x) = e^t$ or e^{-t}, where t = time elapsed and f(x) = light intensity.
Zach Dick, SR

Transversion Love Song
by Jack McGuane

Press your mouth against my ear,
sing me a song of
bronze blue sky,
stainless steel sunshine,
thawed or frozen rainy days,
clean impervious wind;

of morning sunrise,
noonday heat in raucous traffic,
midnight starfall,
homeless adoration
of soft curves and angles,
unexpected corners.

No ode or love song
inscribed upon this
robust work of art
could possibly surpass
its inborn native
truth and beauty.

ABOUT THE SCULPTOR

A graduate of the Rhode Island School of Design, where he earned a Bachelor of Fine Arts and a Bachelor of Industrial Design, Peter Diepenbrock has achieved a distinguished record of accomplishment as one of the most prolific and up-and-coming contemporary sculptors.

Peter and his wife, jewelry designer Didi Suydam, own Didi Suydam Contemporary on Mill Street in Newport, Rhode Island. In addition to his artistic work, Peter is an advocate for the arts and the relevance of design. He frequently appears as a guest speaker at community and educational forums throughout the country and serves as an adjunct faculty member at the Rhode Island School of Design. Peter's work has been featured in solo exhibitions appearing at Bridgewater State College, Newport Art Museum, The Hunter Gallery at St. George's School and Lenore Gray Gallery.

Design projects include work for Dansk International, the Museum of Modern Art, the White House (for Christmas ornament design) and The Troy Collection (a collection of limited edition sculptural and functional objects founded by Peter).

He has received numerous awards for his work, including: 9/11 Memorial from the State of Rhode Island; Marc Harrison Award for Excellence; Best Design Award, Accent on Design, New York International Gift Show; Excellence in Design, Dansk International; and multiple fellowships in crafts, design and sculpture from the Rhode Island State Council on Arts.

Commissions received for public spaces include: The Ark and Yahrzeit Memorial for Temple Beth Elohim in Wellesley Ma., Torsion III for the University of Rhode Island, the 9/11 Memorial for the Rhode Island State House; 'Undulating Flurries' for One Exeter Plaza in Boston; Infinity III, Main Street, East Greenwich, and numerous commissions for private and business locations in Massachusetts, Rhode Island, and California.