Fluorescence
HAISHI CAO
This issue marks the ninth publication of *New Frontiers*. We are pleased to once again feature members of our faculty and their research, and share with you a glimpse of their lives and the passion they have for their important work here at the University of Nebraska at Kearney.

2016 has been a special “25/111” Year of Celebration for this institution – 25 because this is the 25th anniversary of our becoming part of the University of Nebraska system, and 111 for two reasons. In 1903, the Nebraska Legislature appropriated funds to build a new Normal School in western Nebraska. After fierce campaigns by a number of communities, it took the State Board of Education 111 ballots to finally award the new school to Kearney. The first fall term of the new Nebraska State Normal School at Kearney commenced two years later, on Sept. 20, 1905, making the 2016 fall term our 111th.

I’m grateful to all of you for your support during this Year of Celebration and for your focus and enthusiasm as we move forward to the next 25/111 years. We have so much ahead of us: a new academic structure to replace the Otto Olsen building, development of a new residence hall, the beginning of University Village, and more exciting projects on the horizon.

This fall as I prepared to welcome new students, faculty and staff, I reflected on all we’ve accomplished over, in particular, the past 25 years. I remembered, as I often do, the work of the late Nebraska State Sen. Jerome Warner and his frequent mention of “leaving your mark.” As an academy and an institution, we strive to leave our mark through teaching and outreach on those we serve: the students who enter our classrooms, labs and performance halls ready to learn and grow as scholars and citizens, the Kearney community, the people of Nebraska; and the world beyond.

As illustrated in this and previous issues of *New Frontiers*, it is also important to note that we leave our mark by discovering and sharing new knowledge. Knowledge that increases understanding, solves problems, and demonstrates how to further build, for the benefit of all, on what we have learned. These eight researchers, along with UNK’s entire family of faculty, staff and students, are most definitely leaving their mark.

This has indeed been a year to celebrate, but we have important work yet to do. After reading the pages that follow, I hope you will be inspired to look at your everyday work with a renewed passion for discovery and creativity, and a renewed commitment to sharing that passion with others. Collectively our work has a greater impact than what each of us can attain on our own. Together we become even greater Difference Makers.

Sincerely,

DOUGLAS A. KRISTENSEN, J.D.
Chancellor
New Frontiers Through The Years

2010

WILLIAM AVILÉS
Associate Professor
Political Science

JOSEPH CARLSON
Professor, Criminal Justice and Social Work

LINDA CROWE
Chair/Professor,
Communications Disorders

DARLEEN COWLES MITCHELL
Professor,
Music and Performing Arts

KYLE LUTHANS
Chair/Professor,
Management

DAWN MOLLNKOPF
Associate Professor,
Teacher Education

MARGUERITE TASSI
Professor, English

FRANK TENKORANG
Chair/Associate Professor,
Modern Languages

2011

TEARA ARCHWAMETY
Education Research Consultant

SYLVIA ASAY
Chair/Professor,
Family Studies and Interior Design

HERBERT CRAIG
Chair/Associate Professor,
Modern Languages

MARK ELLIS
Chair/Professor,
History

CHAD FONFARA
Associate Professor,
Art and Art History

KEITH GELUSO
Associate Professor,
Biology

MAX MCFARLAND
Professor, Counseling and School Psychology

2012

TING-LAN CHEN
Associate Professor,
Music and Performing Arts

BRENDA ESCHENBRENNER
Assistant Professor,
Accounting/Finance

SATOSHI MACHIDA
Associate Professor,
Political Science

JAKE MESSERSMITH
Associate Professor,
Management

2013

NATHAN BUCKNER
Professor, Music and Performing Arts

DAVID HOF
Professor, Counseling and School Psychology

SUSAN HONEYMAN
Professor, English

PETER LONGO
Professor,
Political Science

DENNIS POTTHOFF
Professor,
Teacher Education

HEATHER SCHULZ
Assistant Professor,
Marketing

JUILL SHAFFER
Professor,
Biology

KATHRYN ZUCKWEILER
Associate Professor,
Management

2014

SHERRI CROW
Associate Professor,
School Library Science

TONI HILL
Assistant Professor,
History

MIECHELLE MCKELVEY
Associate Professor,
Communication Disorders

2015

PAUL TWIGG
Professor,
Biology

SAM UMLAND
Professor,
English

DOUG WATERFIELD
Professor,
Art

CHARLES "CHUCK" ROWLING
Assistant Professor,
Political Science

MALLORY WETHERELL
Assistant Professor,
Ceramics

PHU VU
Assistant Professor,
Teacher Education

ADAM JENSEN
Assistant Professor,
Physics and Physical Science
It is my privilege to highlight the research and creative activity of our faculty at the University of Nebraska at Kearney. I have been impressed by the consistent trajectory of growth in research productivity at UNK. Our academic programs are supported by a broad research base that brings innovation to the classroom experiences. Faculty accomplishments in research and creative activity serve as the basis for involving students in research opportunities both inside and outside of class.

The foundation of any university is its faculty, and I am delighted to work with such a group of distinguished scholars. In this issue you will meet eight faculty members whose work exemplifies the innovative, interdisciplinary and international spirit of research and creative activity at UNK. Their diverse projects – on subjects ranging from music composition, Arthurian legends in literature and film, therapeutic intervention before and after musculoskeletal injuries, mental health and addiction counseling outcomes to juvenile justice and youthful offenders, investigation of hydrogen sulfide as a cure for neurodegenerative diseases, case study research in business, and examination of the comic book industry from a business perspective – offer a glimpse into the scientific, scholarly and creative endeavors engaging our faculty across the four colleges on the UNK campus.

UNK sets a high priority on recruiting faculty who have the potential to excel as scholars, understanding that professors who are active researchers and artists enrich their classroom teaching with current knowledge in their academic areas. We recognize that teaching and scholarship are mutually supportive endeavors. Our faculty is committed to providing excellent classroom instruction while pursuing research and creative activity. They know that their scholarship informs and enhances teaching, and students are the direct beneficiaries of that research. In fact, faculty often include students in conducting and reporting outcomes of their scholarship through a process of experiential mentoring.

UNK has benefited from the inherent synergy between faculty research/creative activity and teaching. Not only do our faculty conduct innovative scholarship, they also demonstrate to our students the importance of developing a passion for learning that spans their lifetimes.

I hope you enjoy reading this issue of New Frontiers. I am confident that the stories included will convey the extraordinary scholarly activities being undertaken at UNK.

KENYA S. TAYLOR, Ed.D.
Associate Vice Chancellor for Academic and Student Affairs
Dean for Graduate Studies and Research
FEATURES

6 Prison Attitudes
Timbre Wulff-Ludden

12 Sound Structures
Anthony Donofrio

17 Arthurian Legend
Rebecca Umland

22 Fluorescence
Haishi Cao

28 Attitudes, Knowledge, Skills
Christine Chasek

34 Superheroes Collide
David Palmer

38 Embracing Scholarship
Kay Hodge

43 Muscular Architecture
Kazuma Akehii

MEDIA CONTACT
Todd Gottula
gottulatm@unk.edu
308.865.8454
Wulf-Ludden studies relationships, violence among inmates

By TODD GOTTULA

She spends her time in small, nondescript rooms. Where white – gray if you’re lucky – is the color of choice. And the air is different inside.

This place, with its cement floors, protective glass and stainless steel in every direction, is where Timbre Wulf-Ludden’s research takes her.

Inside prison walls across the Midwest. In front of hardened criminals. Analyzing a social system and prison culture that few on the outside have experienced or understand. Where everything is different.

“This is where I am comfortable,” says the University of Nebraska at Kearney assistant professor of criminal justice. “This is when I’m at my best and having the most fun. I love doing interviews, sitting down with prison inmates in front of me, asking questions and chatting about their lives.”

As a researcher of institutional corrections, Wulf-Ludden spends her time conducting one-on-one interviews and establishing rapport with men, women and juveniles with years in the system behind them. And for some, years of incarceration ahead of them.

“It’s a different world,” she says. A world of many violent people who will fight you for no reason.

A world that motivates her research, which includes juvenile justice, prison violence and interactions among inmates. Much of her research focuses on female offenders. Her work also examines re-entry challenges for adult male offenders, and the importance of race and gender in media depictions of offenders.

YOUTHFUL OFFENDERS

Juvenile justice. It’s a hot-button issue across the United States, where more than $5.7 billion is spent annually to detain youth. And it’s an especially-charged issue at the Youth Rehabilitation and Treatment Center in Kearney.

“I love doing interviews, sitting down with prison inmates in front of me, asking questions and chatting about their lives.”
Located just west of UNK, YRTC is under examination—locally and statewide—following a string of assaults and escapes.

Wulf-Ludden’s research on youthful offenders and juvenile justice confirms that detaining juveniles for relatively low-level offenses is both ineffective and detrimental. Her 2013 article “Assessing Youth Early in the Juvenile Justice System” found that too much involvement in the juvenile justice system often leads to increases in violent behavior and subsequent law violations.

“When juveniles are detained for low-level offenses, detention does not have a deterrent effect. Instead, it often increases the chance of relapsing into criminal behavior,” Wulf-Ludden said.

Detaining low-risk youthful offenders results in a variety of negative consequences, including reinforcement of violent attitudes caused by association with other high-risk youth, mental health concerns and sexual health issues, she explains.

Nearly 100,000 youth are confined in juvenile jails, prisons, boot camps and other residential facilities in the U.S.

To test the effect of system involvement, Wulf-Ludden examined youth enrolled in two early intervention programs: Juvenile Diversion, which involves formal processing and services; and Early Assessment, a process designed to screen low-risk youth out of system involvement.

Her findings indicate that, 24 months after program completion, Early Assessment participants were significantly less likely to have a new law violation compared to youth who participated in Juvenile Diversion.

“When contact in the system is good. Unnecessary court
involvement contributes to worse outcomes in low-risk juveniles,” Wulf-Ludden said. “You’re not doing them any favors by cracking down super hard. Trying to scare them straight does more harm than good.”

Roughly 40 percent of all detained youth are held for nonviolent offenses, making the U.S. a country that treats adolescent offenders more harshly than almost any other industrialized nation, said Wulf-Ludden.

“Unnecessary detention is not an effective use of resources. It is mostly ineffective and costly,” said Wulf-Ludden.

Why then, do we rely on juvenile detention as our primary intervention for juvenile crime in the United States?

“So often it becomes an emotional decision. The general public doesn’t like the idea of taking it easy on criminals, whether it’s a kid or not. Lesser punishment doesn’t always sit well with people,” Wulf-Ludden explained. “An emotional response isn’t the best response to addressing the problems that brought a kid into contact with law enforcement. We should base our responses on the research out there, a kid’s background and what imprisonment does or doesn’t do.”

The difficulty is determining when involvement is unnecessary and when it is necessary, said Wulf-Ludden.

“We need to focus on individualized treatment and address that specific kid’s needs. However, we need to be careful.

“If we have a kid who is a violent sociopath, who is not going to be helped by programming, they do need to be locked up. But not every juvenile fits that description.”

UNEXPECTED CAREER

Timbre admits she “stumbled” into her career in criminal justice and academia.

There was no law enforcement background or interest in her family. Her dad, Gary, was a journalist, reporting agriculture news for KZ100 FM and other radio stations in central Nebraska. He also worked for Dow Jones, writing farm, ranch and market stories. Her mother, Earlene, works at the hometown grocery store in Central City.

The first time she showed interest in becoming a corrections officer, her grandpa Kenny warned her.

“Grandpa said, ‘If you go into corrections, I’ll correct your ass,’” she said, laughing. “He didn’t like the idea of me being in a prison. If he was still alive today, he probably wouldn’t be a fan of my research.”

In high school, Wulf-Ludden was involved in speech and drama at Central City High School, where her speech teacher encouraged her to look at a career as a lawyer.

“She saw I was good at speech and encouraged me to take some law classes in college.”

Timbre’s older sister, Kellie, also pushed her toward criminal justice.

“She helped set up my freshman-year schedule at UNL, selecting some political science and criminal justice courses to see what I would like.”

It didn’t take long for Wulf-Ludden to develop a strong interest in criminal justice. While taking Criminal Justice
101 at the University of Nebraska-Lincoln, she was drawn in by her professor, Chris Eskridge, and his stories.

“That class was exciting and fascinating. I was hooked right away, and I decided to take more criminal justice classes and just kept going in that direction,” Wulf-Ludden recalled. “I kept falling deeper into it. I truly just lucked into a profession that I really enjoy.”

Wulf-Ludden, 30, worked as a graduate assistant at University of Nebraska at Omaha from 2008-13, received her Ph.D at UNO in 2013 and came to UNK in 2014 after working as an instructor earlier that year at UNO and UNL.

She calls UNK the “perfect fit” for her classroom and research interests.

“The support here is incredible. UNK wants you to do research and helps you accomplish your research goals,” she said. “There’s a nice balance here between classroom and research. I’ve never wanted to go to a Research I college that focuses more on research than students.”

“I’ve always felt that institutions of higher education should focus on education, and that’s what UNK is about. Research is important here, but it isn’t more important than students.”

In her UNK classroom, and when mentoring students conducting their first research projects, Wulf-Ludden does her best to draw on her own experiences as a young researcher.

“You have to be stubborn and can’t be willing to take no for an answer. You get told no a lot and have to come at things from different angles,” she said of the advice she gives students. “You can’t get pushed around. I’ve learned to stand up for myself and say, ‘This is what I want’ and go get it for myself.

“If you want something, you have to stick with it and keep trying and working and improving until you get a yes. You can’t let people bully you and boss you around if you want to do research that you think is meaningful and important.”

Wulf-Ludden repeatedly says she is “fortunate” to work on the UNK campus, which is just 65 miles from her hometown of Central City.

“I always saw myself working in the University of Nebraska system. Kearney is close to home, and I feel comfortable here. I know the type of students who attend here. They are kids who are excited about their studies, who talk and participate in class and are into it.

“I really love the atmosphere at UNK. It’s an environment I’m comfortable in, where I am surrounded by people like me and feel like I belong.”

CULTURE OF VIOLENCE

Violence is the accepted tool to solve problems in prison, and female inmates are often motivated by that violence.

“At times, it’s really a social event. Relationship violence, the drama – it’s accepted as a fact of life and part of women’s prison culture,” said Wulf-Ludden.

“Women’s prisons have become more violent than they were in the past. For many women with a history of victimization, they’ve learned that violence is a useful problem-solving tool.”

Wulf-Ludden’s 2015 article “Partner Violence in a Women’s Prison: The Social Consequences of Girlfriend Fights” focuses on relationships among women in prison and social consequences of girlfriend fights.

Personal relationships in women’s prisons are very important, and women go to great lengths to maintain social ties while incarcerated, Wulf-Ludden said. Women create pseudo-families and find girlfriends in prison, and they rely on those personal friendships to keep them out of trouble in prison.

“Inmates often claim that they develop deep, meaningful relationships while incarcerated and describe the relationships as loving and emotionally satisfying,” Wulf-Ludden says in her research.

“Over and over inmates told us that they’d have a lot more fights if not for the strong friendships and inmates helping keep them out of violent situations,” added Wulf-Ludden. “Having a friend and positive interactions helps inmates get through their time.”

However, female inmates also identified their “girlfriends” as the leading cause of verbal conflict and physical violence in prison, as they often involve other inmates in their personal problems.

“Women fight, yell and threaten their partners, or inmates seen as threats to their relationships,” Wulf-
Ludden said. “There is a very interesting dichotomy. For women, having a friend or confidant leads to positive things women do for each other. But when women have actual girlfriends and romantic relationships, those often become poisonous and create a lot of the violence and spectacle.”

The majority of incarcerated women in the United States suffer from histories of sexual and physical abuse, said Wulf-Ludden, and many model their prison relationships after their non-prison relationships. They simply continue the cycle of violence and dysfunction while incarcerated.

“It’s their way of life. A huge chunk of incarcerated women have histories of victimization, where they have been victims of violent, abusive and really toxic relationships on the outside. That translates to their romantic relationships on the inside. That’s the normal in their lives, what they’ve experienced.”

Additional research by Wulf-Ludden also zeroes in on prison violence, interpersonal relationships and inmate friendships. Her 2013 article “Interpersonal Relationships Among Inmates and Prison Violence” – co-authored with Metro State University Assistant Professor of Criminal Justice Rebecca Trammell – explored the benefits of having a friend in prison for males and females.

Wulf-Ludden’s work – which included 383 inmate interviews at five adult prisons in the Midwest – focused on whether the presence of friendships in prison affected prison violence.

She revealed that both male and female inmates described a variety of benefits resulting from befriending a fellow inmate, from providing advice and companionship to avoiding trouble and encouraging self-improvement.

The “real straight talk” is that positive relationships keep inmates out of trouble, make prisons safer and improve inmate attitudes, said Wulf-Ludden.

Encouraging positive social skills and learning what it means to have a healthy relationship is an important step, she added.

“These are people primarily coming from unstable backgrounds, and we can’t expect them to magically know the difference between good and bad social skills,” said Wulf-Ludden. “If they’ve been taught negative social skills, somebody has to make the effort to say ‘Hey, here’s some new tools to improve your communications and relationship skills.’”

Wulf-Ludden said the lack of domestic violence programs nationally among the female prison population is appalling.

“Victims of partner violence are often punished along with their abusers, and this only further ingrains the victim’s cycle of learned helplessness. Without addressing the issue of partner violence within the correctional arena, administrators and staff are perpetuating the violence that negatively affects the victim’s safety.”
Her research argues that a two-fold approach should be used to stop the cycle of violence.

- Prison officials must learn to identify and intervene when partner violence is present. They must also offer educational treatment programs to help incarcerated women address and understand the serious consequences of abuse.
- Policies should be put into place that allow victims to openly discuss problems in their relationships in order to find the help they need.

“Prison officials need to intervene and focus on the community as a whole to stop this cycle of violence, which means addressing partner violence as a social problem with viable solutions. Punishment alone does little to stop the cycle of violence,” she said.

“Prison administrators do a huge disservice to victims by teaching them that their cries for help are a waste of time. We can do a better job.”

Similar to her takeaways in other research, Wulf-Ludden found that prison administrators can reduce violence by establishing programming that emphasizes non-violent conflict resolution strategies.

In fact, many men in her study expressed their desire for non-violent options for conflict resolution such as communication groups, intervention, mediation and treatment programs.

“They don’t want to fight. They want alternatives that don’t include violence and to be shown other ways to solve conflict,” Wulf-Ludden said. “If we want them to return to the community and be a successful, nonviolent member of society, we need to help them reprogram and realize violence isn’t the answer.

“When inmates feel like they are respected and treated with dignity by staff and inmates, they are willing to be civil,” Wulf-Ludden added. “Respect is a huge thing for inmates. If they feel disrespected, their attitudes are, ‘Why should I respect anybody around me?’ If you can foster a respectful environment, then typically there is less aggression.”

The solutions sound easy, but Wulf-Ludden admits they are not.

“As much as we’d like it to be, crime isn’t nice and neat, and black and white. There are human beings on both sides of crime, and others who love them. We have to be compassionate at times.

“Accountability is certainly important, but I want people to take away that we need to look at the whole picture, the whole context, before we react. Gut reactions don’t do any good in criminal justice. That’s not the best response. It might feel good at the moment, but it’s typically not beneficial for either side.”
By JAN TREFFER THOMPSON

It’s hard to say when the music starts, exactly. Opening notes insinuate themselves on the listener, coming into focus as if emerging from a fog. Sounds blink in and out of existence in the space above a low rumble that builds into ripples of musical prose.

Listening to Anthony Donofrio’s “Between Event and Crisis” is a bit like chasing fireflies on a summer evening, both exhilarating and peaceful. Or, maybe it’s more pensive, like solving a riddle.


Donofrio sees composition as creation, not interpretation. For him, “Between Event and Crisis” is a piece of depth. A vibraphone solo is at the top, with other percussion taking the middle and the bass drumming at its core. In it, he sees the same non-linear, layered structure he discovered in David Foster Wallace’s novel “Infinite Jest.”

“Do I expect (an audience) to realize that? Absolutely not. That’s the way I was looking at it as I was making it, and that’s good enough for me. That’s all I’m worried about.”

An assistant professor at the University of Nebraska at Kearney, Donofrio blends an interest in literature and painting with his own art by translating compositional techniques from those forms into the language of music. His focus is solely on technique and structure, rather than creating meaning or eliciting emotion from his audiences.

“It’s not about the emotion, it’s not about the story, it’s not about anything programmatic or extramusical, it’s about the technique. It’s about the craft. That’s where I’m comfortable,” he said.

His approach has earned Donofrio significant recognition, including dozens of commissions and acceptance into numerous music festivals. He was chosen for a composer workshop hosted by SEM Ensemble in New York, and was one of only seven composers accepted to the 2016 Bowling Green New Music Festival, an important Midwest event for New Music.

In 2014, his first year at UNK, Donofrio secured grants that expanded the university’s New Music Series and Festival.

PEARL JAM, NIRVANA, GUSTAV MAHLER

Reaching this point in his career has meant learning to listen to his own instincts and voice.

Donofrio said he’s been composing since he was a freshman on his high school’s drum line.

“I do not have a taste for marching band music now, and I haven’t since I was about 19,” he said. “Interestingly enough, the thing that got me into writing music was I was in the drum line in marching band because that’s what you had to do, and I wrote drum cadences.”
By the time he finished high school, Donofrio knew he wanted to teach music, but he didn’t want to conduct a band. A music composition major seemed like an obvious choice, but his band director discouraged it, saying he’d “never get a job.”

It wasn’t until he signed up for classes at Kent State University, and noticed all the courses in music theory, that Donofrio realized he wanted to be a college professor.

At first, Donofrio’s compositions took a cue from Gustav Mahler, one of his favorite composers. Even through high school, if Pearl Jam or Nirvana wasn’t on his stereo, it was a Mahler symphony.

“One of the big reasons I gravitated so much toward Mahler was I found that I enjoyed the massive, expansive pieces,” Donofrio said. The shortest Mahler symphony is about 50 minutes.

“Also, his pieces are on a grand scale. The eighth symphony is called the Symphony of a Thousand for a good reason. There are two choirs, eight soloists, and a massive, massive, orchestra. So just that extreme I felt a liking toward.”

Donofrio describes the music he wrote until the end of his doctoral program as a “loud, bombastic, aggressive style.” It was also programmatic, using musical passages to tell stories and symbolize ideas.

“I had written a piece one time where I had all these motives that were assigned to different emotions and different meanings. So this means sadness, and this means happiness, this means that person – way too many things. And it was in four sections, and the four sections were based on four different emotions. And it was going to be wonderful. Everybody was going to walk out in tears.”

Nothing went as planned. Wrong notes, missed lighting cues, and a final whistle intended to symbolize memory fading off that just never happened.

“There were all these musical things that had to happen for these extramusical things to be understood, and if the musical things failed, then the extramusical things failed, and that was the first realization that maybe programmatic music is a dumb idea,” Donofrio said. “The art is music. Not drama, not theater, not literature. Stories are meant to be told through words. My material is sound. Why am I trying to portray all this extra stuff, and not worrying about the sound of it?”

INSPIRED BY LITERATURE

A new direction for his music came when a percussionist friend told him about Morton Feldman. A 20th century composer, Feldman was known for music inspired by the art of abstract painters such as Philip Guston and Mark Rothko.

But it wasn’t the subject, the feeling or the “meaning” of those paintings Feldman captured in his music. It was the technique and often the compositions.

Donofrio explained the process using the example of Feldman’s interest in Turkish rugs. Where a casual observer might see only a solid swath of blue in a rug, Feldman might study the dying technique, discover myriad spots of different blue tones blended into a mass, and decide to use a similar technique for a piece of music.

“What Feldman did was say ‘Ok, I’m going to take the same rhythmic passage, and I’m going to repeat it seven times, but I’m going to make it slightly different each time.’ Feldman’s not trying to get you to envision the Turkish rug, he’s taking that (technical) idea.”

Even better, from Donofrio’s perspective, was that Feldman wrote extremely long compositions.

“I realized you can make these expansive, beautiful pieces without having to be loud about it, and programmatic about it, and dramatic about it,” he said. “It was exactly what I needed at exactly the right time. I can sit and just listen to beautiful sounds for four and a half hours, and I don’t have to make any assumptions, and I don’t have to make any connections, and I can just get deeper and deeper into the sounds.”

Donofrio began thinking about his own interest in literature. Could he take musical inspiration from the
compositional techniques used in novels? He began by reading James Joyce’s “Ulysses.” The day after he finished it, he started “Gravity’s Rainbow,” followed by many others. He immediately found techniques he wanted to try.

“I infinite Jest,” for example, offered a story without a clear beginning or end; just a window into the much larger world Wallace’s characters inhabit. And rather than building to a climax, the story delves deeper into their world, expanding readers’ understanding. That lent him the form for “Between Event and Crisis.”

One of Donofrio’s longer works, “V,” uses the circular structure of Joyce’s stream-of-consciousness novel “Finnegans Wake.”

The only problem with his new musical style, Donofrio said, was that he found it halfway through his doctoral dissertation. Though he tried to rearrange the music to reflect his new influences, he said he’s been much happier with the work he’s produced since.

Donofrio describes his process as finding a shape for the music, and those shapes are often suggested by literary references. When asked to write something very short, for example, it brings to mind the short story form, and writers such as Raymond Carver who make every word count.

Longer pieces call for the more intricate structure of a novel, or a complex painting such as Rothko’s.

Donofrio knows his approach to composition isn’t universal, and sometimes finds himself debating other composers who see emotional reaction as key to a composition’s success.

“I’m happy that I went that way because I find it much more interesting to experiment with things like time, and really try to understand. For example, if I have a six-minute piece, six minutes has a much different personality than an 80-minute piece. Sure there are
“It would be great if right in the middle of the country there was this (showcase) for new music.”

GROWING NEW MUSIC FESTIVAL

Breaking down resistance and building awareness of contemporary and experimental music is one of Donofrio’s goals for the New Music Series and Festival. While the festival has been at UNK for 15 years, Donofrio introduced several changes to increase its profile.

“The way the old New Music Festival went was you mailed in a score, mailed in a $20 check, and the pieces were selected on the basis of the available performers,” Donofrio said. He used a university seed grant to drop the entry fee, made all submissions electronic, and put a greater emphasis on the quality of the work.

The 2016 festival drew 185 submissions, up from only 26 the year before. Concerts are also now streamed online, which Donofrio said improves the experience for both composers and student musicians. “As soon as the 3 p.m. concert on Saturday was over (this year), a composer was online congratulating the student performer,” he said. “So a student is getting a personal e-mail from a nationally-known composer, saying ‘thank you for playing my piece.’”

The grant also funded the New Music Series, which has hosted nationally-known performers such as pianist Karl Larson and the Quince Contemporary Vocal Ensemble. Response from the community, and especially students, is growing stronger.

“The students really get into (the concerts),” Donofrio said. “In the community, we’re getting there. There are community members we see at every single event.” Donofrio has even secured a commission from the Kearney Area Symphony Orchestra, and was recently asked to write music for the university’s bell tower.

In future years, Donofrio said, he hopes to further blend the festival and concert series, so that the festival becomes an end-of-series celebration. Grown into a more prominent event, it could work with Omaha’s Under the Radar festival and gain recognition as an outlet for today’s composers.

“It would be great if right in the middle of the country there was this (showcase) for new music. That’s kind of a long-term goal. We’ll see if it gets there,” he said. But in the meantime, “We’re showing composers from California, composers from Chicago, composers from New York, that it may not be big, but there’s a strong New Music thing going on here.”

ANTHONY DONOFRIO

Title: Assistant professor, Composition and Theory
College: Fine Arts and Humanities
Education: Ph.D., Music Composition, University of Iowa, 2011; Master of Arts, Music Composition, Kent State University, 2007; Master of Music, Percussion Performance, Kent State University, 2005; Bachelor of Music, Music Education, Kent State University, 2003.
Years at UNK: 2
Career: Assistant professor of music, Kent State University, 2011-2014.
Hobbies/Interests: Book collecting, literature, running, chess, cooking.
Honors/Awards: International Academy of Music Excellence in Composition Award, 2011; Seed Grant for UNK New Music Series and Festival, 2014.
Courses taught: Music Fundamentals.
Recent Events:
• “Piano Trio,” Selected for S.E.M. Ensemble 2016 Composer Readings.
• “I for Solo Piano,” Commissioned by Amy O’Dell.
• “V: oratio secreta,” Commissioned by Chamber Cartel, performed on its 2015 tour.
Umland maintains interest in world of medieval romance
By KIM HACHIYA

Rebecca Umland remembers the kernel of the idea for her research and teaching interest in the quester hero figure.

She and her husband were attending one of the final screenings of the 1999 David Lynch film “The Straight Story” at a Kearney theater. The film is based on the true story of an elderly man who drove his lawn mower tractor 240 miles from Iowa to Wisconsin in 1994 to reconcile with his dying brother, from whom he was long estranged. The film offers deep reflection about forgiveness and love in the face of death, and the quest for redemption.

Umland, professor of English at the University of Nebraska at Kearney, was struck by the film. “I was so profoundly moved by the idea of the ‘old quester,’” she said. “Typically, the quester (in film and literature) is a young and naïve person who embarks on a life-changing journey. But in this film, the aged and ailing man’s journey reinforced the idea that transformation can come at any stage of life, that we don’t stop growing or making mistakes. The urgency of the dying man was prompted by his desire to right his mistake. He takes on the difficult task of going the slow way as a form of atonement and redemption. It fascinated me.”

Umland said the quester is an archetypal character found in a variety of literary and film texts, especially her favorite literary genre – Arthurian legend. And perhaps the fact the quester in the movie was an Iowan also resonated.

An Iowa native, Umland grew up just outside Iowa City, home to the University of Iowa and its excellent English program. She knew early on that she wanted to be a Hawkeye and teach high school English. But as she took undergraduate classes, she became more enamored of reading and learning. And after earning her bachelor’s degree, she just kept taking classes, eventually applying to Iowa’s doctoral program.

“I realized how little I knew, and how much I wanted to learn. I loved the graduate academic culture, one that spontaneously fed my desire to keep learning. It’s been an ongoing lifelong joy.”

After earning her Ph.D., Umland took a three-year position at Iowa State University, a job that allowed her to develop her professional skill as a college professor. ISU, she said, was very supportive in mentoring young faculty as they searched for permanent positions. And when a position opened in the English department at Kearney...
State College in 1989, Umland visited the campus and was impressed by its size and focused mission. She’s never regretted taking the job, and when KSC became part of the University of Nebraska in 1991, she was excited that the college was becoming more research-focused. There were scholars already doing good work, and the climate encouraged academic publication, as witnessed by the annual Pratt-Heins Distinguished Research Awards, of which Umland was a recipient in 1999.

When the transition to the university system occurred, she and others benefited from the opportunity to apply for developmental leaves for research.

**VICTORIAN POETRY**

Umland has always been interested in Arthurian legend and the world of medieval romance, especially as it has retained its vitality in later eras. She has been a member of the International Arthurian Society since her graduate school days, and has presented papers at international conferences both in the United States and the UK.

Her research, she says, tends to be additive – building upon itself – even as it sets off in new directions. Her doctoral dissertation, for example, focused on medievalism in Victorian poetry. For Umland, Arthurian legend remains a recurrent research and teaching interest.


It explores various film genres and periods that have adapted the legend for modern audiences and cinematic viewing. After its publication, the authors were invited lecturers at the Arthurian Film Festival in Edinburgh, part of the City Art Centre’s Exhibition, “The Quest for Camelot – The Arthurian Legend in Art,” in January 2002.

Following the publication of a later book about the life and works of a Scottish painter and writer/director, “Donald Cammell: A Life on the Wild Side,” the coauthors were invited as speakers at the Montreal Film Festival in 2006.

Arthurian legend is in some ways the one great human story, endlessly retold, Umland said.

The King Arthur of medieval chronicle and romance could have been based on an actual heroic late 5th or early 6th Century warlord whose tale has been embellished far past its hazy origins. In the literary tradition, he allegedly earned his crown by withdrawing the magic sword from the stone. He became a “world conqueror” forming the Knights of the Round Table who later searched for the Holy Grail – the chalice supposedly used by Christ – a disastrous quest for most of them, and one that eventually destroyed the knightly fellowship and Arthur’s kingdom.

Mix in the illicit romance between Arthur’s chief knight, Lancelot, and Camelot’s queen, Guinevere, and the story begins to take its tragic shape. A noble but flawed hero, Lancelot must relinquish his destiny to be the knight who achieves the grail, that honor being reserved for his son, Sir Galahad, whose purity allowed him to complete the holy quest and ascend straight to heaven.

Are these names and plot lines familiar? Umland points to countless retellings of the many medieval versions of the story – culminating in Sir Thomas Malory’s complete version, “Le Morte d’Arthur,” published in 1485, at the end of the Middle Ages. Malory’s is one of the earliest publications of the stories in English; more recent versions include, Rodgers’ and Hammerstein’s musical “Camelot,” Disney’s “Sword in the Stone,” “Star Wars,” “Monty Python and the Holy Grail,” Harry Potter films, and the hot television series “Game of Thrones.”

And the themes are not limited to Western culture. Japanese Samurai culture is heavily laced with these themes as well. The characters and themes are among the strongest archetypes in literature, as her coauthored article published in “Mythlore,” “All For Love: The Myth of Romantic Passion”
Umland says the renewed interest in Arthurian legend tends to resurface in cycles, especially during times of upheaval or uncertainty. Sir Thomas Malory was an imprisoned knight during the bloody English War of the Roses, so his text focused on the devastating effects of internal strife and how such divisiveness can destroy a world, she said.

Arthur, she said, is a crisis figure and his story helps modern readers interrogate issues about war, loyalty and the internal corruption caused by the misuse of power.

So, are we in that kind of period now? “Well, we’ll see what the next Arthurian film has to say,” Umland says.

And how does all this relate to an old guy driving a riding lawn mower across Iowa? Well remember the idea of the quester and the flawed hero? That’s related to the Arthurian ideal of redemption — Lancelot in particular.

INTEREST IN FLAWED HEROES

Umland said her research has always informed her teaching, and her teaching has informed her research. Her students, she finds, are always more interested in the troubled characters — such as the imperfect but inspired Lancelot, or the moribund but wise Alvin Straight and his unusual trek to reconcile with his ailing brother — than the perfect characters.

The flawed hero, the conflicted hero, the outlaw hero — one with a fierce individualism — are all so much more interesting than the perfect but one-dimensional Galahad, she said.

About four years ago, she began to explore more deeply how these characters move from mistake to redemption through the idea of liminality — an in-between space in the moral landscape of the worlds they inhabit.

In her recent book “Outlaw Heroes as Liminal Figures of Film and Television,” Umland describes liminal space as “an anthropological concept of a threshold between past and future, or between conflicting social values and/or individual experience and desires.”

Published in Spring 2016 by McFarland and Co., a press that specializes in scholarly works about popular culture subjects, Umland looks at a type of hero who negotiates between justice and the law. If the law is unjust, corrupt or inept, the liminal hero, who is neither part of the status quo nor entirely apart from the main culture, adheres to his own ethical code, and retains his individuality while serving the needs of the community.

As writer John Steinbeck noted, the outlaw hero who appears in Western films has distinct ties to Lancelot and the world of medieval romance, she said. Lancelot, who rescues the queen when she is sentenced to be burned at the stake for treason, knows that their adultery is a sin, but not one that should be punished so severely. He serves a higher justice than that which the law allows.

This type of hero, whose roots are in the world of medieval romance, enjoys an enduring popularity with modern audiences, especially those who favor urban westerns and action films, Umland said, citing several films and television shows that feature such a figure: “Shane,” “Casablanca,” “The Lone Ranger,” “Have Gun Will Travel,” both “Dirty Harry” and “Death Wish” franchises, “Rambo,” “The Batman Dark Knight Trilogy” and “Star Wars.”

People applaud poetic justice, she said. Sophoclean tragedy, Dante’s “Divine Comedy” and Shakespeare’s “Hamlet” share with modern stories of “The Lone Ranger” and “The Dark Knight” the problem of revenge and a higher justice.

So, is there just one story that we keep telling over and over?
“Well, what people cared about in the middle ages, we still care about those things now,” she said. “There is a universality to the story; we want to hear it over and over. The magic for me is that we want to hear about people who are people. They may fail, but they redeem themselves. They give us hope. The quester riding his lawn mower across Iowa tells us something about the nature of redemption, what you learn through the journey and what, by grace, you are given.”

And, she notes in “Outlaw Heroes,” “the stories a culture chooses to tell itself about its past, present and future shape and affirm its identity.”

In American culture, these stories that feature the liminal outlaw hero reconcile the mutually cherished but sometimes conflicting values of individual freedom balanced against self-sacrifice for the communal good. Only Shane, the gunfighter, can rescue a Wyoming farm community from a tyrannical rancher and unscrupulous professional hired gun, but after this violent resolution, Shane cannot join the community he saves. He must remain a solitary, marginalized figure – a liminal outlaw hero.

STUDENT INTERACTION

Umland said interaction with students in the classroom often introduces new lines of research interests for her. “It’s the question I cannot stop thinking about thatformulates my next avenue of inquiry. I never teach a class quite the same way twice because each group of students brings new thinking that becomes the next interesting question. It produces the happy surprises, such as wondering why we like flawed heroes.”

Umland said UNK has been an excellent fit for her. It’s an institution that is supportive of teaching and provides an encouraging environment for intellectual growth, she said. “I feel that I belong to a larger academic community. My department has always done a good job of maintaining balance between a traditional curriculum and offering innovative courses. I enjoy having the freedom to conceive and develop courses with a different perspective,” she said.

Umland hopes her teaching and research efforts honor her mentors and others from whom she learned. “I received a lot of proper encouragement from people who pushed me when I was a graduate student. I was given advice that I have treasured, lifelong advice regarding habits of study and inquiry, habits of professional development and a knowledge base upon which I have expanded. I do try to do the same for my current students. It is the greatest pleasure to see them succeed.”

REBECCA A. UMLAND

Title: Professor of English
College: Fine Arts and Humanities
Education: Bachelor of Arts, University of Iowa, 1976; Master of Arts, University of Iowa, 1983; Ph.D., University of Iowa, 1985.
Years at UNK: 27
Career: Iowa State University, 1986-89.
Family: Husband, Samuel J. Umland, UNK English professor and chair; Son, John Umland, and stepchildren Andrew Umland and Lauren Miller.
Hobbies/Interests: Popular culture, Arthurian legends, Music, Film, Titanic Disaster.
Honors/Awards: Pratt-Heins Faculty Award for Scholarship/Research, 1999; American Council for Learned Societies Travel Grant Award, 1990; Mortar Board Society, Outstanding Teaching Award, 1993, 2000; Phi Eta Sigma, Honorary Member for Teaching Excellence, 1992.
Areas of research/specialization: Romantic and Victorian Poetry, Arthurian Legends, Film Studies, Medievalism and the Medieval Revival.
Courses taught: Romantic Literature, Victorian Literature, World Literature (The Quester Hero; Love in the Western World; European Literature in Translation), Arthurian Legends in Literature and Film.
Recent Published Books:
• “Outlaw Heroes as Liminal Figures of Film and Television,” 2016.
Recent Published Articles:
By KELLY BARTLING

Hydrogen sulfide is an interesting compound. H₂S. A colorless gas, it's that stinky rotten egg smell. It's toxic and volatile – can make humans and animals sick or it can explode.

But chemists such as University of Nebraska at Kearney's Haishi Cao know the human body produces small amounts of H₂S as a signaling molecule.

As a top university researcher in bio-organic chemistry, Cao may one day find the right amount of hydrogen sulfide that in the brain could be a cure for neurodegenerative diseases such as Parkinson's or Alzheimer's.

That's what keeps Cao and his students working in their Bruner Hall labs day in and day out – the quest for discovery of the exact compound or molecular “sensors” that can measure the level of H₂S that will help – not kill – cells, leading to treatments or even cures for cell- and nerve-damaging diseases in the brain.

Fluorescence – that neon-like glow – is the signal that Cao and his undergraduate lab assistants observe, detect and measure to help discover that right mix and measure of hydrogen sulfide and other compounds.

“Our job is to find out how much of this molecule is helpful,” Cao said. “A large amount is very toxic. A small amount is very helpful.

“That molecule (hydrogen sulfide) is very useful. It is toxic, but in our brain… in our body – the loss of hydrogen sulfide is the key to our brain housing.”

Scientists have speculated that hydrogen sulfide is useful in mitigating cell damage that’s responsible for specific diseases. Time magazine in July 2014 featured a discovery by researchers at England’s University of Exeter who reported in the journal “Medicinal Chemistry Communications,” that small amounts of H₂S could prevent mitochondrial damage. (Mitochondria supply cellular energy and also are involved in signaling, differentiation and cell death, while maintaining cell growth.) Discovering how much of a tiny amount of hydrogen sulfide is beneficial to cells' mitochondria could lead to prevention of arthritis, heart disease, strokes, as well as neurodegenerative diseases.

The same team in 2013 published research that hydrogen sulfide activates a gene linked to longevity, similar to resveratrol, the antioxidant in red wine.

So what was used as a chemical weapon during World War I is now a hot area of research for labs around the world – like Cao’s. The race is on to discover the precise level of H₂S to eventually cure these diseases. Cao dreams of winning that race.

“I’m really interested in the medical application. Discovering the final target,” he said. “Lots of diseases have small molecules and low concentrations that have significant regulation for the species. People have a really hard time detecting these small molecules. They’re not visible so we have to use (special) techniques to figure out how many molecules are there.

“I’m interested in nervous disease like Parkinson’s. There are many factors that can affect this disease-cause.
It’s a really complicated process. I’m interested in this very small part, which is hydrogen sulfide. That is the molecules that can keep the reduction foundation in the cell, and can keep the cell normal. I want to know what’s their function.

Armed with his lab instruments and aided by as many as six undergraduate students at a time, Cao is analyzing, measuring and tracking precise numbers and types of molecules and their reactions.

“Most fluorescent molecules are organic compounds with a highly conjugated structure,” Cao said. “The fluorescent properties can be changed under different environments or through interacting with other molecules. I work on this with my students every day.”

Cao points to a vent-hooded table where the toxic hydrogen sulfide is analyzed by UNK students.

Cao turns serious: “I tell the students, some of this is very toxic so we look at these molecules under the hood… these could explode or they could get sick, these are toxic.” He holds up a test tube and puts it in a small black box under ultraviolet light. It is glowing.

“This is the molecule. We made it, it is fluorescent. My compound is very visible. You can see the color there.” Some are glowing blue, or green or yellow. The concentrations of H₂S are so small, even as small as 1 part per billion. The exact measurement of the number of micromoles or nanomoles is important, requiring precise instruments.

“How this hydrogen sulfide in the cell interacts with the molecules we make here… results in fluorescence. Based on the change we know how much hydrogen sulfide. It’s the change of both intensity and color.”

The chemistry labs include other equipment: a nuclear magnetic resonance instrument (like a medical MRI that detects anomalies in the body). The NMRI characterizes the structure of compounds, so when they are developed, Cao and students know they are pure.

“We have to use this instrument to identify whether we get the right or wrong compound. We propose to make some molecules but we verify that we get the right one. If the compound is right we can go to the next step, we can measure fluorescence. This is the second step for our research. The first was under the hood to make the molecules. Then we purify that, then we come here to verify the structure, to make sure we get the right compound, and if it’s correct then we go to the fluorimeter.”

A fluorimeter measures the fluorescent excitation and emission: the wavelength and intensity.

“Fluorescence is an emission when electrons go back from an excited state to a grounded state,” Cao said. “Moving around in a nucleus the electrons are pretty stable, pretty relaxed, pretty comfortable. However, if you put anything to the electrons, the electrons get very crazy. Ah, really powerful and really excited, so what do they do, they jump higher. Like the kids. When you give them some candy they get very happy. So electrons, they give off energy. This energy is light. So when you make the electrons very excited, they jump to somewhere. We call this the excited state. When these electrons go back from the excited state to normal, they give off fluorescence.

“I’m proud of our department. We’re pretty unique. Good people. Our culture. … Our facility, our people, our teaching. We’re outstanding.”

“We use one instrument to measure the fluorescence. We use this one – a spectrometer – to measure absorption. Sometimes we can say the absorption will determine the fluorescence. Sometimes we’re interested in one or the other. Whenever we’re investigating some bio-event like how the molecules interact with hydrogen sulfide, we want to know how much absorption is there, and how much fluorescence.”

While most research universities have this array of instruments, it’s rare to find them in a university such as UNK, a teaching institution, where undergraduates are routinely working on them.

“I show them first (laughing). Eventually they learn how to use it themselves. There’s no problem,” he says.

The last step is to hand off the sample to biology researcher Kim Carlson for her lab to test in mice and human (monocytic) cell lines.

PASSION FOR SCIENCE, COLOR

Haishi Cao (pronounced “sow”) was born in Changchun China, the son of two professors (both literature). Destined to teach.

“Changchun is northeast. It’s kind of a big city. Our weather is very close to Nebraska. The main agricultural product is corn. I came to the U.S. in 1999. Then I went to New Mexico to get my Ph.D., then to Washington state to do postdoc there for three years, then moved to...
Kearney in 2007. I really like chemistry, and I know there are some really good universities in the United States and I thought it would be a good advantage to go to the U.S. to get my degree.

"The United States was a very interesting country to me. I learned a lot in China, but most of what I learned about it I saw on TV and read in books. I just was very curious about what this country is."

Cao said chemistry always came naturally to him, but he knows it doesn't come easily to everyone. He has always been passionate about experimentation and science.

“When I was in middle school I took lots of physics, math and chemistry and just found chemistry was super easy for me,” he said. “I discovered chemistry was my work. I love demo (experiments). Even right now. There are some amazing things you can see from demo. How do molecules affect each other. That’s what drew me to the chemistry major. I love it.”

Cao is an easy conversationalist but wants to talk more about his students and about hydrogen sulfide. About other things that brought him to chemistry.

“I cannot see color,” he says. “I’m not completely color blind, but I cannot distinguish color easily. That makes me really like color, actually. When I get to see something in color, that’s amazing for me. Things that I see, I like the fluorescence, that makes me see the color. Say there’s a flower with red flower and green leaves. Some people ask me if I can see significant contrast and I say ‘no, I say they are the same.’ I can see the difference between yellow and green.

“For my research I don’t need to see the colors. We rely on the instrument. And another advantage for the fluorescence is it is super sensitive. You can have a really tiny amount and see it. You don’t need too much.”

NATURAL TEACHER

Cao is most pleased talking about teaching and about watching his students succeed, celebrating in their success with them. He teaches a few different chemistry courses, but primarily organic chemistry, usually a class of 45 with two to three labs.

“I think I got some genetic thing from my parents. I love students, I really do.

“I really enjoy explaining what I learn. When I talk to students I say… in China things are different. In the U.S. they teach us something one way. I like to share my learning and the way I learned things in another country. I tell students: ‘you can think about things this one way. Or you can think of things this other way. You learn which way is better for you. I’m an opportunity to find another way for you.’"
“They laugh. ‘Oh that’s weird.’”

His greatest joy, he said, comes from watching and learning that his students have succeeded.

“There are two things that make me very happy: One, whenever a student gets an acceptance to grad school or medical school. Every March or April I’ll hear some students get accepted to medical school or grad school, and they are so excited about it.” He keeps track of his students on his website, and they’ll contact him to let him know where they are.

Still, organic chemistry is tough. Some students really struggle and aren’t successful. He takes joy in their success and works hard to help.

“I think that’s part of my job (to help students work through this). I understand organic chemistry and people think it is a horrible class. It’s time-consuming. It’s very different from other chemistry. You have to be careful of all of the details. If you miss one, you will mess up. You should be careful if you miss one step. You should use all of your knowledge, not just one (part).

“I don’t want students to feel frustrated. I don’t want students to feel like they will fail. … If they’re having some difficulty, I will help them get better.”
CONQUERING THEIR FEAR

Cao is a frequent author for articles in Journal of Fluorescence, Organic & Biomedical Chemistry, New Journal of Chemistry and others. He always puts his students as authors on his papers. Funding for his students comes primarily from National Institutes of Health (INBRE) and from the Nebraska Research Initiative. Carlson says he is prolific in publishing and amazingly fast with his experimentation. “The students love him,” she said.

Says Cao: “This is a teaching institution. I love research, but I love teaching. I really enjoy working with students. It’s a beautiful thing. In this department and at UNK we have the opportunity to balance this so we can do research and teaching, I would say it is perfect. You have lots of freedom to do your research, you have time, you get instrument support. Students like to be involved in the research. We emphasize teaching and we represent high-quality teaching.

“I tell my students ‘Do your research seriously. Don’t just come here to be here. Do your research and get the result. We want to get the result for publication.’ (My students) are the major contributors. This is why I like to list them. I like to emphasize the students and to get them confidence. I want them to feel they can do something in the lab. A lot of times when my students come to the lab they are not very confident. They want to know: ‘Can I do that?’ I say: ‘Yes you can do that.’ I want to show them. But ‘yes you should work hard and yes you should be serious.’ If they’re worried they’re going to break something I say ‘yes and I break something, too.’

“So chemistry lab is about conquering their fear.”

‘ENJOY WHAT YOU HAVE RIGHT NOW’

Above Cao’s desk is a beautiful Chinese calligraphy. His father, a professor of rhetoric at a university in China, wrote it for him. It says, loosely translated: “Enjoy what you have right now.”

That’s Cao’s personality and attitude in a nutshell.

“I really love this place, actually,” he says. “I’m proud of our department. We’re pretty unique. Good people. Our culture. I visited some other institutions in Nebraska, and our department is really good. Our facility, our people, our teaching. We’re outstanding.”

Cao and his wife, Yue, are parents to daughter Isabella, who is 11 going on 30, and Cao beams when he talks about her.

“Travel is one of my favorite things. I like driving. I like to go to Colorado. But I like to go anywhere. My daughter doesn’t like it so much. She feels like it is boring. When she was little she liked it, but now she is almost a teenager and she doesn’t like being with me (laughs). I like hiking. I like being close to Colorado and the mountains there.”

He lives for his research. Carlson says he’s far ahead of the curve on this research.

Perhaps a major “Time magazine discovery” is one fluorimeter test away.
Chasek uses three-pronged approach for training addiction counselors

BY JAN TREFFER THOMPSON

Alcoholics may choose to take a first drink, but they can’t simply choose which drink will be their last. Addictions wield incredible power, Dr. Christine Chasek said. She trains counseling students to respect that power, and respect addicts for battling it.

Chasek learned that lesson decades ago while interning at a Kearney halfway house.

“There was a client there and he was a big, burly motorcycle-type guy. Big scruffy beard, heavyset and really tall. … He lost his wife, his family, his kids, and they’d meant the world to him,” Chasek said.

He told Chasek that before he entered treatment, he’d kept vodka on his headboard. Each night he’d wake up to drink, so withdrawal wouldn’t make him sick.

With tears in his eyes, the man asked a simple question: “How do I stop this?”

Moments such as that one challenged Chasek’s biases about substance abuse, and sparked her desire to improve alcohol and drug counseling by improving the way counselors are trained.

“He would be one person you would just probably turn and walk away from, if you saw him on his motorcycle, out in front of a bar or wherever. In fact, he ended up running with a tough crowd, because that’s where he fit in. But to get to know him, and the pain and how helpless he felt … we can’t take people at face value. We don’t know what they’re dealing with, and if you can get through that denial and that tough stuff, you can really make an impact.

“I want to train people so they can sit across from somebody like this and have that compassion, and help them. To have the knowledge, the skills and the heart of it,” she said.

TEACHER, RESEARCHER, THERAPIST

An assistant professor at the University of Nebraska at Kearney since 2012, Chasek has found many ways to improve counselor training – as a teacher, as a researcher, as a therapist, and as the Kearney director for the Behavioral Health Education Center for Nebraska. That state program promotes behavioral health services in rural areas.

She’s published research on addiction counseling programs, including two book chapters, and has mentored numerous student research projects into publication.

Last year, Chasek’s teaching and professional service earned the American Counseling Association’s Emerging Professional award, the Addictions/Offender Educator Excellence Award from the International Association of Addiction and Offender Counselors, and UNK’s Faculty Mentoring of Graduate Student Research Award.

The international award honored Chasek for her mentorship, and for her teaching approach that emphasizes experiential learning. In one course, for example, Chasek asks students to examine their own addictions. That way, students understand the physical
“We can’t take people at face value. We don’t know what they’re dealing with, and if you can get through that denial and that tough stuff, you can really make an impact.”

and emotional response their clients will have when asked to give up addictive substances.

Students can be surprised to find how much they rely on soda, video games, coffee, or even exercise.

In one nomination letter for the award, a student wrote that during Chasek’s course, one of her classmates quit an addiction. She found the strength to quit because she felt supported by the other students.

“I thought ‘Wow, this counseling business can really make a difference in someone’s life, and quickly,’” the student wrote.

Chasek’s teaching style developed from her professional experience and her research, which has led her to a three-pronged approach for training addiction counselors – attitudes, knowledge, and skills.

“The stigma part is the attitudes and the discrimination. What are my attitudes toward (addiction and substance abuse) as I come in to learn about it? The knowledge piece is (the information students are) learning in a book and taking tests over. Then the middle part is this experiential piece, or the skills. Can I sit down across from somebody and empathize with them, and treat them? Do I have experiences working with people, actually doing it?”


The approach represents Chasek’s contribution to an ongoing debate in her profession.

ATTITUDES ABOUT TREATMENT

“We’re really struggling with what makes the best addiction counselor. … Is it experience – ‘I’ve been there, done that, and I’m in recovery?’ Or, is it ‘I’m like a medical doctor, I’m highly trained, I know the treatment, I know the models and I can help you.’ And that is a huge war.

“It stuns me. I think there’s a place for both.”
Chasek said she first realized the importance of counselor attitudes in graduate school, while working for South Central Behavioral Services in Kearney. She noticed that substance abuse was treated differently than other mental or behavioral health problems, by professionals as well as the public.

“At the halfway house, nobody wanted to do the intensive outpatient groups (for substance abuse). It was like the less glamorous kind of work,” she said. That observation led to Chasek’s first published article, “Assessing Counseling Students’ Attitudes Regarding Substance Abuse and Treatment,” in the Journal of Addictions and Offender Counseling. She found a correlation between student attitudes about substance abuse and their attitudes about treatment; those with stereotypically moralistic ideas about substance abuse were less likely to be optimistic about treatment. A lack of optimism, in turn, makes effective treatment less likely.

The idea of substance abuse as a moral failing, or choice, dates back to the temperance movement. Chasek said those attitudes sparked programs such as Alcoholics Anonymous in the mid-20th Century. Professionals didn’t want to work with people who had addiction problems, so recovering addicts were recruited and given some training as counselors.

“So it was kind of like a make-do thing. It worked. The AA model and all those, it’s people who struggle helping other people who struggle, which is great. But what happened was it left out the whole education piece. So our people who are highly trained, knowledgeable, skilled, were not going into the addiction field.”

In the 1980s, Chasek said, the profession’s pendulum swung to understand addictions more as a disease than a choice. And today, psychologists consider addiction a biological and sociopsychological problem. While choice is a component of substance abuse, there are also social and biological factors.

So with a new understanding of the disease, students need updated training. Along with understanding and empathy, Chasek said, counselors need a solid knowledge of the drugs being abused, the mechanisms of the drugs, what each one does to the brain, and what the withdrawal effects are.

“If you come in to see me and you’re withdrawing off heroin, you’re going to be uncomfortable but you’re not in danger. But if you come to see me and you’re withdrawing off alcohol, you could potentially die. That’s the deadliest drug to withdraw from. So we have to train because our social construct is it’s no big deal, let them sleep it off.

“With heroin, (we think) ‘oh my God those people are scary,’ or with methamphetamine (we think) ‘get them to the doctor right away,’ but it’s the opposite. So they need to know all the classes of drugs, what all the withdrawal effects are, what it does to the brain, all the treatment techniques. We need to know more, we really do.”

**TRAINING MODELS VARY**

Along with the knowledge and empathetic attitude, today’s counselors need real-life skills. Chasek said her latest research, which expands on findings she presented at the 2016 American Counseling Association meeting in Montreal, Canada, assesses the strengths and weaknesses of various counselor-training models. She’s found that experiential programs, such as those at community colleges, do a better job than four-year degree programs of giving students counseling skills.

“We’re giving them knowledge and we’re challenging their attitudes, but we’re not putting them out there and saying ‘hey, this is what it’s like to sit across from somebody under supervision.’”

At the same time, people training through the experiential route may be more likely to use less efficient methods.

“One of the old ways of treating (addiction) was to break down people’s denial and resistance, get in their face and tell them they’re bad people and they have to quit doing this. We call it the hot seat, kind of berating them until they get better. That, we’ve found, doesn’t work very good. It’s the least effective method, but I think it’s still being taught in that experiential route.”

While Chasek’s research has focused primarily on counselor training, her students take her into much different territory. Chasek encourages students to develop their classroom research projects for publication, and they pick whatever subjects interest them.

The paper that sparked Chasek’s focus on student research came from graduate student Kaitlin Wilson. Reading Wilson’s paper on food addiction, Chasek said, she was struck by the quality of the content.

“One of the old ways of treating (addiction) was to break down people’s denial and resistance, get in their face and tell them they’re bad people and they have to quit doing this. … That, we’ve found, doesn’t work very good.”
lined up outside my door,” she said. “I’ve never sat down and put a number to it. To me, I get benefit out of it, they get benefit out of it, the profession gets benefit out of it.”

Chasek tries to incorporate real-life experience into her courses, and draws on her professional experiences to give students real-life examples. With dual licensure for mental health and alcohol and drug counseling, Chasek still treats clients part-time. She said the work helps her stay current on the issues facing her profession.

“When I was doing my rehab work in the halfway house it was a lot of alcohol and a lot of methamphetamine. Now in the field there’s still alcohol, methamphetamine not quite so much, but heroin is huge, and opioids. The opioid epidemic is crazy … and these are different clients. These are not heroin addicts we think about from the projects or on the streets. These are people who have been on prescriptions for pain, and then they get hooked on them, and there’s so much shame and stigma because what happens is you can’t get the pain medicine anymore, so you turn to illegal means, and heroin is cheap.

“One of the last clients was a mom, at home, and (she) had surgery. Fast forward and she’s trying to buy heroin, and still trying to take kids to school and all that.”

SIGNS OF ADDICTION

Making sure those clients have access to counseling is Chasek’s mission as director of Behavioral Health Education Center for Nebraska’s Kearney office. She said her appointment came partly because her dual licensure and academic position are a rare combination, and partly because of her location outside Lincoln and Omaha. The program’s goal is to address the shortage of mental and behavioral health professionals in outstate Nebraska.

There was a rush into the mental health profession in the 1980s, Chasek said, but those people are now reaching retirement age. At the same time, the demand for mental health counseling is rising. BHECN develops programs to bring more well-trained professionals into more areas.

At a spring high school track meet, Chasek said, she saw firsthand the problem BECN is trying to address. A man in the bleachers was alone, and way overdressed for the very hot day. After he collapsed, Chasek found a nurse working the concessions stand, and learned that the town doctor was running the track meet. Both of them knew the man, and knew he had schizophrenia. All they could do, though, was call an ambulance and take him to the emergency room.
“He needs a psychiatrist. This really is that example that people don’t have access to the care and treatment they need, and then it ends up costing more money – the emergency room was the only option,” she said. Part of Chasek’s job is educating nursing and physician assistant students about the signs of addiction, so they can identify it in patients. The center also helps place counseling interns in rural areas, offers continuing education, and promotes the counseling profession to high school students. In its sixth year, Chasek said BHECN is now assessing how many students its programs have recruited into the mental health profession, how many are staying in rural Nebraska, and how many counseling jobs have been created. “Anecdotally, (communities) have opened a few more clinics, they’ve opened a whole series of integrated health sites out in the Panhandle,” she said. Regardless of the role she’s playing – teacher, counselor, scholar, administrator – Chasek’s vision and mission remain to bring well-trained counselors to people who need them. And that means changing the images people carry about substance abuse. “A lot of people look away and have a lot of pre-conceived ideas and stigmas around addiction, and that’s why part of my research has been how to train counselors who do that work to combat that stigma and, I feel, discrimination. … That’s what I try to help students understand, that when you work with people you have to understand that they just can’t quit.”

**CHRISTINE CHASEK**

**Title:** Assistant Professor, Counseling and School Psychology; Director, Behavioral Health Education Center-Kearney.

**College:** Education

**Education:** Ph.D., Counselor Education and Supervision, University of South Dakota, 2012; Master of Science, Community Counseling, University of Nebraska at Kearney, 1999; Bachelor of Science, Psychology, University of Nebraska at Kearney, 1992.

**Years at UNK:** 11

**Career:** Outpatient Clinician, Michael Burke and Associates; Associate Director of Counseling and Health Care, UNK; Program Director Specialized Children’s Services, South Central Behavioral Services; Outpatient Clinician, South Central Behavioral Services; Family and Youth Program Specialist, South Central Behavioral Services.

**Family:** Husband, Jerry; Daughter, Ashley, 21; Sons Jacob, 16, and Marshall, 15.

**Hobbies/Interests:** Reading, gardening, sports, learning

**Licensure & Certification:** National Certified Counselor, National Board for Certified Counselors; Licensed Professional Counselor, Licensed Independent Mental Health Practitioner, Licensed Mental Health Practitioner and Licensed Alcohol and Drug Counselor, Nebraska Department of Health and Human Services; Internationally Certified Alcohol and Drug Counselor, International Certification and Reciprocity Consortium.

**Honors/Awards:** International Association of Addiction and Offender Counselors, Addictions/Offender Educator Excellence Award, December 2015; American Counseling Association National Award, Robert H. Rencken Emerging Professional Leader Award, April 2016.

**Areas of research/specialization:** Addiction Counseling, Addiction Counseling Training and Preparation, Professional Issues in Counselor Preparation and Identity, Mental Health and Addiction Counseling Outcomes.

**Courses taught:** Counseling Techniques; Clinical Treatment Issues in Addiction Counseling; Diagnosis and Treatment of Emotional and Mental Disorders; Research Methods in Counseling; Alcohol and Drug Assessment, Case Planning, and Management; Medical and Psychosocial Aspects of Addiction; Theories of Counseling; Adult Development; Counseling Across the Lifespan.

**Recent Published Articles:**

- “Older Adults and Addiction,” Embracing Diversity: Treatment and Care in Addiction Counseling, 2014.
By SARA GIBONEY

Seventy-two long cardboard storage boxes contain the fantastical narratives of superheroes, spies and other fictional characters.

David Palmer’s collection of comic books has grown to 20,000 in the 50 years that he’s been reading and collecting.

Palmer’s love for comic books began as a child. He remembers being captivated by Captain America, Thor, Iron Man and the Wasp as he read the Avengers in the early 1960s.

“Comic books are fun and full of fantasy,” he said. “Until just recently, comic books were the only place a man could fly. Now with special effects, you can do anything. Comic books had a corner of that market.”

His love for reading comic books eventually grew into a passion for researching the comic book industry from a business and management perspective. But Palmer, a management professor at the University of Nebraska at Kearney, never could have imagined that his background in business would collide with his appreciation for comic books.

Unsure of what he wanted to study, Palmer dropped out of college and spent a few years working in food service. He eventually landed a job at Big Boy, now an 80-year-old fast food franchise.

Working in restaurant management led him back to college. “I dropped out of school because I didn’t know what I wanted to be,” he said. “The years working in restaurant management solidified my desire to study business. Having managed for a number of years, I wanted to understand business more in depth.”

He earned an Associate of Science in Business Administration from Monroe Community College in Rochester, N.Y., and a Bachelor of Science in Management Science from State University of New York University Center at Binghamton.

Palmer continued to work in food service until he landed a job in customhouse brokerage, clearing goods through customs for international importers and exporters.

He later earned his Master of Business Administration from Bowling Green State University in Ohio, then moved to St. Louis, where he managed dietary departments for hospitals and retirement centers for Marriott.

He began teaching community college after he moved to Iowa. Palmer realized that teaching allowed him to do what he loved most about business management – train people.

“So much of what we teach in business and management students already have experience in,” he said. “By the time we get to college, we’ve had jobs and we’ve dealt with management and bureaucracy. But in college courses, you begin to make some sense of it.”

Palmer earned his Ph.D. in organizational behavior and human resource management from Purdue University in Indiana. In 1997, he began teaching at UNK.

ANTI-COMICS MOVEMENT

Over the years, he’s taught management classes such as Compensation Management, Human Resource Management, International Management, Principles of
He's also published research on the organizational and psychological perceptions and uses of time and traditional aspects of business management such as organizational behavior, leadership, staffing and motivation.

But Palmer eventually found himself examining the comic book industry from a business perspective. His primary focus is on comic books of the 1950s, 1960s and 1970s, and how the industry changed during those decades.

The comic book industry began in the 1930s. Immigrants and other marginalized individuals who couldn't land jobs in publishing due to discrimination were the first to create comic books. By 1938, with the creation of Superman, the comic book industry was booming.

During the 1940s, newsstands and locally-owned mom and pop shops sold comic books, which were mass-marketed.

“Comic books were selling by the millions, maybe upwards of billions,” Palmer said. “It was a huge industry, and it just grew through the 1940s.”

During the 1940s and 1950s, a top-selling comic book would sell over a million copies.

The decline of comic books began in the 1950s when the television became a fixture in Americans’ living rooms. It was also at this time that a nationwide anti-comics movement arose. Parents’ concerns about the graphic depiction of violence and sex in comic books eventually led to censorship.

Sales continued to decline throughout the 1950s and 1960s, and by the 1970s the mass distribution and sales at newsstands continued to diminish.

It was at this time that the comic book store emerged.

“The distribution theory is very different. The comic book stores buy the comic books through the distributors and they own them,” Palmer said. “Whereas in the past, comic book publishers distributed to newsstands and what wasn’t sold was returned to the publisher.”

Today, a top-selling comic may sell around 100,000 copies.

“The stigma that comic books are for children has changed. There are a lot of comic books out there produced for adults and older readers,” Palmer said.

CROSSOVER CHARACTERS

Palmer’s interest in researching comic books began in the late 1990s when he became a regular commentator in the Comic Buyer’s Guide, a monthly magazine that reports on the comic book industry. He wrote about comic books from smaller publications.

“That intrigued me from the business point of view,” he said. “People were essentially publishing comic books out of their garage and either going on to become big companies or just publishing one comic book.”

During his time as a commentator for the magazine, Palmer traveled across the country attending comic book conventions looking for comic books that weren’t big sellers. He’s attended about 100 comic book conventions.

He briefly considered pursuing a career in comic book reporting before deciding to become a teacher.

“I thought I could pursue comic books as a career path, but I was also teaching at the community college at the time. That seemed to make more sense,” Palmer said. “Now, in one of those instances of serendipity, those two have combined.”

Palmer even created a capstone course at UNK based on his research – Super Heroes: The American Comic Book Industry.
“Trying to understand the comic book industry is interesting in and of itself,” he said. “But there are some instances that are applicable to other industries: video games and binge-watching television shows. “

“Entertainment and popular culture are certainly not going to disappear, so understanding that there are also business, economic and market forces underneath that is important.”

Superheroes are a great example, he said.

While the comic book industry has declined in popularity, superhero movies have earned billions of dollars in global revenue.

“The impact of comic books is well beyond its industry,” he said.

Palmer is also fascinated with the innovation of creating a shared universe between characters from different comic books, and how that was used to increase comic book sales.

“Iron Man interacts with Captain America, who interacts with the Hulk who interacts with the Fantastic Four, who interacts with Spider-Man. It’s not just one title you’re reading. It becomes multiple titles that you’re reading. It becomes one huge story across 10-15 comic books each month.

“It was an innovation to crossover characters. Batman and Superman teamed up in the 1950s. You can become invested in 10-15 comic books each month. From a business standpoint, you’re selling 10 books instead of one. There aren’t too many parallels like that today.”

In the classroom, Palmer aims to share insights and lessons from the comic book industry and show how they apply to other industries.

“I get the sense that students enjoy the class. Some of the students know a lot about comics, and others have never read a comic. But all of them learn something and have a good time with it.

“Some of the concerns people had with comic books are the same with video games today. Twenty or 30 years from now there will be a new form of entertainment that raises concerns.”

Palmer has begun attending conferences about pulp magazines, fiction magazines published in the late 1800s through the 1950s. Pulp magazines were the precursors to comic books.
By KIM HACHIYA

Consider this situation:

You are the boss of a highly educated, dedicated professional who is good at her job, and in whom you have invested time and resources. But a recent culture shift in your organization has upset her apple cart in ways that make it hard for her to succeed like she once did.

She was a happy, early-career professor who worked to earn her master’s and doctoral degrees to teach principles of management, business ethics, business communications and accounting at your small Midwestern college. She has been perking along in her discipline, focusing on teaching – a task at which she excelled. But the college has become part of a larger state university system. And a new campus chancellor is realigning the new university’s mission with more emphasis on scholarly research as an indicator of faculty productivity.

Suddenly, your professor is not so happy. She wants to teach, not do research. As her supervisor, what options might you suggest to help motivate her to success? What best management practices should you employ? Discuss.

This is a brief start to a case study, a now-familiar tool used in many classrooms to help students apply knowledge to real-world problems. Kay Hodge, professor of management at the University of Nebraska at Kearney, is a recognized expert in the field of case writing and using case study in the classroom. And as you may have guessed by now, she was that early-career faculty member in the early 1990s who was not excited about having to develop a research portfolio as part of her teaching duties.

“I dug in my heels so hard, you could have plowed a field with them. Teaching was my niche. I didn’t want to do research."

LEARNING OUTCOMES

In 1993, Hodge and a few other colleagues went to a conference at Northwest Missouri State University. Truth be told, her department chair “encouraged” her to attend, she said. The conference was on the emerging, and then somewhat maligned, discipline of case study pedagogy – using real world cases/situations/problems in the classroom to help students learn to apply knowledge or make informed decisions.

It was not love at first sight, Hodge said. But it was an eye-opening experience because she found the collegiality among those in attendance to be inviting and stimulating. And she started to see a way to become more engaged in research through the development of the discipline.
of case writing. Now, she is a well-recognized expert in the field who has edited the discipline’s leading journals, been president of its scholarly society, and in summer 2016 hosted the society’s annual workshop on the UNK campus.

Case writing is not just coming up with a problem for students to dissect. A good case requires research into many aspects of the situation and usually includes observations over time with an eye toward holistic interrogation of a situation. But the real heavy lifting – the intellectual achievement – is developing and writing the case note, Hodge said. This is the document in which the instructor learns how to use the case: the learning outcomes that students should achieve; what principles and theories the case demonstrates and how they can be applied to the case; how to analyze various aspects of the case; and how these theories and principles have held up over time.

“The note brings the theory to a head and explains why teaching the case is important and relevant,” Hodge said. “The beauty of the method is that it brings the theories we teach in textbooks into real life.”

When Hodge sets out to design a case study, she first thinks about what she wants students to learn. Then she creates the learning outcomes. Finally, she writes information about the case. The teaching note describes which theories might be applied and how the case might prove, or disprove theories.

For example, Hodge described a few principles or theories she might use when writing a case focused on business ethics:

• Maslow’s hierarchy of needs, a pyramid with five levels with physiological needs at the base, and in ascending order safety, love and belonging, esteem and self-actualization are realized.
• Justification of actions, such as utilitarianism – the greatest good for the largest number of people or deontology, the duties and obligations of the action rather than the consequences.
• Social responsibility: do businesses have an ethical obligation to give back to society? Is the sole duty of business to make a profit? At what cost? Do we care if there are negative consequences? Is there a scale of negatives in which a little bit is OK? Where’s the line in which a consequence becomes unacceptable?
• Stakeholder theory: Espoused by Edward Freeman, this looks at how businesses create or destroy value for their various stakeholders, who include customers, stockholders, clients, employees, communities and financiers.
If the case is focused on management, she would look at various theories of management, human psychology and behavior, leadership traits and practices, and other principles and theories.

CHANGING ATTITUDES

Case study can be used across many disciplines, not just business, she notes. While law schools have employed case studies for generations, business schools, medical schools and disciplines such as history, philosophy and science find applications.

Case methodology was once denigrated, she said, with some in academe seeing it as intellectually lazy. It’s taken hard work by people such as Hodge and others in groups such as the Society for Case Research, of which Hodge was president in 2010-11, to lift the discipline’s profile and reputation.

“We educated deans and others as to the value of case methodology as a legitimate pedagogy. We just kept taking our argument to them and showing examples of why this method works. It is definitely a pedagogy based on scholarship and research and is a perfect vehicle for new faculty to begin research.”

Do students like case studies? Yes and no, Hodge said.

“When I used to just teach with the ‘book,’ students would glaze over,” she said. “But with a case, at least two-thirds of a class will find the case relevant and interesting. Today’s students are different than we were. We accepted ‘sage on the stage.’ But students today expect to be included in their educational process, that it be interactive and relevant. They want to know ‘How are we going to use this? How does this apply to me?’ You know, real life is stranger than fiction, so there is no end to interesting cases.”

However, there is that one-third who don’t enjoy case study pedagogy, she noted. These are the students who are less engaged, and they just want to know the answers in black and white/true-false/multiple choice; they are less likely to be critical thinkers, she added.

Students tend to really enjoy cases involving ethics, she said. Cases that require more thinking about management strategies or pulling multiple parts of an organization together tend to be less popular. Short cases that can be examined over one or two sessions also are popular, she said. Students either may orally discuss and present findings or write research papers.

The Society for Case Research publishes three journals; Hodge edited two of them.

She edited the society’s leading and most prestigious publication, Business Case Journal, and Journal of Case Studies (formerly titled Annual Advances in Business Cases). She recently turned over the reins of Business Case Journal, which she oversaw from 2004-15. The society’s third publication, Journal of Critical Incidents, tends to publish shorter explications of single incidents. Some examples of case topics could include how an auto company handled a particular defective auto recall or how

“Today’s students are different than we were.

… Students today expect to be included in their educational process, that it be interactive and relevant.”
a restaurant chain managed a food poisoning outbreak.

The society’s summer workshop, hosted in July by UNK’s College of Business and Technology and organized by Hodge, included two tracks: helping writers refine and complete a case study that is in progress so it can be submitted to a journal; and a “boot camp” where writers with a germ of an idea learned how to research and sharpen their ideas and write that critical teaching note.

Hodge notes that the Business Case Journal accepts only about 10 percent to 13 percent of cases submitted for review. Journal of Case Studies accepts 25 percent to 30 percent of submissions. Attendance at the workshop does not guarantee acceptance, Hodge said. A case writer’s intellectual property is protected, she said, because when a case is accepted for publication by a journal, it is released through McGraw-Hill and other publishers, who ascertain that the people requesting the cases and accompanying teaching notes are actually professors using the materials for academic purposes. The publishers sell copies of the case and the important teaching note.

Hodge is nearing the end of a long and satisfying career at UNK. She has no regrets about attending that workshop back in 1993.

“I really fell into case writing sort of by accident. It wasn’t a planned or designated journey.”


In case writing, it’s not about the destination, it’s the journey,” she said. “I really fell into case writing sort of by accident. It wasn’t a planned or designated journey. Yet now, I cannot picture myself doing something like researching something that just doesn’t matter. I feel like what I have done matters.”

What is learned from the above case?

Great teachers are always learning. Finding relevance and meaning leads to satisfaction, self actualization.

Listen to your chair. And listen to your heart.
KAZUMA AKEHI

MUSCULAR ARCHITECTURE

Akehi studies neuromuscular changes in college athletes
By SARA GIBONEY

Growing up in Asahikawa, Japan, Kazuma Akehi spent summers playing basketball, soccer and baseball and winters skiing and snowboarding.

He was always moving his body.

“Obviously we didn’t have smartphones when I was growing up, so outside was our playground,” he said. “I loved running around and chasing the ball with my friends. I simply loved to move. I wanted to be moving all of the time.”

His love for physical activity eventually led him to his groundbreaking research on muscular architecture and neuromuscular changes in college athletes.

Akehi, an assistant professor of kinesiology and sport sciences at the University of Nebraska at Kearney, is currently examining the influence of season-long competitive sport participation on muscular architecture characteristics such as subcutaneous tissue thickness, muscle thickness, pennation angle and echo intensity of muscles.

His research, which he conducts using ultrasounds imaging, aims to assess when an injury will occur during the sports season, how muscles heal using specific therapeutic treatments and whether the muscle can regain its previous thickness and strength.

Akehi came to UNK as a student through an international study abroad agency in 2003. When he arrived, he didn’t speak English. He attended the English Language Institute at UNK before enrolling in general courses.

It was his father, a pharmacist, who encouraged him to study overseas. Akehi developed an interest in medicine as he observed his dad working in the medical field.

WORKING WITH PRO ATHLETES

With his love for physical activity and sports combined with his interest in medicine, athletic training was a perfect fit for Akehi.

He earned his bachelor’s degree in athletic training in 2007.

He then attended the University of Central Oklahoma to begin work on his master’s degree. The University of Central Oklahoma is the home to the United States Paralympic Training Site. Akehi served as an athletic trainer for Paralympic athletes from 2008 to 2014.

“I had a chance to work with a variety of athletes in a variety of situations. That gave me a lot of good experience,” he said. “I learned how to approach different types of athletes, from high school students to college athletes to professional athletes at the international level.”
In addition to working with athletes of varying ages with different needs, many of whom had experienced trauma, Akehi learned about sports medicine all over the world. He traveled to Russia, Brazil, Canada and Europe with the U.S. Paralympic Team.

Akehi also served as an athletic trainer for the USA Volleyball Association from 2008-14, USA National Sitting Volleyball team from 2008-14, USA Wounded Soldier Training Camp from 2012-14 and USA Volleyball Association High Performance Training Camp in 2012.

He also worked with the Ortho Oklahoma Hospital – Oklahoma High School Outreach Program from 2010-12, the NBA's Oklahoma City Thunder in 2009 and NBA's Oklahoma City Thunder Girls Dance Team in 2009 and 2010.

He earned his Master of Science in wellness management with an emphasis in exercise science from the University of Central Oklahoma in 2010, and his Ph.D. in health and human performance with an emphasis in athletic training from Oklahoma State University in 2014.

**DIAGNOSTIC ULTRASOUND**

At Oklahoma State University, Akehi’s research focused on therapeutic modalities such as Icy Hot, ice packs, heat packs or others. He examined how muscle tightness changed after applying a therapy.

While at Oklahoma State, he also began using diagnostic ultrasound to look at muscle architecture. An ultrasound uses sound waves to create imaging of the internal body structures such as muscles, joints, tendons and internal organs. Akehi used ultrasound on injured athletes to view muscle fibers.

In August 2014, Akehi brought his expertise in using diagnostic ultrasounds to UNK.

“I really wanted to bring what I had learned back to UNK. I had a great experience as a student here,” he said. “I was in Oklahoma for six years, and I experienced so much. I was confident that I could expand UNK’s athletic training program.”

Akehi’s research at UNK became focused on finding out how muscle architecture and neuromuscular property changes with physical activity.

Muscular morphological adaptation is commonly measured using a tape measure, which doesn’t isolate each muscle and its changes.

Akehi hoped to determine how thigh muscle morphological and architectural characteristics changed throughout the soccer season and how post-knee surgery rehabilitation influenced morphological and architectural characteristics.

“There’s not a lot of people doing this type of research,” he said. “Professional journals often focus on concussions, shoulder problems, knee problems and major injuries. What I’m doing is taking an in-depth look at muscles and nerves.”

He studied 18 female soccer players through an entire season. He took initial measurements of their thigh circumference, subcutaneous tissue thickness, muscle...
thickness, pennation angle and echo intensity on the rectus femoris, vastus medialis oblique, vastus lateralis, vastus intermedius and biceps femoris muscles. He then measured the athletes every four weeks during the soccer season using the diagnostic ultrasound.

He found that quadriceps and hamstring muscle thickness increased for most during the soccer season and muscle contractile tissue increased in three quadriceps muscles.

In addition to learning how muscles change as a result of training for a sport, Akehi wanted to learn the risk factors for injury during a collegiate sports season. Some athletes failed to adapt their muscle architecture, which means their risk for injury increases.

“Athletes have a high risk for ACL ruptures. Female athletes have three to five times higher risk for injury than male athletes,” he said.

An ACL injury is the over-stretching or tearing of the anterior cruciate ligament in the knee.

Two of the athletes suffered ACL sprains and were continuing post-knee surgery rehabilitation during the study.

“When athletes get injured and have surgery, I can see how the surgery impacts their muscle architecture and how they regain muscle strength,” he said.

Following 12 weeks of post-knee surgery rehabilitation, their muscle tissue measured at the pre-injury stage. This means the rehabilitation and training allowed the athletes to maintain or improve their athletic performance after their injuries. If their muscle architecture hadn’t improved, the physical therapy and training wasn’t effective.

“It’s really unique research. This research provides us with good information that enables us to enhance some of the training or rehabilitation protocols,” he said.

LIFE AFTER SURGERY

Akehi’s findings mean that coaches and trainers of college athletes must consider how season-long college sport participation influences muscle changes and how
that relates to performance and injury.

His final finding was that tape measures did not identify the muscular morphological and architectural characteristics.

Akehi will continue his research and study both female and male collegiate athletes at UNK.

Akehi is also working on collaborative research projects on improving athletic performance and preventing injuries with colleagues from Texas Tech University, Utah State University, Oklahoma State University, University of Nebraska-Lincoln and University of Nebraska Medical Center.

In a partnership with UNK’s sports medicine program and New West Orthopaedic and Sports Rehabilitation in Kearney, Akehi is studying how specific surgical procedures influence quality of life years after the surgery.

At UNK, Akehi teaches Athletic Training Practicum, Introduction to Anatomical Biomechanics and General Medical Conditions, and Pharmacological Application in Sport and Exercise.

“I wanted to share my experiences with students. I want students to know that there’s no impossible thing. If you have passion and work hard, you can accomplish your goals,” he said.

Akehi continues to be physically active, and he has a passion for rock climbing.

“It’s meditative and relaxing,” he said. “It gives me ideas about the human body and movement.”

—

KAZUMA AKEHI

Title: Assistant professor, Kinesiology and Sport Sciences
College: Education
Education: Ph.D., Health and human performance emphasis with athletic training, Oklahoma State University, 2014; Master of Science, Wellness management emphasis with exercise science, University of Central Oklahoma, 2010; Bachelor of Science, Exercise science emphasis with athletic training, University of Nebraska at Kearney, 2007.
Professional Certification: Certified Athletic Trainer
Years at UNK: 2
Career: Graduate assistant, School of Applied Health and Educational Psychology, Oklahoma State University, 2010-14; Graduate assistant, Department of Kinesiology, University of Central Oklahoma, 2008-10.
Hobbies/Interests: Cooking traditional hometown food, climbing rock wall, working in my garage.
Interesting Fact: Akehi has worked as a Certified Athletic Trainer for USA Paralympics and USA Volleyball Association, USA National Sitting Volleyball, USA Wounded Soldier Training Camp, USA Volleyball Association High Performance Training Camp, NBA’s Oklahoma City Thunder Girl Dance Team, Ortho Oklahoma Hospital - Oklahoma High School Outreach Program.
Honors/Awards: 2015 Nebraska Research Initiative Faculty Grant recipient for the project “Impact of Orthopedic Surgery and Rehabilitation on the Lower Extremity Neuromuscular Characteristics, Muscles quality, and Motivation on College Athletes: Cohort Research Study.”
Areas of research/specialization: Athletic injury prevention, Therapeutic intervention before and after musculoskeletal injuries
Courses taught: Athletic Training Practicum, Introduction to Anatomical Biomechanics, General Medical Conditions and Pharmacological Application in Sport and Exercise
Recent Published Articles:
• “Ankle Joint Angle and Lower Leg Musculotendinous Unit Response with Cryotherapy,” Journal of Strength and Conditioning Research, Accepted in 2016 and in process of publication.
• “Reliability of Panoramic Ultrasound Imaging to Simultaneously Examine Muscle Size and Quality of the Hamstring Muscles in Young, Healthy Males and Females,” Ultrasound Medicine & Biology, 2015.
• “Application of Menthol Counterirritant Effect on Hamstring Flexibility, Sensation of Pressure, or Skin Surface Temperature,” Athletic Training and Sports Health Care, 2013.
University of Nebraska at Kearney

905 West 25th Street
1000 Founders Hall
Kearney, Nebraska 68849
unk.edu

Return Service Requested