

# FRC-2023

## 4th FRC International Workshop

### Fiber Reinforced Concrete: from design to structural applications

Tempe, Arizona, USA, September 17-20, 2023



<https://faculty.engineering.asu.edu/frc2023/>

Technical Program: <https://www.conftool.org/frc2023>

**Workshop booklet -Tentative Program**



**Organized by:**



Arizona State University School of Sustainable Engineering and the Built Environment

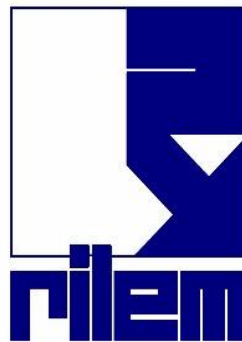
**With the support of:**



American Concrete Institute  
<https://www.concrete.org/>



The International Federation  
for Structural Concrete  
<https://www.fib-international.org/>



The International Union of Laboratories and Experts in Construction  
Materials, Systems and Structures  
<https://www.rilem.net/>

**Industrial Sponsors:**

**Platinum sponsors:**



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## PREFACE

The first international FRC workshop supported by RILEM and ACI was held in Bergamo, Italy, in 2004. At that time, the lack of specific building codes and standards was identified as the main inhibitor to the application of this technology in engineering practice. The workshop's aim was the identification of applications, guidelines and research needs for this advanced technology to be transferred to professional practice. The second international FRC workshop, held in Montreal, Canada, in 2014, was the first ACI-fib joint technical event. Many of the objectives identified in 2004 had been achieved by various groups of researchers who shared a common interest in extending the application of FRC materials into the realm of structural engineering and design. The workshop aimed to provide the state-of-the-art on the recent progress that had been made in terms of specifications and actual applications for building and bridge projects in Europe and North America.

The rapid development of codes, the introduction of new materials and the growing interest of the construction industry suggest presenting this forum at closer intervals. In this context, the third international FRC workshop was held in Desenzano, Italy, four years after Montreal. In that first ACI-fib-RILEM joint technical event, the maturity gained through recent technological developments and large-scale applications was used to show the acceptability of the concrete design using various fiber compositions. The growing interests of civil infrastructure owners in ultrahigh-performance fiber-reinforced concrete and synthetic fibers in structural applications bring new challenges in terms of concrete technology and design recommendations. In such a short period we have witnessed the proliferation of the use of fibers as structural reinforcement in various applications such as industrial slabs, elevated slabs, precast tunnel lining sections, foundations, as well bridge decks. We are now moving towards addressing many durability-based design requirements by the use of fibers, as well as the general serviceability-based design. In that perspective, the aim of the FRC2023 workshop is to highlight the recent opportunities and progress in terms of specifications development, new design approaches, and actual applications and to expose users and researchers to tomorrow's challenges in the design and construction of a wide variety of structural applications.

We appreciate the enormous support we have received from all three sponsoring organizations as well as our industrial sponsors and look forward to paving the path for future collaborations in various areas of common interest so that the developmental work and implementation of new specifications and design procedures can be expedited internationally.

September, 2023

Bruno Massicotte  
Barzin Mobasher  
Giovanni Plizzari

## 1. SYMPOSIUM VENUE

### Memorial Union at ASU's Tempe campus

All the sessions will be held at the meeting rooms on the second floor of the [Memorial Union \(MU\) building](#). The Memorial Union, considered the living room of the campus, welcomes you as a member of the ASU community. Our goal is to provide you with the best possible experience – while attending your conference.

- Take a virtual tour of the MU: <https://tours.asu.edu/tempe/memorial-union>
- [Download a map](#) (PDF)
- [View on Google Maps](#)
- If you are taking Uber or Lift to ASU ask them to drop you off at

**33°24'58.0"N 111°56'06.0"W**

<https://www.google.com/maps/place/33%C2%B024'58.0%22N+111%C2%B056'06.0%22W/@33.416106,-111.9375689,17z/data=!3m1!4b1!4m4!3m3!8m2!3d33.416106!4d-111.934994?entry=ttu>



Hayden Libray at the ASU Tempe Campus, Located across the Memorial Union Building

## 2. COMMITTEES AND LOCAL ORGANIZERS

### Conference Chairman

Bruno Massicotte (*Polytechnique Montreal, Canada*)

Barzin Mobasher (*Arizona State University, USA*)

Giovanni Plizzari (*University of Brescia, Italy*)

### Local Organizing Committee

Barzin Mobasher	Bobbi Ramirez
Kristin Olafsdottir	Theresa Grant
Elizabeth Cross	Skip Derra
Sarah Strohmenger	Chloe Fagg
Michelle Donaldson	Alyssa Kilpatrick <Alyssa.Kilpatrick@asu.edu>
Kerran Armstrong <Kerran.Armstrong@asu.edu>	Jeffrey Long <jjlong@asu.edu>

### International Advisory Board

L György Balázs

Arnon Bentur

Andrzej Brandt

Hirozo Mihashi

Sidney Mindess

Antoine Naaman

Surendra P. Shah

Frank Vecchio

### Scientific Review Committee

Title	Name	Lastname	Affiliation
Prof.	Maria Antonietta	Aiello	University of Salento
Prof.	Mohammad	AlHamaydeh	American University of Sharjah
Dr.	Hassan	Aoude	University of Ottawa
Dr.	Mehdi	Bakhshi	AECOM
Prof.	Nemkumar	Banthia	University of British Columbia
Prof.	Joaquim	Barros	Universidade do Minho
Dr.	Andrea	Belleri	University of Bergamo
Prof.	Evan Charles	Bentz	University of Toronto
Dr.	Erik Stefan	Bernard	Xymox Pty Ltd
Prof.	Nicola	Buratti	University of Bologna
Prof.	Christian	Carloni	Case Western Reserve University
Prof.	Sergio	Cavalaro	Loughborough University
Prof.	Jean-Philippe	Charron	Polytechnique Montreal
Prof.	Matteo	Colombo	Politecnico di Milano
Prof.	David	Conciatori	Université Laval
Prof.	Flavio	de Andrade Silva	PUC-Rio
Prof.	Albert	de la Fuente	Universitat Politècnica de Catalunya
Prof.	Marco	di Prisco	Politecnico di Milano
Prof.	Alessandro P.	Fantilli	Politecnico di Torino
Prof.	Liberato	Ferrara	Politecnico di Milano



Prof.	Stephen	Foster	UNSW Sydney NSW 2052 Australia
Prof.	Steffen	Grünewald	Ghent University
Prof.	Terje	Kanstad	NTNU Norwegian Univ. of Science & Tech.
Dr.	Neven	Krstulovic	ExxonMobil
Prof.	Christopher K	Leung	HKUST
Prof.	Karin	Lundgren	Chalmers University of Technology
Prof.	Peter	Mark	Ruhr University Bochum
Prof.	Enzo	Martinelli	University of Salerno
Prof.	Bruno	Massicotte	Polytechnique Montreal
Prof.	Viktor	Mechtcherine	TU Dresden
Prof.	Günther	Meschke	Ruhr University Bochum
Prof.	Fausto	Minelli	Università degli Studi di Brescia
Prof.	Barzin	Mobasher	Arizona State University
Prof.	Antoine E.	Naaman	University of Michigan
Dr.	Juan	Navarro-Gregori	Universitat Politècnica de València
Prof.	Gustavo	Parra-Montesinos	University of Wisconsin-Madison
Ms.	chidchanok	pleesudjai	Arizona State University
Prof.	Giovanni	Plizzari	University of Brescia
Prof.	Dario	Redaelli	HES-SO
Dr.	Jacques	Resplendino	JB Pastor & Fils
Prof.	Zila	Rinaldi	University of Rome "Tor Vergata"
Dr.	Pierre	Rossi	Pierre Rossi Consulting
Prof.	Pedro	Serna	Universitat Politècnica de València
Prof.	Luca	Sorelli	Université Laval
Prof.	Giuseppe	Tiberti	University of Brescia
Prof.	Romildo	Toledo Filho	Universidade Federal do Rio de Janeiro
Dr.	Ivan	Trabucchi	University of Brescia
Prof.	Gideon	van Zijl	Stellenbosch University
Prof.	Lucie	Vandewalle	KULeuven
Dr.	Frank J.	Vecchio	University of Toronto
Dr.	Giulio	Zani	Politecnico di Milano
Dr.	Raul	Zerbino	CONICET Fac of Engng UNLP Argentina

### **3. CONFERENCE AND SOCIAL PROGRAM AT A GLANCE**

## 4. SESSION PROGRAM

Monday, 18/Sept/2023

8:30- 9:30am	<p><b>Development of structural design Codes for FRC</b>  Location: <b>Pima</b>, Session Chair: <b>Gyorgy Balazs</b></p> <p><b>FRC in Structural Codes: Novelties and Confirmations in the Forthcoming Eurocode 2 and Model Code 2020</b>  <b>Professor Marco di Prisco</b></p> <p><b>Development of the Canadian Bridge Code for Structural Design of FRC Members</b>  <b>Professor Bruno Massicotte</b></p>
9:30- 10:50am	<p><b>Session A: Material Properties</b>  Location: <b>Pima</b>, Session Chairs <b>A.E. Naaman, Gyorgy Balazs</b></p> <hr/> <p><b>Session B: Impact and Blast Loading and Ductility</b>  Location: <b>Ventura A</b> Session Chair: <b>M. Colombo, M. Khorami</b></p>
10:50- 11:20am	<p><b>Coffee Break</b> Location: <b>Ventura B/C</b></p>
11:20- 1:00pm	<p><b>Session A: Fiber Distribution and Orientation</b>  Location: <b>Pima</b> Session Chair: <b>Giulio Zani</b></p> <hr/> <p><b>Session B: Fatigue Effects</b>  Location: <b>Ventura A</b>, Session Chair: <b>L. Ferrara, Stefan Bernard</b></p>
1:00- 2:00pm	<p><b>Lunch</b> Location: <b>Ventura B/C</b></p>
2:00- 3:40pm	<p><b>Session A: Mechanical Characterization</b>  Location: <b>Pima</b>, Session Chair: <b>P. Rossi, A. P. Fantilli</b></p> <hr/> <p><b>Session B: Design Specifications for Structural Applications</b>  Location: <b>Ventura A</b> , Session Chair: <b>G. Parra-Montesinos, G. Plizzari</b></p>
3:40- 4:10pm	<p><b>Coffee Break</b> Location: <b>Ventura B/C</b></p>
4:10- 5:30pm	<p><b>Session A: Temperature Effects</b>  Location: <b>Pima</b> , Session Chair: <b>Enzo Martinelli, Hassan Aoude</b></p> <hr/> <p><b>Session B: Creep and Long-Term Loading</b>  Location: <b>Ventura A</b>, Session Chair: <b>P. Serna, D. Conciatori</b></p>
7:00- 9:30pm	<p><b>Dinner Monday Night</b></p>

Tuesday, 19/Sept/2023

8:30 - 9:30am

**Application Development**

Location: **Pima**, Session Chair: **Giovanni Plizzari**

**Application of UHPC Concept in Architectural Precast Concrete**

**Dr. Charles Nmai**

**Fiber-Enabled Carbon Footprint Reduction in Design and Construction of FRC Tunnel Segments in North America**

**Dr. Mehdi Bakhshi**

9:30 - 10:50am

**Session A: High Performance FRC**

Location: **Pima** Session Chair: **Bruno Massicotte**

**Session B: Structural Applications 1**

Location: **Ventura A** Session Chair: **Jakob Šušteršič, Fausto Minelli**

10:50 - 11:20am

**Coffee Break**

Location: **Ventura B/C**

11:20 - 1:00pm

**Session A: Numerical & Computational Modelling**

Location: **Pima** Session Chair: **Frank J. Vecchio, Mehdi Bakhshi**

**Session B: Durability and Life Cycle Assessment)**

Location: **Ventura A** Ssiosen Chair: **Flavio de Andrade Silva**

**Session C: Special Online Presentations**

Location: **Navajo (240)** Session Chair: **Jean-Philippe Charron**

1:00 - 2:00pm

**Lunch**

2:00 - 4:00pm

**Session A: Structural Rehabilitation and Quality Control**

Location: **Pima** Session Chair: **Matteo Colombo, Nicola Buratti**

**Session B: Structural Applications 2**

Location: **Ventura A** Session Chair: **Marco di Prisco, Ali Amin**

4:00 - 4:30pm

**Coffee**

4:30 - 6:00pm

**Perspectives and future developments in FRC structural applications**

Location: **Pima**

6:00 - 6:15pm

**Closing session**

Location: **Pima**

7:30- 10:00pm

**Gala Dinner,**

Culinary Dropout at the Yard, Tempe, AZ, 149 S Farmer Ave, Tempe, AZ 85281, 480.240.1601

**Date: Wednesday, 20/Sept/2023**

**9:00 - 11:00am**

**Reinforcement for 3-D printing, Location: Ventura A**

Session Chair: **Narayanan Neithalath**

Overview of the procedures and processes for design aspects for 3-D printing reinforcement

**Updating ACI 544-7R Development of Design guide for Precast Tunnel Linings Location: Ventura B/C,**

Session Chair: **Mehdi Bakhshi**

ACI 544-7R Overview and Proposed Updates- Tunneling Design and Durability of Underground Structures

**Textile Reinforced Concrete, RILEM TC-292, Location: La Paz**

Session Chair: **Flavio de Andrade Silva**

Characterization of Mechanical properties and Development of Design tools for TRC

**Test Equipment for Closed Loop testing of Cement Composites, FRC, TRC, UHPC**

Session Chair: **GCTS**

Closed Loop testing Equipment demonstration by GCTS. Introduction and demonstration of a new test equipment developed for testing FRC, TRC, and UHPC

**9:00 - 12:00pm**

**A tour of the Laboratory Facilities at ASU Campus,**

A walk through the various facilities supporting teaching and research at the ASU Tempe Campus, from Single fiber testing to full-scale structural panels, drop weight impact, high speed tension, and structural fatigue. Materials testing covers a range of Cement chemistry and characterization tests to UHPC, and 3-D Characterization of Mechanical Properties and Development of Test methods for TRC, FRC, and UHPC

## Sessions

**Monday, 18/Sept/2023**

**Plenary Session Monday- Development of structural design Codes for FRC**

Location: **Pima**, Session Chair: **Gyorgy Balazs**

**FRC in Structural Codes: Novelities and Confirmations in the Forthcoming Eurocode 2 and Model Code 2020**

**Professor Marco di Prisco**

**Development of the Canadian Bridge Code for Structural Design of FRC Members**

**Professor Bruno Massicotte**

**Session MA1-A: Material Properties**

Location: **Pima**, Session Chairs **A.E. Naaman, Gyorgy Balazs**

**Session MA2\_B: Impact and Blast Loading and Ductility**

Location: **Ventura A** Session Chair: **M. Colombo, M. Khorami**

**Session MB1\_A: Fiber Distribution and Orientation**

Location: **Pima** Session Chair: **Giulio Zani**

**Session MB2\_B: Fatigue Effects**

Location: **Ventura A**, Session Chair: **L. Ferrara, Stefan Bernard**

**Session MC1\_A: Mechanical Characterization**

Location: **Pima**, Session Chair: **P. Rossi, A. P. Fantilli**

**Session MC2\_B: Design Specifications for Structural Applications**

Location: **Ventura A**, Session Chair: **G. Parra-Montesinos, G. Plizzari**

**Session MD1\_A: Temperature Effects**

Location: **Pima**, Session Chair: **Enzo Martinelli, Hassan Aoude**

**Session MD2\_B: Creep and Long-Term Loading**

Location: **Ventura A**, Session Chair: **P. Serna, D. Conciatori**

## Tuesday, 19/Sept/2023

### Plenary Session Tuesday- Application Development

Location: **Pima**, Session Chair: **Giovanni Plizzari**

**Application of UHPC Concept in Architectural Precast Concrete**

**Dr. Charles Nmai**

**Fiber-Enabled Carbon Footprint Reduction in Design and Construction of FRC Tunnel Segments in North America**

**Dr. Mehdi Bakhshi**

### Session TA1-A: High Performance FRC

Location: **Pima** Session Chair: **Bruno Massicotte**

### Session TA2-B: Structural Applications 1

Location: **Ventura A** Session Chair: **Jakob Šušteršič, Fausto Minelli**

### Session TB1-A: Numerical & Computational Modelling

Location: **Pima** Session Chair: **Frank J. Vecchio, Mehdi Bakhshi**

### Session TB2-B: Durability and Life Cycle Assessment)

Location: **Ventura A** Session Chair: **Flavio de Andrade Silva**

### Session TB3-C: Special Online Presentations

Location: **Navajo**, Session Chair: **Jean-Philippe Charron**

### Session TC1-A: Structural Rehabilitation and Quality Control

Location: **Pima** Session Chair: **Matteo Colombo, Nicola Buratti**

### Session TC2-B: Structural Applications 2

Location: **Ventura A** Session Chair: **Marco di Prisco, Ali Amin**

### Perspectives and future developments in FRC structural applications

Location: **Pima**

### Closing session

Location: **Pima**

## 5. INSTRUCTIONS FOR ORAL PRESENTATIONS

- The time for oral presentation is maximum 20 minutes that includes a few minutes of discussion time. Authors are kindly invited to not exceed the time allowed for your presentation.
- There is no template for your presentation. Authors can use their own templates.
- Presentations can be uploaded at the **registration desk, during the ice breaker session or daily sessions** (see workshop map) during the opening hours. Presentation files should be named according to the following template “session number\_lastname.extension” (i.e: X\_Smith.ppt). Ppt, pptx or pdf files are mostly desirable. Speakers are kindly requested to bring their file on a USB drive and to save all presentation files in one folder.
- Authors are kindly invited to come to their Session Room well in advance before the presentation and to contact the reference person in the room who will make sure the presentation is ready. Technical assistance will be available during the sessions and during the opening times of the registration desk
- Only fonts that are included in the basic installation of MS Windows will be available. Use of other fonts not included in Windows can cause wrong layout/style of your presentation.
- Please, do not use MAC file format, if possible. Authors that edited their presentation in a MAC are kindly invited to provide also a pdf version, which generally does not have any projection problems.



## 6. GENERAL INFORMATION

### How to Reach Tempe, Arizona

The ASU's Tempe campus is conveniently located within a 10-minute drive from Phoenix Sky Harbor Airport using taxicabs, Uber or Lyft. Access to local hotels or ASU campus is also possible through the free airport tram, to the 44th Street station of the Valley Metro light rail line. The Valley Metro light rail ride (\$2.00) to Tempe and ASU campus (eastbound train) is about 15 minutes as well. Exit at (University Drive/ Rural Rd. ASU campus. Get on at stop #10018 and off at stop #10023)



### Temperature

According to weather forecast, we expect the temperature on Saturday and Sunday, 17-18th to be in the high 105- low of 79 F (40C-27C) range and from Monday, 18th- Wednesday-20th will drop to high of 100F and low of 76F (38C to 26 C), but it is dry heat! and generally sunny.



## Electricity

USA operates on a 120V supply voltage and 60Hzs.  
[Click here](#) for more information on USA travel adaptors



## Currency

The official currency is US Dollar \$.

## Language

All oral presentations will be in English. No simultaneous translation will be provided.

## Badges

Each participant will receive a name badge upon registration. All participants are kindly requested to wear it during all workshop activities and social events. Your name tag is your ticket to access breaks, lunch and dinner.

Each participant will receive four drink tickets, two for Sunday night reception and two for Tuesday night reception. Additional drinks are the responsibility of the guests.

## Internet Connectivity on Campus

Complimentary Wireless Internet access will be provided at Memorial Union and ASU Campus. In addition, ASU also subscribes to Eduroam protocol and provides connectivity services. For additional support please follow through, the following list ([incommon.com](http://incommon.com))

### ASU Wi-Fi Instructions

**If you do not have an ASURITE User ID, follow the steps below:**

1. Select the "ASU Guest" network from available networks.
2. Open a browser, try to connect to the internet, a sign-in screen will appear.
3. Click "Don't have an account?", fill in your information, click register.
4. Select the verification option available to have your registration information sent to you.
5. Click "Sign On", fill the username and password you received, and sign in.
6. Accept the ASU Acceptable Use Policy to complete registration.

## Social programs

**Sunday, September 17, 2023, 18:00-20:30**

**Welcome Reception , ASU CAVC Building 3<sup>rd</sup> floor Atrium, 600 S. College Ave, Tempe, AZ**

The College Avenue Commons (CAVC) was designed to be a “teaching” building for the Del E. Webb School of Construction and other School of Sustainable Engineering and the Built Environment students. Systems normally unseen in traditional construction, such as plumbing, HVAC and electrical wiring were left exposed in places to allow students to learn about these systems in action. Cutting-edge specialized classrooms and Building Information Modeling (BIM) labs set the CAVC as a premiere place for construction education.

The College Avenue Commons is the home of the Del E. Webb School of Construction. It was “ASU built” over 20 months in 2013–14, after a major financial contribution from Jeff and Mary Ehret. From planning to construction, ASU alumni played a significant role in bringing this flagship building to fruition.



**CAVC Building on College Ave, ASU Campus**

**Monday, September 18**

**Optional Restaurant Dinner**

We will provide menus to some of our favorite restaurants in the area at the registration desk. Feel free to stop by and look at those if you are interested in going to dinner on Monday night. Dinner is on your own and this is a great opportunity to mingle with other attendees. Ride sharing is encouraged.

**Tuesday, September 19, 19:30–22:30**

**Gala Dinner, Culinary Dropout, 149 S. Farmer, Tempe, Arizona**

[Find on google map](#)

Located in the heart of downtown Tempe, a place where food and music are alive, Culinary Dropout serves classic meals done right. Melt into the comfortable, laid-back atmosphere and feast on crowd favorites like our pretzel bites and provolone fondue, 36- hour pork ribs, and our famous fried chicken, drizzled with honey. Your event will be in one of the private rooms in the restaurants named **The Gallery Room** at 19:30 pm. You can check in at the host stand upon arrival and they will bring you directly to the reserved space.

## A selection of Restaurants worth the drive

### **Cocina Madrigal Tacos + Tequila**

[4044 S 16th St, Phoenix, AZ 85040]

Distance from ASU Tempe Campus: 20 minutes | 7.3 miles

Cuisine: Mexican

Price Range: \$\$

### **Harumi Sushi & Sakei**

[114 W Adams St c101, Phoenix, AZ 85003]

Distance from ASU Tempe Campus: 27 minutes | 10.8 miles

Cuisine: Japanese

Price Range: \$\$

### **Pizzeria Bianco**

[623 E Adams St, Phoenix, AZ 85004]

Distance from ASU Tempe Campus: 26 minutes | 10.1 miles

Cuisine: Pizza

Price Range: \$\$

### **Mariscos Playa Hermosa**

[1605 E Garfield St, Phoenix, AZ 85006]

Distance from ASU Tempe Campus: 22 minutes | 9.7 miles

Cuisine: Seafood/Mexican

Price Range: \$\$

### **El Chullo Peruvian Restaurant & Bar**

[2605 N 7th St, Phoenix, AZ 85006]

Distance from ASU Tempe Campus: 26 minutes | 11.9 miles

Cuisine: Peruvian

Price Range: \$\$

### **Hodori**

[1116 S Dobson Rd, Mesa, AZ 85202]

Distance from ASU Tempe Campus: 17 minutes | 5.2 miles

Cuisine: Korean

Price Range: \$\$

### **Pasta Brioni**

[4416 N Miller Rd, Scottsdale, AZ 85251]

Distance from ASU Tempe Campus: 24 minutes | 7 miles

Cuisine: Italian

Price Range: \$\$

### **Cornish Pasty Co**

[425 S Mill Ave #111, Tempe, AZ 85281]

Distance from ASU Tempe Campus: 7 minutes | 1 mile

Cuisine: English

Price Range: \$\$

**Pita Jungle - Tempe**

[4 E University Dr, Tempe, AZ 85281]  
Distance from ASU Tempe Campus: 7 minutes | 1 mile  
Cuisine: Mediterranean  
Price Range: \$\$

**Postino Annex**

[615 S College Ave, Tempe, AZ 85281]  
Distance from ASU Tempe Campus: 7 minutes | 1 mile  
Cuisine: Wine bar  
Price Range: \$\$

**The Chuckbox**

[202 E University Dr, Tempe, AZ 85281]  
Distance from ASU Tempe Campus: 7 minutes | 1 mile  
Cuisine: Hamburgers  
Price Range: \$

**Four Peaks Brewing Company**

[1340 E 8th St #104, Tempe, AZ 85281]  
Distance from ASU Tempe Campus: 7 minutes | 2 miles  
Cuisine: Pub  
Price Range: \$\$

**Lucero Rooftop Lounge and Terrace**

[7 E University Dr, Tempe, AZ 85281]  
Distance from ASU Tempe Campus: 7 minutes | 1 mile  
Cuisine: Contemporary American  
Price Range: \$\$\$\$

**Top of the Rock Restaurant at the Marriott Buttes Resort**

[2000 W Westcourt Way, Tempe, AZ 85282]  
Distance from ASU Tempe Campus: 13 minutes | 4 miles  
Cuisine: American Cafe  
Price Range: \$\$\$

## 7. TOURISTIC INFORMATION

### THINGS TO DO IN TEMPE

Looking for fun things to do in Tempe and the Phoenix area? We've got you covered. Don't miss family-friendly attractions like the zoo, aquariums, arcades and scenic hiking trails. Dine and shop at Tempe Marketplace and Arizona Mills. Explore Tempe Town Lake from a paddleboard or kayak. Get inspired at one of the many museums and galleries throughout the city and on the ASU Tempe campus. And that's just the beginning.

#### On or near ASU and Mill Avenue:

##### [Sunset hike up "A" Mountain](#)

[Find on google map](#)

With a quick jaunt to the top of "A" Mountain, also known as Hayden Butte, in Downtown Tempe, hikers are rewarded with views of the lake, ASU and rock drawings left hundreds of years ago by ancient people.

Mill Ave. and Third St., Tempe, AZ 85281, (480) 350-4311

##### [Arizona Distilling Co.](#)

[Find on google map](#)

The award-winning Arizona Distilling Co. handcrafts spirits that tell the story of Arizona. Their products, including Copper City Bourbon and Commerce Gin, are made from the best ingredients including locally sourced grains. Tours are available.

601 W. University Dr., Tempe, AZ 85281, (602) 391-3889,

##### [ASU Art Museum](#)

[Find on google map](#)

The ASU Art Museum exhibits national and international contemporary artists, with a focus on Latin American art. The Museum houses the largest collection of Cuban art in the U.S. and an award-winning print collection. Exhibitions change seasonally. Admission is free. Please make a reservation prior to your visit. Hours: Friday–Sunday 11 a.m.–5 p.m.

ASU Tempe Campus, 51 E. 10th St., Tempe, AZ 85281, (480) 965-2787

##### [ASU Art Museum Ceramics Research Center](#)

[Find on google map](#)

The Ceramics Research Center houses and displays the ASU Art Museum's extensive ceramic collection of close to 4,000 objects. Exhibitions change seasonally and admission is free. The museum store is open during gallery hours.

Hours: Friday–Sunday 11 a.m.–5 p.m.

699 S. Mill Ave., Ste. 108, Tempe, AZ 85281, (480) 727-8170

##### [Boat Rentals of America – Tempe Town Lake](#)

[Find on google map](#)

At Boat Rentals of America – Tempe Town Lake, everyone can enjoy recreational boating. Select from a variety of watercraft: kayaks, pedal boats, electric boats, stand-up paddleboards and more. Guests can now rent surrey bikes too. Hours: Monday–Sunday, 10 a.m.–8 p.m.

72 W. Rio Salado Pkwy., Tempe, AZ 85281, (855) 690-0794

##### [United Escapes of America](#)

[Find on google map](#)

Follow clues and crack codes to escape the room in 60 minutes or less. The United Escapes of America Escape Rooms offer Arizona's highest-rated and most immersive escape game

experiences. Perfect for a date night, friend/family outing, or corporate event. Do you have what it takes?

414 S. Mill Ave. #112, Tempe, AZ 85281, (480) 666-5550

**[Tempe Center for the Arts \(along Tempe Town Lake\)](#)**

**[Find on google map](#)**

Tempe Center for the Arts, Arizona’s premier waterfront arts center, is an iconic venue offering exceptional, diverse, inclusive and accessible arts experiences. Enjoy dance, music, theater, comedy and visual arts all under one roof.

Gallery hours: Tuesday–Saturday, 10 a.m.–5 p.m.

700 W. Rio Salado Pkwy., Tempe, AZ, 85281, (480) 350-2822

**[Tempe E-Bike Tours](#)**

Looking for a fun way to see all of Tempe? Try our guided and self-guided e-bike tours to explore all around Tempe. Come and join us to experience an e-bike adventure. Open for “meet & ride” for private groups.

(602) 980-3798

**Within 5 miles from Downtown Tempe:**

**[Hotshots Axe Throwing Tempe](#)**

**[Find on google map](#)**

The premier axe throwing venue in Arizona; our coaches will teach you how to have fun and be safe throwing axes on projected targets! 10 and up, BYOB, we welcome the whole family, date nights, friend’s or the whole company!

1290 N. Scottsdale Rd. Ste. 102, Tempe, AZ, 85281, (480) 591-9118

**[Tempe Marketplace](#)**

**[Find on google map](#)**

With more than 100 shops and restaurants and 300 events a year, Tempe Marketplace is the ultimate destination. With a vibrant outdoor setting featuring fireplaces, water features and pop-up art installations, Tempe Marketplace provides an unparalleled shopping, dining and entertainment experience.

2000 E. Rio Salado Pkwy., Tempe, AZ 85281, (480) 966-9338

**[Dave & Buster’s](#)**

**[Find on google map](#)**

52,000 sq. ft. of fun! Have a blast playing billiards, eat and drink at the sports bar, and play over 150 video, prize and simulator games. Whether it’s classics like Pop-A-Shot, Pac-Man, and Skee-Ball, or the newest games in our Million Dollar Midway, everyone in your group will have a blast!

2000 E. Rio Salado Pkwy., Ste. 1100, Tempe, AZ 85281, (480) 281-8456

**[Desert Botanical Garden](#)**

**[Find on google map](#)**

Discover the tranquil vibrancy of 50,000 desert plants nestled amid the red rocks of the Papago Buttes at Desert Botanical Garden. An Arizona icon celebrating 80 years, the Garden has grown into a compelling attraction and desert conservation pioneer.

1201 N. Galvin Pkwy., Phoenix, AZ 85008, (480) 941-1225

**[Phoenix Zoo](#) | Arizona Center for Nature Conservation,**

[Find on google map](#)

Explore a world of curiosity, imagination and discovery at the Phoenix Zoo. See Sumatran tigers, Bornean orangutans, Masai giraffe and enjoy encounters such as Monkey Village and Harmony Farm. Your Zoo visit will be memorable for the entire family.

455 N. Galvin Pkwy.  
Phoenix, AZ 85008  
(602) 286-3800

## **Downtown Tempe Dining options:**

### **Breakfast/ Café:**

**[Daily Jam](#)**

[Find on google map](#)

Daily Jam serves up breakfast, brunch and lunch in a casual, friendly environment with a cool vibe. Our ingredients, sauces and spices transform traditional brunch items into craveable dishes only found within our kitchen.

310 S. Mill Ave. #A101, Tempe, AZ 85281, (480) 968-9288

**[Foch Café & Bistro](#)**

[Find on google map](#)

Foch Café & Bistro is a locally-owned restaurant with American-European inspired dishes + craft cocktails made with house-made juices. Foch offers a full sit-down dining experience, a grab-and-go market with coffee bar, and catering for events.

21 E. 6th St. #146, Tempe, AZ 85281, (480) 398-8534

**[Snooze an AM Eatery](#)**

[Find on google map](#)

Located in a former ASU art studio, Snooze has some of the best pancakes you'll ever have and a wide variety of omelets and benedicts. If the weather is nice, get a seat outside on the patio.

615 S. College Ave., Ste. 103, Tempe, AZ 85281, (480) 355-1934

### **Lunch/Dinner:**

**[Anoche Cantina](#)**

[Find on google map](#)

Anoche is a modern cantina and nightlife concept with an innovative food and beverage program and a build-your-own margarita bar. Savor Latin-inspired dishes and sip craft cocktails by day and party at Mill Ave.'s hottest new nightlife venue by night.

640 S. Mill Ave. B110, Tempe, AZ 85281, (480) 500-5104

**[Caffe Boa](#)**

[Find on google map](#)

A Downtown Tempe favorite for more than 20 years, Caffe Boa serves Italian dishes, such as handmade pastas and fresh seafood, crafted from the finest organic, natural ingredients. They also feature craft cocktails and an extensive wine list.

398 S. Mill Ave., Tempe, AZ 85281, (480) 968-9112

**[Casey Moore's Oyster House](#)**

[Find on google map](#)



Casey Moore's is an iconic Irish pub located in a historic house near ASU. From visitors to locals, college professors to students, everyone loves Casey's for its large patio, cozy bar and menu with sandwiches, salads, beef, oysters and seafood.

850 S. Ash Ave., Tempe, AZ 85281, (480) 968-9935

**Culinary Dropout at the Yard Tempe**

[Find on google map](#)

Savory nosh, crafted cocktails and the next big names in local music have found a home in this glamorous gastropub located in Downtown Tempe. They're known for their extra-large patio with games such as ping pong and corn hole.

149 S. Farmer Ave., Tempe, AZ 85281, (480) 240-1601

**Original ChopShop**

[Find on google map](#)

Original Chop Shop is a relaxed space where you can experience healthy cuisine, including salads, sandwiches, protein bowls and smoothies.

222 E. University Dr., Tempe, AZ 85281, (480) 307-9336

**Postino Annex,**

[Find on google map](#)

Built on a foundation of unique, approachable wines; simple, delicious food; and a warm, friendly culture, Postino Annex seamlessly blends this winning mix with indoor/outdoor dining, vintage garage doors and pop-culture artwork.

615 S. College Ave., Tempe, AZ 85281, (480) 927-1111

**Perfect Pear Bistro,**

[Find on google map](#)

Perfect Pear Bistro is known for their inviting atmosphere and their modern take on American comfort food, including delicious Panini sandwiches, fresh salads, flatbreads and pasta dishes.

603 W. University Dr., Tempe, AZ 85281, (480) 966-7327

**Pedal Haus Brewery**

[Find on google map](#)

This locally-owned brewpub is a haven for beer and bicycle lovers and home to the biggest outdoor patio on Mill Avenue. Enjoy watching the game, playing a round of corn hole or ping pong and eating truly elevated brewery food.

730 S. Mill Ave. #H102, Tempe, AZ 85281, (480) 314-2337

**Pita Jungle**

[Find on google map](#)

Pita Jungle offers Mediterranean inspired healthy dishes made from scratch daily. Also featuring a variety of vegetarian and vegan dishes on their extensive menu.

4 E. University Dr. , Tempe, AZ 85281, (480) 804-0234

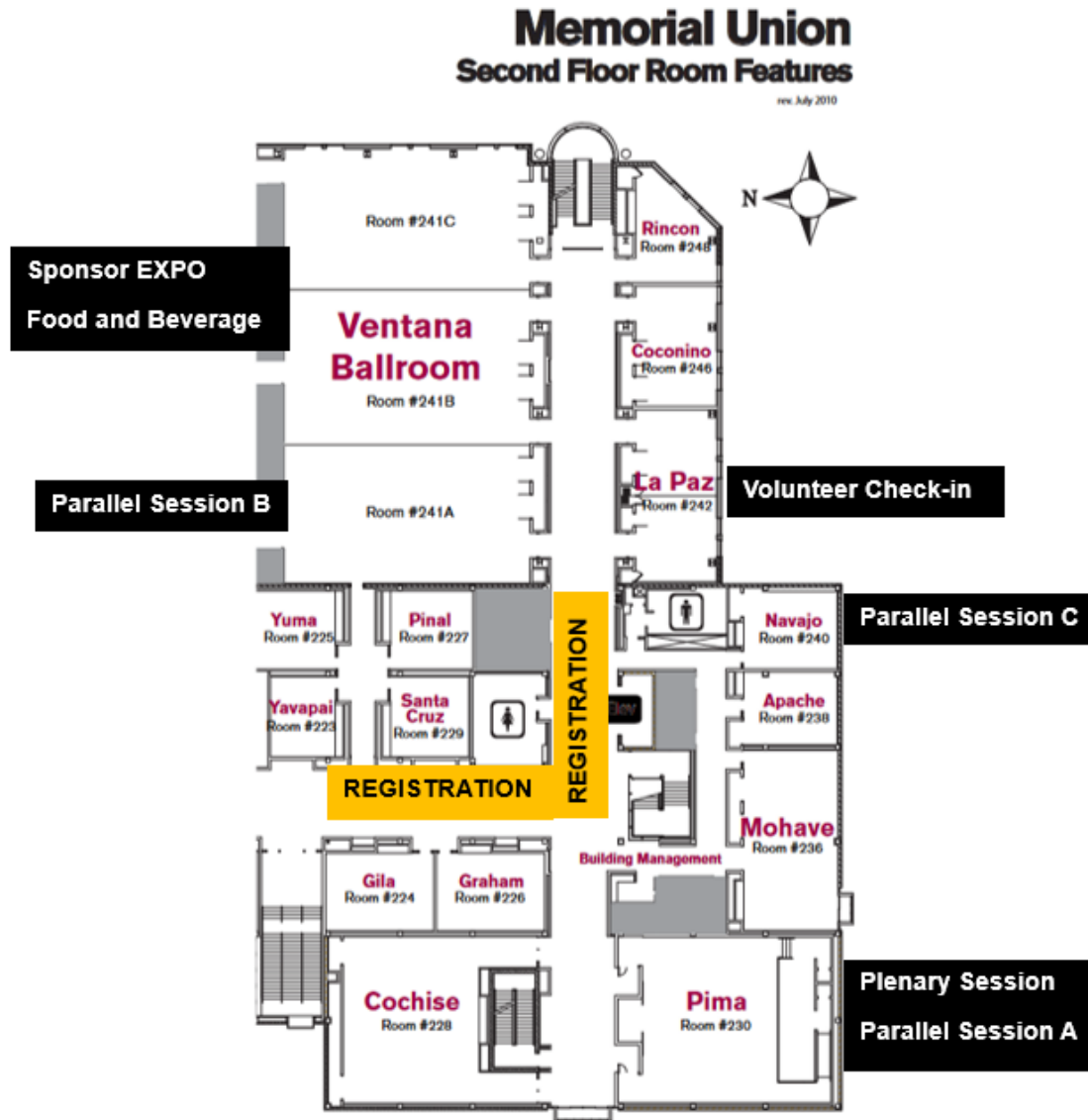
**Snakes & Lattes**

[Find on google map](#)

Have a little fun while you drink and dine in Downtown Tempe. Gather a few friends and family for some fun playing board games and dining on delicious food. The game library offers a huge selection of both classic and new games.

20 W. 6th St., Tempe, AZ 85281, (480) 361-6644

## 8. ASU Memorial Union (MU) CONFERENCE CENTER



**Organized and Hosted by:**

**Arizona State University  
School of Sustainable Engineering and the Built  
Environment**

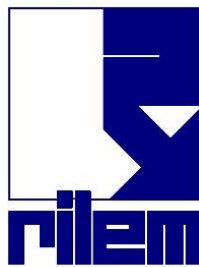
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