



CESCIT 2012 welcomes you to Würzburg!

Information Package



<http://www7.informatik.uni-wuerzburg.de/cescit>

cescit2012@informatik.uni-wuerzburg.de



**CESCIT
2012**

April 3-5, 2012, Würzburg

1st IFAC Conference on
**Embedded Systems,
Computational Intelligence
and Telematics in Control**

1. Welcome address

Prof. Klaus Schilling
CESCIT Chair of National Organizing Committee
University of Würzburg, Germany



Dear conference guests,

It is my pleasure and honor to invite you to the IFAC CESCIT conference in Würzburg. This location offers a perfect mix of rich historical heritage and high-tech innovations, and can be easily reached by high speed trains (directly connecting Frankfurt, Munich and Nürnberg Airports).

The University, founded in the year 1402, has been a proud home of 14 Nobel laureates who have researched and taught here. This list includes Prof. Roentgen, discoverer of the X-rays and whose lab can still be visited. Current activities can be seen in a laboratory tour related to the conference topics.

The city of Würzburg was founded 1300 years ago on the banks of the river Main and is surrounded by vineyards and historical monuments. Several interesting medieval cities (Rothenberg, Dinkelsbühl) are in the near vicinity and Würzburg is also the starting point of the "Romantic Road" that leads to King Ludwig's castles. Prominent touristic places to visit in Würzburg are the castle, hosting museums of art, and the baroque residence of the bishop (a UNESCO world heritage site).

I am looking forward to meeting you in Würzburg in April to share with you the technical highlights of the conference, as well as the cultural treasures of this region.

Klaus Schilling

2. Important Dates

Submission of full draft papers: September 15, 2011
Notification of acceptance: December 15, 2011
Submission of final paper (6 pages): February 15, 2012

3. Contacts & Links

Local Coordinator

Prof. Dr. Klaus Schilling
University Würzburg
Informatik VII: Robotics & Telematics
Am Hubland, 97074 Würzburg, Germany
Tel.: +49 931 318 6647

Conference E-Mail: <mailto:cescit2012@informatik.uni-wuerzburg.de>
Conference home page: <http://www7.informatik.uni-wuerzburg.de/cescit>
Submission of papers: <http://ifac.papercept.net/>
Instructions to authors: <http://www.ifac-control.org/events/information-for-ifac-authors/>
IFAC copyright notice: <http://www.ifac-control.org/publications/copyright-conditions>

4. Sponsors

IFAC TC 3.1 [Computers for Control](#)

IFAC TC 3.2 [Computational Intelligence in Control](#)

IFAC TC 3.3 [Telematics: Control via Communication Networks](#)

5. Co-Sponsors

IFAC TC 4.1 [Components and Technologies for Control](#)

IFAC TC 4.2 [Mechatronic Systems](#)

IFAC TC 4.3 [Robotics](#)

IFAC TC 4.5 [Human Machine Systems](#)

IFAC TC 7.3 [Aerospace](#)

IFAC TC 7.5 [Intelligent Autonomous Vehicles](#)

VDI/VDE [GMA, German NMO in IFAC](#)

6. Topics

(1) Common CC3 topics

Architectures for real-time, distributed, intelligent embedded control systems (e.g special and dedicated processors, parallel processing, communication platforms, middleware, ASICs, etc.)

Modelling, design and implementation of real-time, distributed, intelligent embedded control systems

Validation, verification, testing, evaluation of embedded systems and applications

Safety, reliability, maintainability, security

Fault detection, fault tolerance

Re-configurable control,

Modelling of the physical embedding systems

Man-machine interfaces for real-time distributed computer control systems

(2) Computer-based control systems

Real-time algorithms,

Scheduling, schedulability, temporal predictability, time analysis

Programming and programming platforms

Logical design, physical design, and implementation of embedded computer systems

Model-driven engineering of computer-controlled systems

Operating systems,

Inter-computer communications

Partitioned embedded systems,

Virtualization in embedded systems

Programmable logic controllers

Standards-based platforms and environments

(3) Computational intelligence methods in modeling, systems identification and control

Search methods and decision-making: neural networks, evolutionary computing, fuzzy techniques (single or multiple objective);
Swarm Intelligence (e.g., ant colony, particle swarm, differential evolution, cultural algorithms)
Neurodynamic optimization
Adaptive dynamic programming,
Biologically plausible neural networks, computational neuroscience, neurodynamics and regulatory networks,
Brain computer interface,
Cognitive architectures,
Neuroinformatics,
Bioinformatics,
Hybrids of computational intelligence systems (e.g neuro-fuzzy systems, neuro-genetic, etc.),
Intelligent systems and instrumentation: smart systems, sensors, actuators and distributed systems,
Data fusion and data mining; Fault management and knowledge processing and representation; Use of internet technology; Intelligent agents
Training and adaptation algorithms,
Constructive algorithms,
Structures for computational intelligence,
Design methodologies

(4) Telematics: control via communication networks

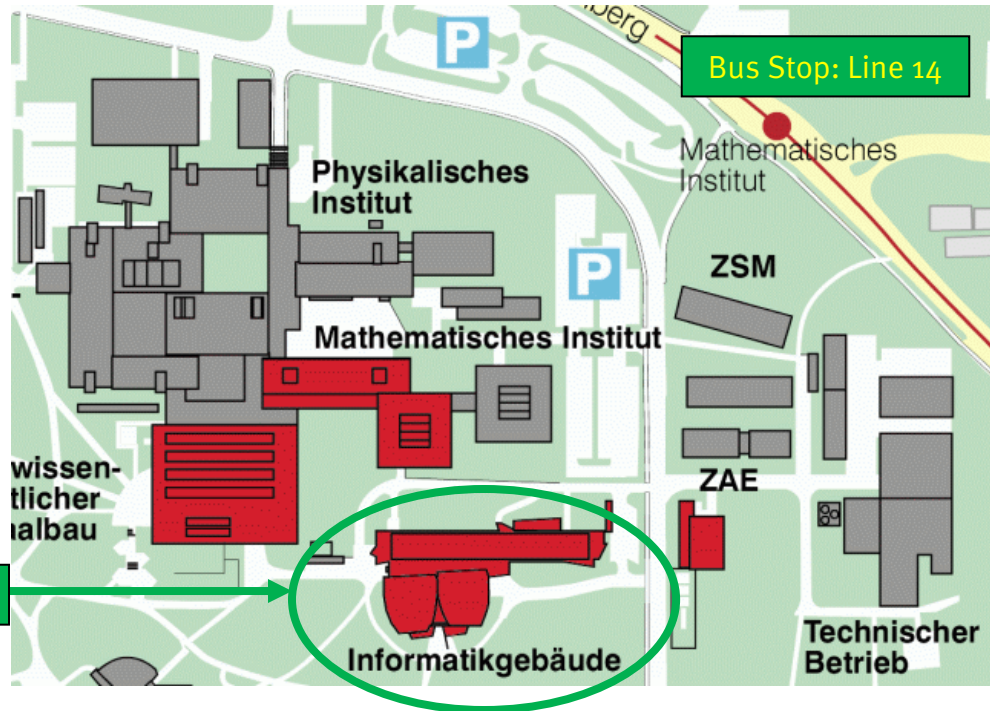
Telecommunication-based automation systems,
Remote servicing,
Remote and distributed control,
Remote sensor data acquisition
Internet of things
Tele-presence, Tele-robotics, Tele-maintenance, Tele-medicine, Tele-education
Traffic control systems
Smart energy grids
Spacecraft servicing

(5) Embedded systems applications, industrial projects, case studies, related topics

Applications of computer-based control systems, computational intelligence and telematics, including: process control, manufacturing, mechatronics, robotics and autonomous systems, power systems, energy management, intelligent house, environmental systems, medical and biomedical, biology, biotechnology, transport, aerospace, agriculture, economics and business systems
Efficiency of embedded systems (power, size, performance,..)
Ubiquitous, pervasive systems, context aware systems, ambient intelligence
Mobile embedded applications
Education in computer control systems

7. Location

The first IFAC conference on Embedded systems, Computational Intelligence and Telematics in Control (CESCIT 2012) will be held on 3rd-5th April 2012 at the University of Würzburg (Tübing lecture hall in the Informatics Building).



Julius-Maximilians-University Würzburg (JMUW)

The University was first founded in 1402 & today enrolls more than 20,000 students in 12 faculties and hosts well known research institutions. 14 Nobel Prize winners worked here, one among them being Wilhelm Röntgen, the discoverer of X-rays.

8. Registration

Early registration fee: 690 Euros

Early registration deadline: 15.01.2012

Student registration fee: 345 Euros

9. Visa Requirements & Letter of Invitation

Visitors from outside Germany should check whether or not a visa is required. Participants requiring an official letter of invitation in order to obtain a visa must contact Prof. Dr. Klaus Schilling at cescit2012@informatik.uni-wuerzburg.de at the earliest.

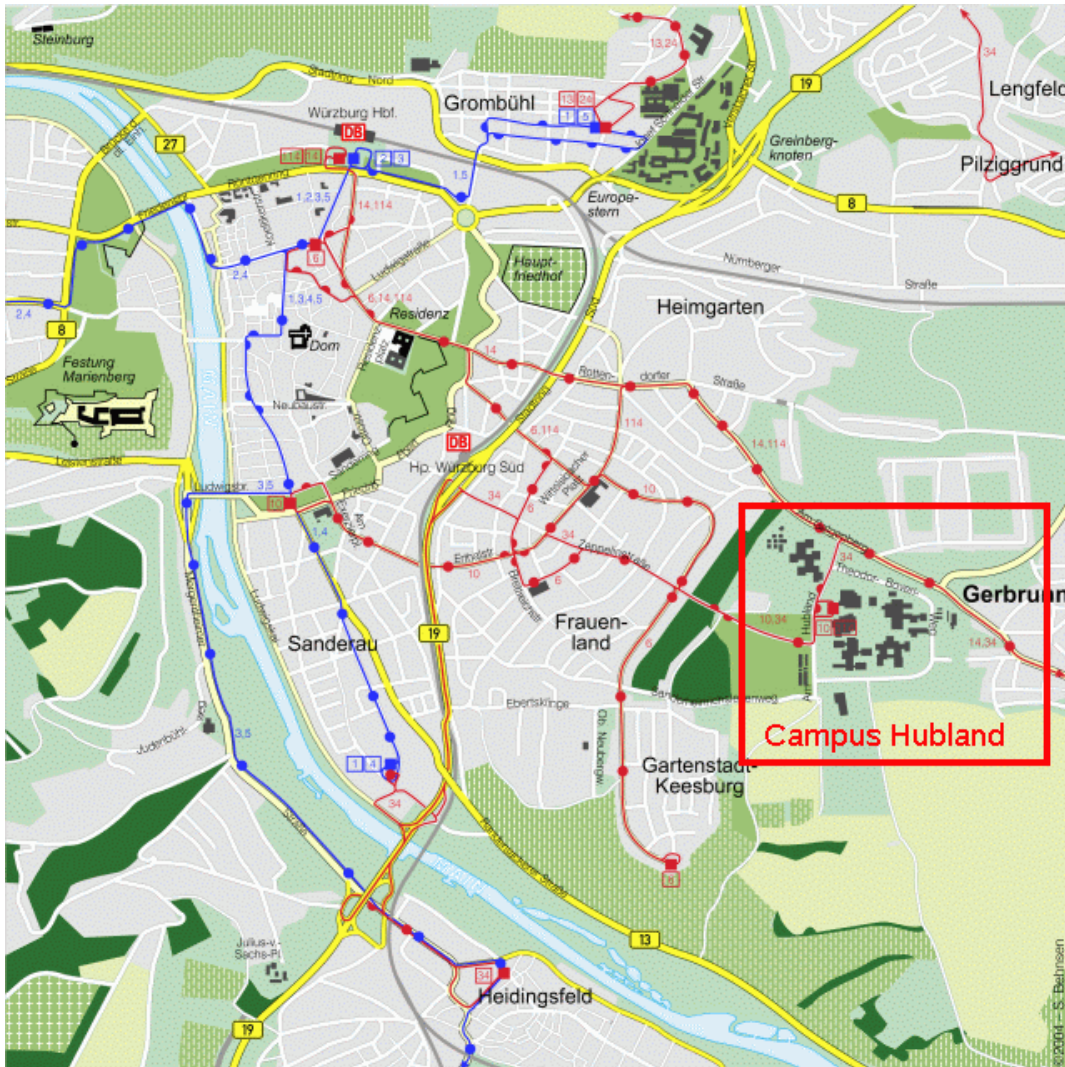
10. Journey

1.1 By Plane

- [Frankfurt](#) and [Nürnberg](#) are the two airports within fairly close range.
- There are direct train connections to Würzburg. www.bahn.de
From Frankfurt airport the train takes about 90 minutes and departs every hour.
From Nürnberg, the train takes between 1 and 2 hours and departs almost every 30 minutes.

1.2 By Train and Bus

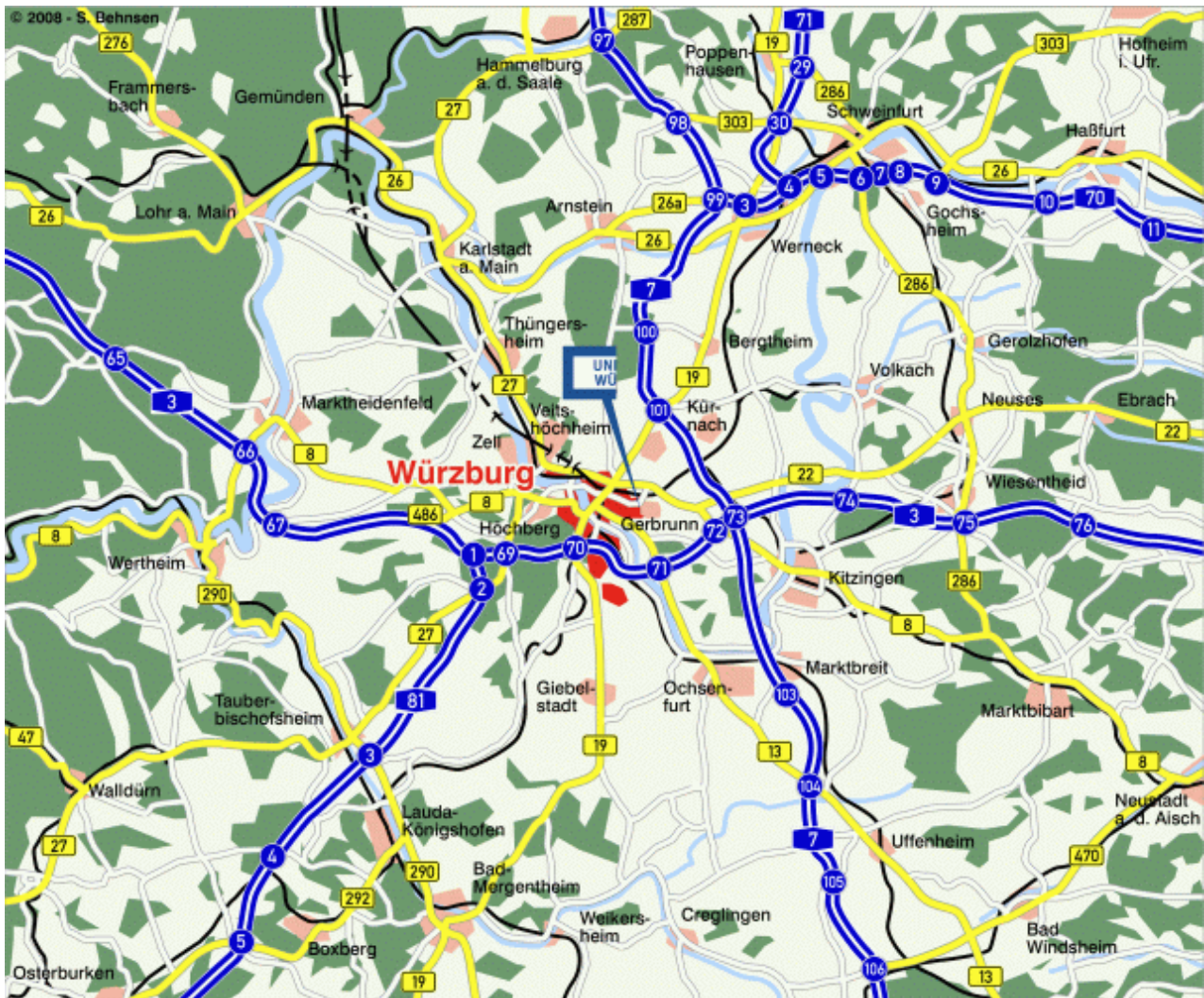
- At Würzburg main station (ICE-, Intercity-, Interregio-Stop), the bus terminal is right in front, take the bus line 14 direction Gerbrunn, alight at bus stop "Mathematisches institut".



- Train Schedule DB Bahn: www.bahn.de
- Bus Schedule Würzburger Verkehrsverbund: www.wvv.de (only in german)

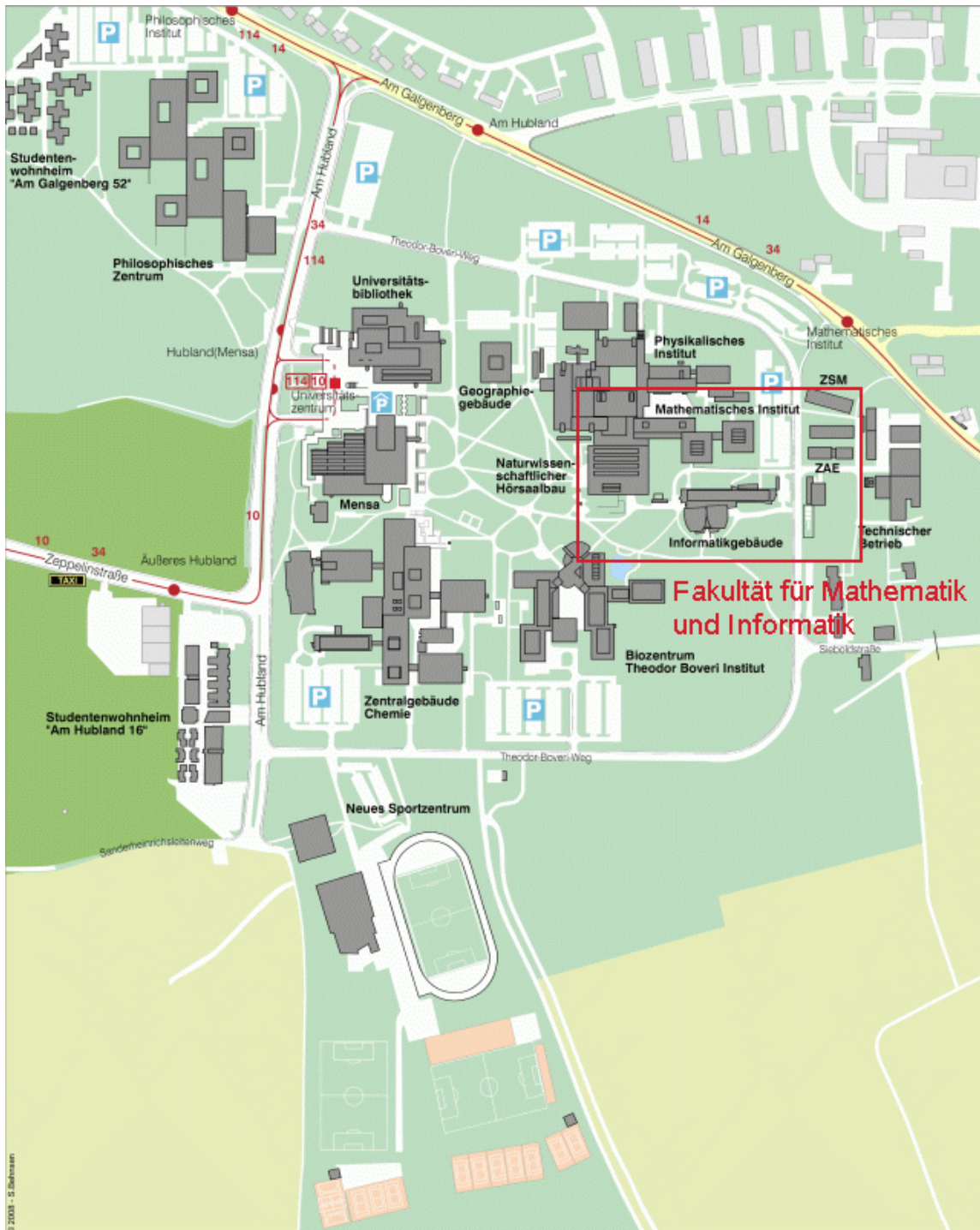
1.3 By Car

- [Via motorway A3](#)
Take Exit 72 (Rottendorf) to Bundesstraße 8 towards Würzburg - exit in Gerbrunn, turn right at the traffic lights and follow the signs to "Uni Hubland"
After 2.2km you will reach a T-junction, by which time you will have crossed four traffic lights.
- You are now located at the upper right hand corner of the [Hubland campus map](#) (map next page)
- Take a right turn in the direction of Würzburg. At the second traffic light, turn left into the street 'Am Hubland'. Bear left and take the first street at the left hand side, which is 'Theodor-Boveri-Weg'.
This road bends slightly to the right, and after about 600 meters you will reach the buildings of the Faculty of Mathematics and Computer Science.
- [Via motorway A7](#)
At interchange Biebelried (A3/A7) switch to motorway A3 towards Würzburg. Then follow the description above.



- Route planning with Google Maps: [Route to Faculty of Mathematics and Computer Science](#)

- **Navigation systems:** There are no street numbers on the campus, so please use the address 'Theodor-Boveri-Weg, Würzburg' instead. You will then be lead to the campus.
Or use GPS:
N 49° 46,876'
E 9° 58,452'
- **Parking:** Please keep in mind that some of the parking sites are reserved for members of staff, but there is plenty of public parking, too. Parking slots for the differently abled are available close to the "Rechenzentrum" and in front of the "Informatik" building.



11. Accommodation

In order to make it easier for conference participants, blocks of rooms have been reserved in different hotels in Würzburg in cooperation with '[Congress Tourismus Wirtschaft](http://www.congress-tourismus-wirtschaft.de)'. Interested participants are encouraged to book rooms through the following URLs:

[English] http://germany.nethotels.com/info/wuerzburg/events/CESCIT/default_en.htm

[German] <http://germany.nethotels.com/info/wuerzburg/events/CESCIT/>



Legend:

- 1) Hotel Alter Kranen
- 2) Hotel Amberger "Top Hotel"
- 3) Hotel Central
- 4) City Hotel Schönleber
- 5) Hotel Ibis Würzburg
- 6) Hotel Strauss "City Partner Hotel"

12. Tourist Information and Local Amenities

Highlights of Würzburg include one of Europe's most well know baroque castles and UNESCO World Heritage Site the Residence, the medieval fortress Marienberg, the historic town hall building and the Romanesque cathedral "St. Kilian." From the old bridge "Alte Mainbrücke" situated right next to the town hall, you will enjoy fantastic views of the fortress "Marienberg," the pilgrimage church "Käppele" with sloping stretches of Würzburg's famous vineyards.

Take a walk in the gardens adjacent to the Residence Palace, a baroque UNESCO World Cultural Heritage Site built by the famous architect Balthasar Neumann. Explore the interior of this former home of the local Prince-Bishops to see the Imperial Hall and the famous ceiling fresco painted by Tiepolo above the central staircase.



Residenz Photo: Rainer Schöffner
Residence Palace and adjacent gardens



Alte Mainbrücke Photo: Rainer Schöffner
Old Main Bridge and Marienburg Fortress

Cross the river Main on the Old Main Bridge (Alte Mainbrücke), the oldest existing bridge crossing the stream, lined by statues of saints, to climb up to the mighty Marienburg Fortress (Festung Marienberg). Rising above Würzburg, you can spot the church Käppele and enjoy a panoramic view of the town and the adjacent vineyards from there.

Sample the Franconian Wine (Frankenwein) while diving into the local nightlife in one of the numerous pubs and restaurants. Würzburg features countless sights and places to visit – ask the local staff for pointers where to start.



Odeon Summer Lounge Photo: Elmar Hahn



Residenz Wine Cellar Photo: Elmar Hahn

- Würzburg's official website:
<http://www.wuerzburg.de/en/index.html>
- Must see places in Würzburg
<http://www.wuerzburg.de/en/tourismandconventions/worthseeing/mustsees/index.html>
- Romantic Road:
<http://www.romanticroad.com/>