**11<sup>th</sup> International Conference**
**1-3 July 2013**
**Pisa**

# RASD 2013

# Technical Programme
# and
# General Information

**RASD 2013**

# Welcome to Pisa and to RASD 2013

On behalf of the Organising Committee, it is a pleasure to welcome you to Pisa for the XI International Conference on Recent Advances in Structural Dynamics (RASD 2013). Some of you may have attended many of the previous conferences and may be surprised that this time we are not meeting in Southampton! We really hope that bringing RASD 2013 to Pisa will be stimulating and that all of you will have an enjoyable conference.

The conference is devoted to theoretical, numerical and experimental developments in structural dynamics and their application to all types of structures and dynamical systems. The conference will reflect the state-of-the-art structural dynamics and dynamical systems in science and engineering practice and is an opportunity to exchange scientific, technical and experimental ideas.

The Conference Proceedings include 127 papers by authors from over 25 countries and are contained on a USB memory stick attached to your lanyard. You will find this inside the conference folder together with the book of abstracts and this programme which may help you in planning your attendance.

The conference will be held at the Polo Didattico Universitario Fibonacci (Ex Marzotto, Via Buonarroti 4, 56127 Pisa, Italy), which is close to the Leaning Tower and the Cathedral of Pisa. Registration will take place from 5:00pm to 7:00pm on Sunday 30 June in the main entrance hall on the first floor of the conference venue (RASD 2013 registration desk, tel: +44 (0)7786277986 or +39 3773213562). Further registration will take place from 8.00am on Monday 1 July. Please enter the building by the main entrance on Via Filippo Buonarroti and follow the RASD 2013 signs to the registration desk.

The four lecture theatres being used are the Auditorium and Rooms 1, 2 and 4. To locate the lecture theatres refer to the floor plan of the Polo Didattico Universitario Fibonacci on the last page of this programme. Tea and coffee will be served on the first floor in the morning and between the two technical sessions in the afternoon. Lunch will be served in the same area. You will also be able to buy tea, coffee and light refreshments from a kiosk café just outside the venue from 10:00am to 3:00pm.

Following the afternoon session on Monday, there will be a conference reception at the 'Palazzo del Consiglio dei Dodici', in Piazza dei Cavalieri, which is a short walking distance from the conference venue. The conference reception is for all delegates and accompanying persons. On Tuesday evening there will be a conference dinner at the 'Chiostro della Chiesa di Santa Maria del Carmine' in Corso Italia, 85. Again this is walking distance from the conference venue, just the other side of the river Arno.

I would like to thank the members of the Organising Committee and the Conference Secretariat for their considerable help. In particular I would like to thank the DICI (Department of Industrial and Civil Engineering) of the University of Pisa for hosting this conference.

I hope you will all have an interesting and exciting meeting and a pleasant stay in Pisa.

Emiliano Rustighi, *Conference Chair*

# Conference Outline

## Sunday 30 June

| | |
|---|---|
| 17:00 – 19:00 | Early Registration |

## Monday 1 July

| | |
|---|---|
| 08:00 – 10:00 | Registration |
| 08:45 – 09:00 | Opening Ceremony |
| 09:00 – 10:00 | Plenary Session 1 |
| 10:00 – 10:30 | Coffee/Tea Break |
| 10:30 – 12:30 | Technical Sessions |
| 12:30 – 13:40 | Lunch |
| 13:40 – 14:40 | Plenary Session 2 |
| 14:50 – 16:10 | Technical Sessions |
| 16:10 – 16:40 | Coffee/Tea Break |
| 16:40 – 18:00 | Technical Sessions |
| 19:00 – 20:00 | Conference Reception at 'Palazzo dei Dodici' |

## Tuesday 2 July

| | |
|---|---|
| 09:00 – 10:00 | Plenary Session 3 |
| 10:00 – 10:30 | Coffee/Tea Break |
| 10:30 – 12:30 | Technical Sessions |
| 12:30 – 13:40 | Lunch |
| 13:40 – 14:40 | Plenary Session 4 |
| 14:50 – 16:10 | Technical Sessions |
| 16:10 – 16:40 | Coffee/Tea Break |
| 16:40 – 18:00 | Technical Sessions |
| 19:30 | Conference Dinner at 'Chiostro del Carmine' |

## Wednesday 3 July

| | |
|---|---|
| 09:00 – 10:00 | Plenary Session 5 |
| 10:00 – 10:30 | Coffee/Tea Break |
| 10:30 – 12:30 | Technical Sessions |
| 12:30 – 13:40 | Lunch |
| 13:40 – 14:40 | Plenary Session 6 |
| 14:50 – 15:50 | Technical Sessions |
| 15:50 – 16:10 | Coffee/Tea Break |
| 16:10 – 16:20 | Closure Session and Best Presentation Award |
| 16:30 | Optional Tour of the DICI: Department of Industrial and Civil Engineering |

# MONDAY 1 JULY 2013

| | | | | |
|---|---|---|---|---|
| **08:45** | **Opening Ceremony** Auditorium | **Dr N. Ferguson**, *Institute of Sound and Vibration Research, University of Southampton* **Prof D. Acquaro**, *Department of Civil and Industrial Engineering, University of Pisa* | | |
| **09:00** | **Plenary Session 1** Auditorium | **Professor Y. Suda**, *"Dynamic Simulation and Analysis for Sustainable Transport Systems", University of Tokyo, Japan* | | |
| **10:00** | **Coffee/Tea Break** | | | |
| | Auditorium | Room 1 | Room 4 | Room 2 |
| | **Nonlinear Vibrations I** | **Vibroacoustics I** | **Structural health monitoring** | **Human Structure Interaction** |
| **10:30** | L. N. Virgin (838) On the behavior of post-buckled plates | N. Zafeiropoulos (1030) A comparison of two in-situ transfer path analysis methods | N. Popplewell (885) Reflection and transmission coefficients from rectangular notches in pipes | M. G. McDonald (919) Measuring dynamic force of a jumping person by monitoring their body kinematics |
| **10:50** | L. N. Virgin (839) Dynamic instability in an apparently simple experimental structure | M. Magalhaes (1037) Quantification of airborne noise transmission in the interior of an ambulance | R. Rodríguez-Rocha (906) Comparative study of damage detection in steel catenary risers | L. Gaile (920) Lattice tower dynamic performance under human induced dynamic loading |
| **11:10** | R. Darula (841) An analytical study of non-linear behaviour of coupled 2+2×0.5 DOF electro-magneto-mechanical system by the method of multiple scales | N. Totaro (943) Modal energy analysis | F. L. Marques dos Santos (925) Helicopter main rotor blade modelling and experimental testing for structural health monitoring | J. Macdonald (1094) A novel experimental setup for the identification of human actions on laterally oscillating structures |
| **11:30** | N. Hoffmann (863) Friction induced vibration as multi-scale dynamics | G. Volandri (1003) Comparison of finite element formulations for sound transmission modelling in the outer ear | G. Zarini (969) Ultrasonic wave dispersion curves with application to crack detection from acoustic emissions in aircraft structures | Y. Hayashi (815) Quantitative evaluation of the rotational motion pattern in the joints of the lower limb during the unrestrained human gait |
| **11:50** | J. Harvie (860) Reduced order system model nonlinear response and expansion for full field results | H. G. Kil (1010) Aero-acoustic performance analysis method of regenerative blower | K. A. Elbhbah (1036) Fault diagnosis in rotating machine using composite bispectrum | J. Chen (979) Acceleration response spectrum of long-span floor under human walking loads |
| **12:10** | | H.G. Kil (1035) Energy flow analysis of the vibration of a finite plate excited by an in-plane point force | | |
| **12:30** | **Lunch (Hall)** | | | |
| **13:40** | **Plenary Session 2** Auditorium | **Prof Andrei Metrikine**, "Development, evaluation and application of a wake-oscillator model for vortex-induced vibrations of marine risers", *TU Delft, Netherlands* | | |
| | Auditorium | Room 1 | Room 4 | Room 2 |
| | **Nonlinear Vibrations II** | **Vibroacoustics II** | **System identification and inverse problems I** | **Earthquake engineering I** |
| **14:50** | G. Gatti (876) Some insight into the evidence of detached resonance curves in the frequency response of nonlinear oscillators | K. S. Shin (818) Development of road noise estimation technology based on character of tire and matrix inversion method | F. I. Cosco (908) An optimized identification method for modular models of rubber bushings | S. K. Sadat Shokouhi (937) Evaluating the seismic damage index of LSF systems using FEA-ANN approach |
| **15:10** | M. Loccufier (888) Trends in tuning nonlinear absorbers: a comparison | Y. Wang (883) Vibro-acoustic analysis of an enclosure bounded by a flexible panel: effect of the boundary condition | F. Javier Cara (938) Operational modal analysis using joint statistical analysis of multiple records | M. Saranik (790) Comparing the results of seismic vulnerability of steel structures with and without the integration of low cycle fatigue damage |
| **15:30** | L. Xu (872) Dynamic characteristics and sensitivities analysis of a power turret gear train | O. Giannini (910) Transition among veering, crossing and lock-in through variation of the system parameters | M. Pishbin (955) Structural dynamics identification of a bolt and nut joint using modal test data | I. E. Harik (995) Natural and man-made hazard mitigation of transportation structures |
| **15:50** | B. El Bikri Khalid (855) Large vibration amplitude of circular functionally graded plates resting on Pasternak foundations | H. Wu (1011) Numerical study of a submerged hull with internal masses | | S. Y. Esadze (843) Vertical seismic vibration of cantilever constructions |
| **16:10** | **Coffee/Tea Break** | | | |

# MONDAY 1 JULY 2013

|  | Auditorium | Room 1 | Room 4 | Room 2 |
|---|---|---|---|---|
|  | **Modal analysis and structural modification** | **Vibroacoustics III** | **System identification and inverse problems II** | **Earthquake engineering II** |
| **16:40** | P. Neri (1093) Explanation and application of the SAFE diagram | J. M. Renno (766) Calculating the forced response of cylinders using the wave and finite element method | S. Chakraverty (829) Parameter identification of multistorey frame structure from uncertain dynamic data | M. G Shaikh (765) Finite element modeling of reinforced concrete beam column joint |
| **17:00** | L. Soria (909) Operational modal analysis of passenger cars: effect of the correlation between front and rear inputs | G. Ni (836) Waves in a three-dimensional model of the cochlea | S.-I. Choi (819) Identification of vibration path in a gasoline direct-injection engine using two input-one output model | G.N.Vakhrina (966) The analysis of methods of generating accelerograms for calculation of buildings |
| **17:20** | T. Hirai (1019) Damping in jointed friction plates with partially overlapping interfaces | Y. S. Al Rjoub (976) The reflection of SV-waves in a poroelastic half-space saturated with viscous fluid | S. B. Shiki (864) Identification of mechanical systems with local nonlinearities through discrete-time Volterra series and Kautz functions | L. Solazzi (913) Evaluating the seismic effects on lifting equipment |
| **17:40** | B. Hajiuon (956) Finite element model updating of a bolted joint using modal test data | J. Wei (809) Wave based method for free vibration analysis of ring-stiffened cylindrical shells with bulkheads |  | V. M. Agrawal (820) Effect of irregularity on the fundamental period of setback buildings |
|  |  |  |  |  |
| **19:00** | Welcome cocktail at 'Palazzo dei Dodici' | | | |

| Session Title | Session Chairman |
|---|---|
| **9:00 - 10:00** | |
| Plenary Session 1 .................................................................. | Michael Brennan |
| **10:30 - 12:30** | |
| Nonlinear Vibration I .......................................................... | Michael Brennan |
| Vibroacoustics I ................................................................. | Jamil Renno |
| Structural Health Monitoring ............................................. | Vicente Lopes Jr |
| Human Structure Interaction .............................................. | Emiliano Rustighi |
| **13:40 - 14:40** | |
| Plenary Session 2 ............................................................. | Miha Boltežar |
| **14:50 - 16:10** | |
| Nonlinear Vibration II........................................................ | Rob Fey |
| Vibroacoustics II ............................................................... | Neil Popplewell |
| System Identification and Inverse Problems I .................................. | Snehashish Chakraverty |
| Earthquake Engineering I.................................................... | John Macdonald |
| **16:40 - 18:00** | |
| Modal Analysis and Structural Modification ..................................... | Timothy Waters |
| Vibroacoustics III............................................................... | Andrei Metrikine |
| System Identification and Inverse Problems II................................. | Gianluca Gatti |
| Earthquake Engineering II.................................................... | Issam Elias Harik |

# TUESDAY 2 JULY 2013

| 09:00 | **Plenary Session 3** Auditorium | **Prof. J. Stuart Bolton**, "The influence of boundary conditions and internal constraints on the performance of noise control treatments: foams to metamaterials", *Purdue University, USA* | | |
|---|---|---|---|---|
| 10:00 | **Coffee/Tea Break** | | | |
| | Auditorium | Room 1 | Room 4 | Room 2 |
| | **Nonlinear Vibrations III** | **Vibration Control** | **Civil Engineering Structures** | **Numerical Techniques** |
| 10:30 | L. I. Wilmshurst (972) Nonlinear vibrations of a stroke-saturated inertial actuator | J. Salvi (1002) Analysis and optimisation of tuned mass dampers for impulsive excitation | N. Blaise (828) Equivalent static wind loads for structures with non-proportional damping | H. RIOU (825) PGD-VTCR: a reduced order model technique to solve mid-frequency broad band problems on complex structures |
| 10:50 | A. Abolfathi (1034) On the performance of a nonlinear vibration isolator consisting of axially loaded curved beams | D. P. McCrum (1328) Optimisation of a tuned liquid column damper for building structures | H. A. Elgohary (831) New empirical formula for the determination of the fundamental period of vibration of multi-storey RC buildings | S. Obando (856) System model modes developed from expansion of uncoupled component dynamic data |
| 11:10 | R. H.B. Fey (902) Nonlinear vibrations of base excited shallow arches: effects of hinge friction | Y. Nakano (999) Design method of multiple dynamic absorbers for suppressing chatter in end-milling operation | S. K. Sadat Shokouhi (897) Improving the blast performance of base-isolated structures using pneumatic dampers via genetic algorithm | M. Belyi (898) Advanced linear dynamic capabilities and modeling abstractions in abaqus |
| 11:30 | A. U. Rehman (1091) Coulomb friction-induced damping estimation at the crack interface for cantilever-type specimen | H. Yamaguchi (901) Linear friction damper consisted of tilt lever supported with leaf spring and cylindrical block | Y. C. Han (1290) Dynamic analysis for ball mill foundation | N. Avramova (936) An assessment tool for quantifying cumulative effect of modeling errors for smart hybrid simulation |
| 11:50 | U. Bhattiprolu (1023) Efficient predictions of the steady state response of a beam interacting with viscoelastic materials | T. Koizumi (1004) The vertical seismic isolator by using a link-crank mechanism | F. Behnamfar (807) Development of fragility curves for cylindrical concrete water tanks | M. Javorski (1046) Magnetostriction-induced dynamics of laminated structures |
| 12:10 | N. Panananda (934) The effect of cubic damping on a base excited isolator: an experimental study for harmonic excitation | F. Behnamfar (816) Proposing a new elastomeric-sliding isolator system | J. Jia (1609) P Offshore Structural Assessment by Dynamic Approach | P. Tiso (1550WIP) Nonlinear component mode synthesis using modal derivatives |
| 12:30 | **Lunch (Hall)** | | | |
| 13:40 | **Plenary Session 4** Auditorium | **Prof. S.K. Bhattacharyya**, "Response Control Of Tall Buildings Using Tuned Liquid Dampers", *Central Building Research Institute, Roorkee, India* | | |
| | Auditorium | Room 1 | Room 4 | Room 2 |
| | **Active Vibration Control and Smart Structures I** | **Soil-Structures Vibrations** | **Reusable Hypersonic Platform I** | **Analytical Modelling** |
| 14:50 | I. F. Lazar (891) A new vibration suppression system for semi-active control of a two-storey building | M.J. Brennan (939) Measurement of wave attenuation in buried plastic water distribution pipes | D. M. A. Millar (887) A Review of Fatigue Failures with Aircraft Engine Nacelle Components | X.-J. Sun (865) Influence of displacement-dependent suspension damping on transient response of earth-moving machinery cab |
| 15:10 | B. R. Mace (990) Design and adaptive model-based feedforward control of an electromagnetic tuned vibration absorber with shunt electronics | J. Maestre Heredia (1538WIP) A 3D time domain BEM approach accounting for internal soil attenuation | M. P. Mignolet (890) Coupled reduced order model-based structural-thermal prediction of hypersonic panel response | C.-O. Chang (968) The frequency analysis of double-end tuning fork quartz resonators |
| 15:30 | V. Wickramasinghe (804) Active control of seats to reduce helicopter aircrew exposure to vibration | K. Liddell (1548WIP) Accurate location of explosive misfires using a single channel detector | K. A Sweitzer (914) Allowing for non-proportionality in multiaxial spectral fatigue analysis | Y. Zhang (821) Three-dimensional elasticity solutions for free vibrations of thick rectangular plates with various boundary conditions |
| 15:50 | P. Singru (771) Seat design and control of passenger vibrations in a quarter car model | | M. P. Mignolet (946) Reduced order modeling for the static and dynamic geometric nonlinear responses of a complex multi-bay structure | |
| 16:10 | **Coffee/Tea Break** | | | |

|  | Auditorium | Room 1 | Room 4 |  |
|---|---|---|---|---|
|  | **Experimental Methods** | **Fluid-Structure Interaction** | **Reusable Hypersonic Platform II** |  |
| **16:40** | A. Palermo (942) Gear transmission error measurement accuracy using low-cost digital encoders | Z. Haitao (874) Dynamics of a nonlinear liquid sloshing inside a tank | F. Kihm (1006) Understanding how Kurtosis is transferred from input acceleration to stress response and its influence on fatigue life |  |
| **17:00** | C. Niezrecki (950) Monitoring the dynamics of an operating helicopter rotor using 3d digital stereophotogrammetry | K.-H. Jeong (982) Free vibration analysis of a fixed-free rectangular tank partially surrounded with water | M. Česnik (1045) Vibrational fatigue and structural dynamics at harmonic and random loads |  |
| **17:20** | G. M'Boungui (770) Ultrasonic motor using first and second bending modes | D. Saba (991) Review and upgrade of a bulk flow model for the analysis of honeycomb gas seals based on new high pressure experimental data | A. Swanson (1055) P Combined environment validation of hypersonic structures |  |
| **17:40** | S. A. Rizzi (803) Recent enhancements to the NASA Langley structural acoustics loads and transmission (SALT) facility | M. Lepidi (1014) Aeroelastic stability of a symmetric multi-body sectional model | S. M. Spottswood (892) A Structural Perspective On The Challenges Associated With Analyzing A Reusable Hypersonic Platform |  |
|  |  |  |  |  |
| **19:30** | Conference Dinner at 'Chiostro del Carmine' |  |  |  |

|  | **Session Title** | **Session Chairman** |
|---|---|---|
| 9:00 - 10:00 | Plenary Session 3 ................................................................................. | Stephen Rizzi |
| 10:30 - 12:30 | Nonlinear Vibration III........................................................................... | Lawrence Virgin |
|  | Vibration Control .................................................................................. | Paola Forte |
|  | Civil Engineering Structures ................................................................. | Sara Casciati |
|  | Numerical Techniques............................................................................ | Miha Boltežar |
| 13:40 - 14:40 | Plenary Session 4 .................................................................................. | Snehashish Chakraverty |
| 14:50 - 16:10 | Active Vibration Control and Smart Structures I ................................ | Paolo Gardonio |
|  | Soil-Structure Vibrations....................................................................... | Timothy Waters |
|  | Reusable Hypersonic Platform I............................................................ | Stephen Rizzi |
|  | Analytical Modelling.............................................................................. | Ciro Santus |
| 16:40 - 18:00 | Experimental Methods ........................................................................... | Kimihiko Nakano |
|  | Fluid-Structure Interaction ................................................................... | Paola Forte |
|  | Reusable Hypersonic Platform II ......................................................... | Neil Ferguson |

# WEDNESDAY 3 JULY 2013

| | | | | |
|---|---|---|---|---|
| **09:00** | **Plenary Session 5**<br>Auditorium | **Dr. S. A. Rizzi**, "An Overview Of Virtual Acoustic Simulation Of Aircraft Flyover Noise", *NASA Langley Research Center, USA* | | |
| **10:00** | **Coffee/Tea Break** | | | |
| | Auditorium | Room 1 | Room 4 | |
| | **Active Vibration Control and Smart Structures II** | **Uncertain Dynamical Systems** | **Reusable Hypersonic Platform Workshop** | |
| **10:30** | M. Zilletti (1025)<br>Tuneable vibration absorber for multi modal control of lightly damped structures | J Náprstek (817)<br>Compressional wave features propagating in a two dimensional domain with randomly imperfect material density | Moderated Discussion | |
| **10:50** | P. Gardonio (1031)<br>Velocity feedback loops with composite hexagonal and circular piezoelectric patch actuators | J. Yang (1042)<br>Evaluation of statistical overlap and frequency spacing of two randomised dynamic systems | Moderated Discussion | |
| **11:10** | M. Soliman (1300)<br>Development and validation of a finite element structure semi-active tuned liquid damper system model | M. Caresta (1043)<br>Impact dynamics of cylindrical shells | Moderated Discussion | |
| **11:30** | S.Q. Zhang (788)<br>Unknown disturbance estimation and compensation using PI observer for active control of smart beams | H. Chung (899)<br>Distribution of vibrations of a double-leaf plate with random inhomogeneities | Moderated Discussion | |
| **11:50** | T. Senda (832)<br>Development of control system for dynamic absorber using neural oscillator and position controller | C. Lecomte (927)<br>An efficient Krylov model reduction approach for the direct evaluation of analytical frequency average of transfer functions in the low-, mid-, and high-frequency ranges | Moderated Discussion | |
| **12:10** | K. Shiomi (924)<br>Sensor layout design procedure for active control of floor panel vibration with modal filtering technique | S. De Rosa (1536WIP)<br>First investigations on bounded eigenvalues for spectral finite elements models | Moderated Discussion | |
| **12:30** | **Lunch (Hall)** | | | |
| **13:40** | **Plenary Session 6**<br>Auditorium | **Dr. A. M. Wickenheiser**, "Broadband Vibration-Based Energy Harvesting: Model Reduction and Frequency Up-Conversion", *The George Washington University, Washington, DC, USA* | | |
| | Auditorium | Room 1 | Room 4 | |
| | **Energy Harvesting** | **Stochastic Dynamics and Random Vibrations** | **Railway Noise and Vibration** | |
| **14:50** | M. J. Brennan (853)<br>On the simultaneous use of a resonator as an energy harvester and a vibration absorber | C. Liu (875)<br>Dynamic response and reliability analysis for a turret | S. Casciati (947)<br>The effect of temperature variability when monitoring a railway bridge | |
| **15:10** | M. Ghandchi Tehrani (933)<br>Energy harvesting using semi-active nonlinear control | E. Capiez-Lernout (922)<br>Nonlinear stochastic dynamical post-buckling analysis of uncertain cylindrical shells | J. Maestre Heredia (1026)<br>Train-induced building vibration due to high-speed train passage | |
| **15:30** | K. Nakano (1009)<br>Feasibility study on energy harvesting using stochastic resonance | L. Cortes (1541WIP)<br>Uncertainty propagation in complex modes based component mode synthesis | P. M. Belotserkovskiy (814)<br>Interaction between a flexible wheel-set and corrugated rails | |
| **15:50** | **Coffee/Tea Break** | | | |
| **16:10** | **Closure of the Conference** | | | |
| **16:30** | **Tour of DICI: Department of Industrial and Civil Engineering** | | | |

| | Session Title | Session Chairman |
|---|---|---|
| 9:00 - 10:00 | Plenary Session 5 | Paola Forte |
| 10:30 - 12:30 | Active Vibration Control and Smart Structures II | Maryam Ghandchi Tehrani |
| | Uncertain Dynamical Systems | Brian Mace |
| | Reusable Hypersonic Platform Workshop | Neil Ferguson |
| | | Stephen Rizzi |
| 13:40 - 14:40 | Plenary Session 6 | Kimihiko Nakano |
| 14:50 - 15:50 | Energy Harvesting | Jamil Renno |
| | Stochastic Dynamics and Random Vibrations | Sergio De Rosa |
| | Railway Noise and Vibration | Neil Ferguson |

# Information Regarding the Technical Sessions

## Information for Presenters of Contributed Papers

Oral presentations of contributed papers are given 15 minutes, plus 5 minutes for questions and change-over. Please stick strictly to these time limits. A data projector and a laptop will be available in all rooms and you are required to use the laptop provided; if you require any further AV aids please let us know. Presentations should be on CD or USB memory stick. You can load your presentation on Sunday 30th of June in the foyer of the conference venue or, from Monday 1st of July, in the room where you will give your presentation. Please load your presentation in one of the breaks before your session starts and meet the session chairman in the room at least 10 minutes before the session begins.

## Information for Session Chairs

20 minutes has been timetabled for each oral presentation in the parallel sessions: 15 minutes plus 5 minutes for questions and change-over. Please stick strictly to these time limits. An AV assistant will be present.

## Congress Venue

Polo Didattico Universitario Fibonacci (Ex Marzotto)
Via Buonarroti, 4
56127 Pisa, Italy

## Parking

Pay and display parking is available on Via Buonarroti and is marked with blue lines. The fee, from 8:00am to 2:00pm, is €0.60 an hour. The parking is free after 2:00pm.

## Internet Connection at the Congress Venue

- *Eduroam users*
  University of Pisa offers an Eduroam (education roaming) internet connection. Eduroam is a secure, world-wide wireless access service for research and education communities. To access Eduroam use your home institution username and password. In order to access Eduroam you need to have registered to the service at your home institution first.

- *Others*
  If your organisation is not part of Eduroam or you have not registered before, ask at the registration desk for a temporary username and password.

# Map of Pisa
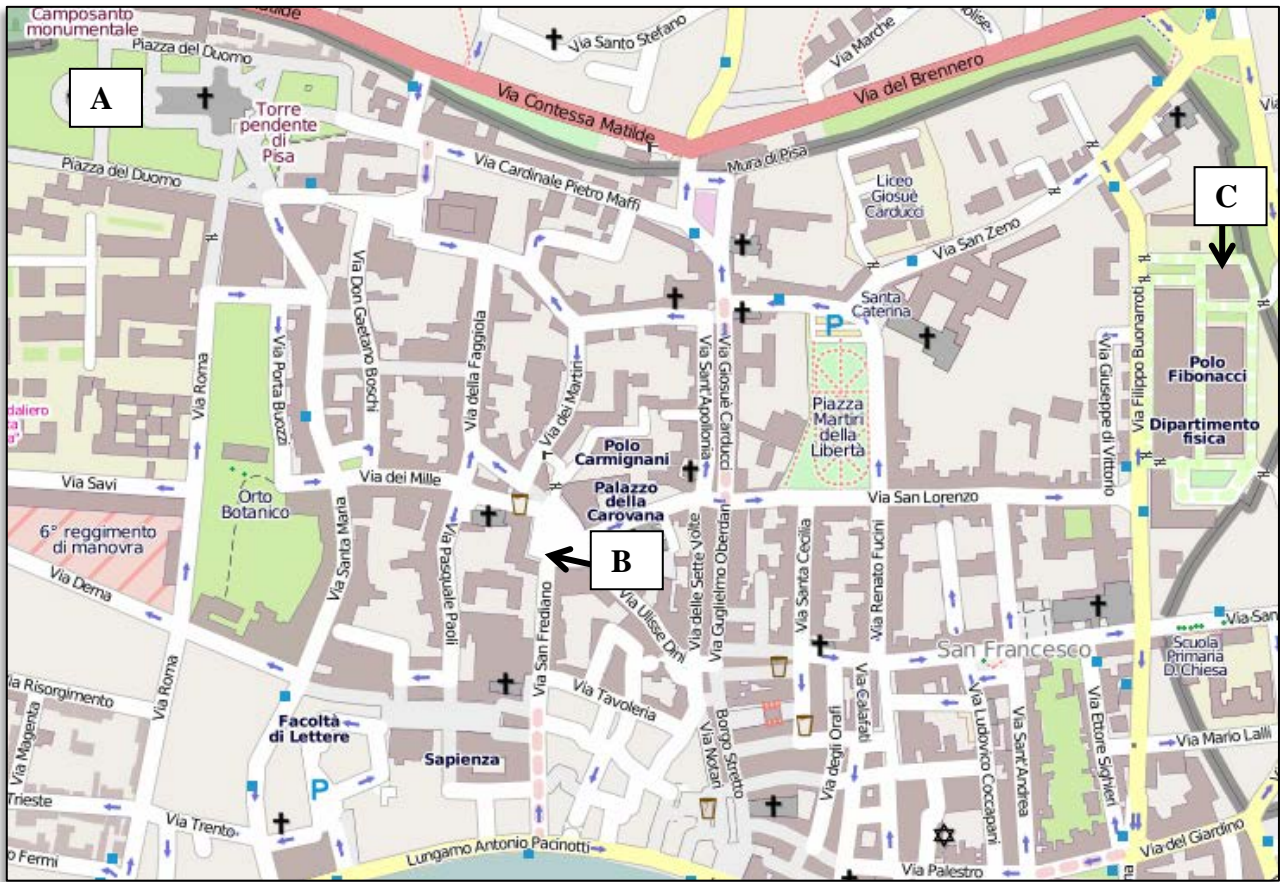




**Key:**

**A** – The Leaning Tower

**B** – Piazza dei Cavalieri (conference reception)

**C** – Polo Marzotto (conference venue)

**E** – Chiesa del Carmine (conference dinner)

# General information

## Reaching Pisa

- *Arriving by Plane*
  Pisa airport is at the south-west end of the town, surprisingly close (1.5 km or 15min walk) to the train station. In addition to cabs, you can take bus LAM ROSSA (Red Line) and possibly switch, at the train station, to buses serving your destination.

- *Arriving by Train*
  Most buses stop at the train station serving the various areas of the town, so public transportation is quite effective. Cabs also stop at the train station.

- *Arriving by Car*
  The preferred highway exit for Pisa is Pisa Centro, which brings you straight to the airport and from there you can cross the town for your destination. You can drive along the river, but otherwise most of the central streets are restricted traffic areas, with camera access control at the (very visible) gates. Be careful not to enter these if you don't want a fine. Just in case, check with your hotel for instructions. Note that street parking (at least in the places marked by blue lines) is generally subject to a fee from 8:00am to 8:00pm

## Transportation

Here we deal mostly with local transportation. In Pisa, you'll have a choice between walking, local bus service and taxi in town, and bus, train and rental cars should you wish to visit nearby places.

- *Walking*
  Why not? The conference location is within walking distance of the train station (2 km) and the airport (3 km). Most of the tourist areas are also within 1/2 km of the conference site.

- *Local Bus Service*
  The local bus service is run by a company called CPT (www.cpt.pisa.it), and offers transportation to most hotels downtown or in the near proximity. Most buses run between 6:30am and 9:00pm, with two night lines running every 20 minutes till 11:30pm. One-hour tickets cost €1.10 (or less for blocks of 4-10: see the full tariffs www.cpt.pisa.it/tariffe/tariffenew.htm).

- *Taxi*
  Local taxi transportation is managed by a company called CoTaPi (www.cotapi.it). The cabs typically stand at the train station, airport and piazza Arcivescovado (near the tower), or you can call +39 050541600 and follow the instructions in Italian.

- *Hotel Shuttles*
  Many hotels are equipped with a minivan and offer (often free) transportation to and from locations in the town. This may be a good option if you plan to arrive or leave early or late in the day.

- *Tourist Buses*
  City Sightseeing Pisa (www.pisa.city-sightseeing.it) runs an open-top bus going around the central part of the town, which you might find of some interest.

- *Non-Local Buses*
  Connections to nearby towns and villages (Tirrenia, Marina di Pisa, Livorno, San Giuliano, Lucca) are supplied by two bus companies (CPT, www.cpt.pisa.it, and Lazzi, www.lazzi.it), and by trains. The last buses to Tirrenia, Marina and Livorno leave around 11:00pm, while those to Lucca and San Giuliano typically run their last service around 9:00pm.

- *Train*
  Trains are useful if you want to visit nearby cities such as Florence and Viareggio. Details on train schedules can be found on the link www.trenitalia.com. Direct trains to and from Florence are very frequent and convenient (once per hour, travel time is 1hr). Going to and from Siena takes two-three hours and a connection in Empoli.

- *Car (and Car Rental)*
  Most car rental companies are based at the Pisa Airport. Italian cars normally have manual-shift.

  If you plan to drive through Pisa, keep in mind the following:

    o Most of the central part of the town is a pedestrian area ("ZTL"), with camera surveillance equipped with OCR for license plate reading. The system does work well, and if you are not authorized to pass the gate, the chances are very high that you'll be caught and fined;

    o Street parking is generally permitted, but on the parking places marked by blue stripes you have to pay an hourly fee between 8:00am and 8:00pm. Coin-operated parking meters are available in those areas, and you can buy tickets for the expected duration of your stop. For longer parking, you might find it convenient to buy electronic pre-paid cards; you can buy them in "Tabacchi" shops.

    o Speed limits vary depending on the road. In town it is usually 50 km/h, outside it is either 70 or 90 depending on the number of lanes in each direction, and 130 on the toll highways. Here again, there are a large number of fixed speed cameras installed on nearby highways (both the non-toll Fi-Pi-Li, and the toll Pisa-Firenze), including some that compute your average speed.

- *Bike Rental*
  There are a few companies renting bicycles and similar vehicles in Pisa. Among these are Pisa Scooter & Bike Rental (www.hotelfrancesco.com/bikerental.html), and www.toscanaintour.it.

## Currency, Language, Units

The local currency is the Euro (€), which comes in coins (1-2-5-10-20-50 cents, 1-2 Euros) and notes (5-10-20-50 and, less commonly, 100-200-500). Amounts are generally rounded to the next 5 cents. The currency is used across several EU countries so the coins may carry local symbols. The notes are the same in all countries. More information on the notes can be found at the European Central Bank (www.ecb.int).

The local language is of course Italian, with no strong dialect spoken (unlike some places in northern and southern Italy). English is mostly understood and (slightly less often) also spoken.

## Banks, Credit Cards and ATM

Banks are open from Monday to Friday, from 8:30am to 1:30pm and in the early afternoon, from 3:00pm to 4:30pm. On Saturday and Sunday money can be changed in hotels, currency exchange booths in the Leaning Tower area and at the airport. Banks also have ATM machines ("bancomat"), which are open 24 hours a day, seven days a week and take most credit cards.

Major credit cards are accepted by hotels, restaurants and most shops.

## Tipping and Receipts

Tipping is not required nor expected in Italy: the bill ("conto") always includes service. So, particularly in bars, restaurants and taxis, etc., it is acceptable to pay exactly the amount on the bill.

Italian law requires businesses to release a receipt if requested ("scontrino fiscale" or a "ricevuta fiscale") with date, sequence numbers, and identification of the business. A note scribbled on a piece of paper is not a valid receipt.

## Weather

In July the temperature rises during the day to an average of 25°C. The appropriate dress for the conference is business casual

## AC Voltage and Plugs

AC power is 220 Volts, 50Hz. Plugs have three round pins in-line (the central is ground and may be missing sometimes). Schuko (German-style) plugs are also used but are somewhat less popular. Most of the power sockets at the conference will be able to accommodate Italian and Schuko plugs. Adapters for UK and US power plugs are available in several electrical supply stores.

## Health

The Italian emergency number is 118 and can be reached by any phone or by going to the "Pronto Soccorso", which is located in via Paradisa 2. You will not be refused treatment for real emergencies, even if you don't have an insurance policy or credit card. Some treatments or tests are of course subject to payment, depending on your citizenship (Italian and EU citizens have public health insurance services) and the type of treatment.

By law, drugs are generally sold in medicine shops ("Farmacie"), but never in supermarkets and other stores. "Farmacie" are normally open during business hours, with only some open 24 hours. Ask at your hotel reception for assistance.

## Telephones

- *Number formats and prefixes*
  Italian phone numbers are variable in length, both in the "prefisso" (prefix, or area code) and in the local part of the number. The prefix must always be included, even for local calls. A leading "0" denotes area codes for wired phones (e.g. 050 is Pisa, 055 is Florence, 06 is Rome, 02 is Milan). The leading "0" is an integral part of the area code and must be dialed also when calling from abroad. A leading "1" is normally used for toll services or emergency numbers and a leading "3" indicates the prefix for cellular phones (eg 347, 340, 338...). These are not area specific. Toll free

numbers have the "800" prefix (but they are normally only free from landlines), whereas other prefixes starting with "8" are toll services and may be expensive.

Finally, international calls must be prefixed by "00" and the international prefix for the country you are calling (so it is 001 for the US, 0044 for the UK, and so on). The international phone prefix for Italy is +**39**.

- *Emergency numbers*
  113: Polizia (police, general emergency) - 118: Pronto soccorso (Emergency medical service) - 115: Vigili del fuoco (fire brigade)

- *Calling from public phones*
  Public phones are rapidly vanishing these days, except in airports and train stations. They might be coin-operated but more often will take a calling card (on sale in some bars and tobacco shops) or sometimes a credit card, though this can be expensive.

- *Calling centers*
  Especially in the station area (via Corridoni), where there are more visitors from abroad, there are several call centers with cheap tariffs for international calls.

## Internet Access

- *Internet points*
  There are a number of internet points in the central part of the town (via dei Mille, via Carducci) and in the station area. Tariffs are from €2.00 per hour and above, and normally, you are not allowed to connect your own equipment, but must rely on the machines supplied there.

- *Hotel Access*
  The situation varies here as well. Most hotels still have only dialup access, with some of the newer establishments also offering wireless connectivity (for free or for a daily or hourly fee) in the lobby or possibly also (wired) in the rooms.

## Shopping

Shops are generally open Monday to Saturday, 9:00am-1:00pm and 4:00pm-8:00pm. Some stores (usually clothing) are closed on Monday morning. Others (usually electricity, hardware etc.) are closed on Saturday afternoon. Supermarkets and department stores usually are open 8:00am-8:00pm (excluding Sunday).

The main shopping streets (clothing, jewelery, pottery) are around Borgo Stretto and Corso Italia, cutting the town North to South across ponte di Mezzo. A shopping mall with a large electronics store (MediaWorld) is just 1 km north-east of the train station, in via Matteucci.

# Polo Didattico Universitario Fibonacci

Via Buonarroti, 4

56127 Pisa, Italy

AUDITORIUM

REGISTRATION DESK

COFFEE BREAK-LUNCHES

ROOM 4

**FIRST FLOOR**

ROOM 2

ROOM 1

ENTRANCE

**GROUND FLOOR**