

Fatigue Analysis: CAE Based Random Response

With a particular emphasis on automotive, aerospace, rail & heavy-duty ground transportation systems

Roma, 14/03/2018

Summary: EXEMPLAR in collaboration with **Dr. Neil Bishop** will present the technical and practical background needed to implement the latest advances in random response analysis and fatigue/durability calculations including advanced mixed loading techniques (mixed random, deterministic and mean loads), large system modeling (virtually unlimited model sizes), large multiple input systems with correlation, and the latest stress and fatigue analysis methods not available elsewhere. The theoretical aspects of the course will be interwoven with hand calculations and computer demonstrations of the techniques.

AGENDA

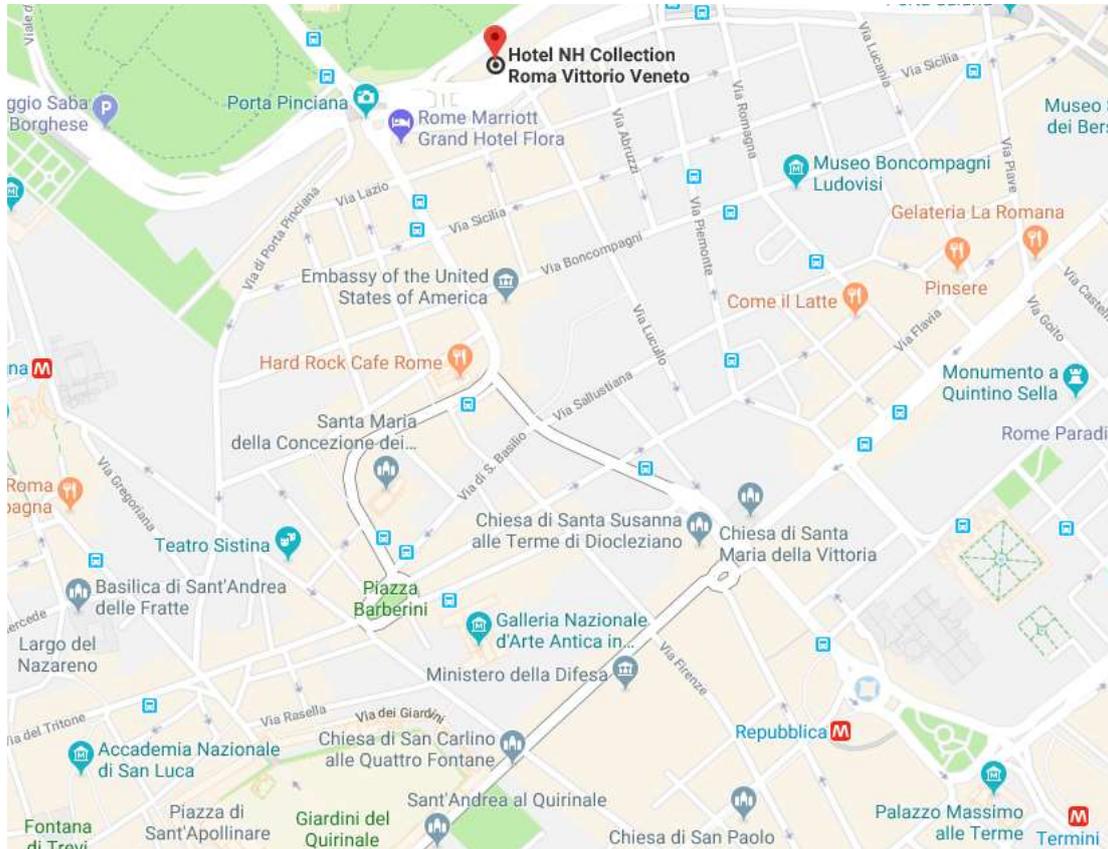
- 09:30 - Exemplar welcome & introduction
- 10.00- What is the Frequency Domain and Why We Should Use It?
- 10:30 - CAE fatigue VIBRATION – A New Way of Doing Random Response and Fatigue with Particular Reference to Mixed Loads.
- Coffee break
- 11:00 - Single Input Base Shake Example Fatigue and Collisions Detection – Satellite Payload Model.
- 11:30 - Multi Input – Multi Event Example – Full Vehicle.
- 12:00 - Close and Q&A

Exemplar: Our works in the sector of innovative societies and in the field of virtual simulation developing vertical tools software. We sell products for CAE offering added-value services, courses on tools and methods and developing dedicated software. The Seminar, focused on Fatigue Analysis, has organized together with **Dr Neil Bishop**. He has been teaching fatigue life estimation techniques and dynamics to undergraduates, postgraduates and design engineers for the last 20 years. His teaching style reflects the philosophy that dynamics analysis and fatigue life estimation techniques (and FEA) should be accessible to all design engineers, not just the specialists. Dr. Bishop also has a vast experience of industrial problems, and solutions, through his (worldwide) experiences with major automotive, aerospace, and other major industrial companies. He co-authored the NAFEMS publication "Finite Element Based Fatigue Calculations". He recently directed an R&D project for the US Air Force dealing with acoustic fatigue.

Registration: e-mail: exemplar@exemplar.com , indicating: Name, Company, E-mail Address, Telephone and Cell Phone number for contacts; or call 011.435051.

Participation Fee: none.

Location: Hotel NH Collection Vittorio Veneto - Area: Vittorio Veneto / Villa Borghese - Corso d'Italia, 1 Rome (Italy) Telephone +39 06 84951



How to reach the NH Collection Roma Vittorio Veneto

From Fiumicino Airport:

Train: The hotel is located 30 km from the airport. You may take a train to Stazione Termini. From there, you can take the underground (Line A) and get off at either Barberini or Spagna.

Bus shuttle: Departs every 30-45 minutes. Drop off at Stazione Termini and from there either take the metro line as above, or the Bus line 910 toward Mancini for 4 stops.

From the main train stations:

You can reach the closest metro stations: take the underground (Line A) and get off at either Barberini or Spagna (15 min. walk to the Hotel), or the Bus line 910 toward Mancini for 4 stops.

By car

The hotel's address is: Corso d'Italia, 1 Rome. An indoor toll parking underneath the Hotel is available upon reservation, you can call +39 06-8414747 or +39 06 84951.