



**IRF**  
GLOBAL

# Bridge Management & Inspection

*Expert training by professionals, for professionals*

**Online Training  
June 14-24, 2021**



# Online Training



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Online Workshop

## Background

This on-line training workshop will cover the main technical issues regarding Road Bridge Management, Inspection and Maintenance. The contents will be based on international standards as well as the hands-on experience of the course instructors. The workshop is addressed at highway agency executives and private sector contractors. The topics of the workshop go from the basic knowledge of Road Bridges and their main characteristics, to the visual inspection activities, until the most up-to-date concepts of Bridge Asset Management.

The lectures will be taught over a two period with live 2 hour on-line sessions held Monday – Thursday. Upon completion of the training program, the IRF will administer an on-line knowledge test. Participants with a score of 80% of the exam will be awarded with a certificate verifying their successful completion of the course.

### Why Online?

- Expert training by professionals for Professionals: access IRF's unique curriculum and lectures developed by world-class specialists
- Accelerated learning processes: get up to speed and gain new insights in less time and with no travel constraints
- Full access to learning materials and session recordings
- Small classrooms & scheduled One-on-One sessions between with instructors
- Self-paced options available
- Interactive group projects and case studies
- Receive IRF Certification

## Learning Objectives

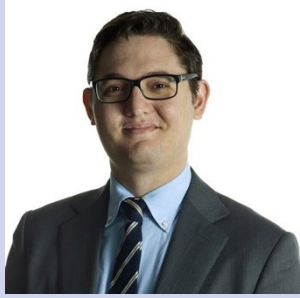
- ✓ Better understand each of the aspects of Existing Bridge Inventory and Inspection and their related functions
- ✓ Recognize the main structural problems of bridges;
- ✓ Knowledge of the main techniques of structural investigation and structural monitoring;
- ✓ Understand the importance of good bridge inspection practices in order to achieve optimal bridge management target;
- ✓ Knowledge of the most up-to-date techniques of bridge inspection;
- ✓ Learn about bridge management optimization and tools for resource allocation;
- ✓ Understand bridge predictive maintenance and its possible applications.

# Schedule

**Monday – Thursday (1:00 PM– 3:00 PM US EST / 5:00 – 7:00 PM GMT)**

<b>Session 1: June 14</b> <b>BRIDGE MANAGEMENT DEFINITION AND CHARACTERISTICS</b>	Session 1 learning objectives: <ul style="list-style-type: none"><li>• What is Bridge Management and why it is important</li><li>• Type of bridges</li><li>• Bridge elements</li></ul>
<b>Session 2: June 15</b> <b>BRIDGE DESIGN AND VULNERABILITY</b>	Session 2 learning objectives: <ul style="list-style-type: none"><li>• Main design and construction rules</li><li>• Bridge main defects and weaknesses</li><li>• Bridge collapses</li></ul>
<b>Session 3: June 16</b> <b>EXISTING BRIDGE INVENTORY</b>	Session 3 learning objectives: <ul style="list-style-type: none"><li>• Bridge inventory standards</li><li>• Bridge inventory rules and common practices</li></ul>
<b>Session 4: June 17</b> <b>DEFECTS AND PATHOLOGY (1)</b>	Session 4 learning objectives: <ul style="list-style-type: none"><li>• Existing bridge defect classification</li><li>• Existing bridge pathologies</li><li>• National and international standards</li></ul>
<b>Session 5: June 21</b> <b>DEFECTS AND PATHOLOGY (2)</b>	Session 5 learning objectives: <ul style="list-style-type: none"><li>• How to learn and recognize defects</li><li>• Examples and case studies</li><li>• Personnel certification</li></ul>
<b>Session 6: June 22</b> <b>DIAGNOSTIC TESTS AND STRUCTURAL MONITORING</b>	Session 6 learning objectives: <ul style="list-style-type: none"><li>• Main diagnostic tests for bridges</li><li>• Main principles of structural monitoring</li><li>• Examples</li></ul>
<b>Session 7: June 23</b> <b>NEW BOUNDARIES IN BRIDGE INSPECTION</b>	Session 7 learning objectives: <ul style="list-style-type: none"><li>• Limits of standard practices</li><li>• New techniques and tools</li><li>• Future developments</li></ul>
<b>Session 8: June 24</b> <b>BRIDGE ASSET MANAGEMENT &amp; PREDICTIVE MAINTENANCE</b>	Session 8 learning objectives: <ul style="list-style-type: none"><li>• Bridge Management System</li><li>• Bridge management practices</li><li>• Prioritization</li><li>• Management of single bridge</li><li>• Management of stock of bridges</li><li>• New boundaries and optimal resource allocation</li></ul>

## Instructor



**Michele Frizzarin** is a structural engineer with 15 years experience in the field of analysis and verification of existing structures. In particular he gained expertise in the inspection and structural analysis of existing concrete, steel and masonry infrastructures, as well as historical buildings and monuments. He furthered his education in the study of the dynamic and seismic behavior of structures, and work constantly in universities for the organization of technical courses of construction and structural dynamics.

He is partner and R&D Manager of Franchetti Group, headquartered in Italy, branches in Brazil, Canada, and Expansions from 2020 in USA, India and Singapore. The company operates in the field of civil engineering and environmental engineering with the collaboration of more than 50 engineers.

## Registration

- 1,700 USD IRF Members
- 1,400 USD IRF Members (Groups of 3 or more)
- 2,000 USD Non IRF Members
- 1,700 USD Non IRF Members (Groups of 3 or more)
- 1,000 USD IFIs, SARF, Canadian/ US State DOTs & City Officials

Registration: <https://www.irf.global/event/brm21-online-training/>

For any support, please contact [melabyad@irf.global](mailto:melabyad@irf.global)

# System Requirements

## Computer Requirements

### Operating System

*Windows 7 - Windows 10, Mac OS X 10.9 (Mavericks), macOS Catalina (10.15), Linux, Google Chrome OS, Android OS 5 (Lollipop) - Android 9 (Pie), iOS 10 - iOS 12, Windows Phone 8+, Windows 8RT+*

### Web browser

Google Chrome (most recent 2 versions)

Mozilla Firefox (most recent 2 versions)

Internet Explorer v11 (with Adobe Flash if running Windows 7)

Apple Safari (most recent 2 versions)

Microsoft Edge (most recent 2 versions)

### Internet connection

1 Mbps or better (broadband recommended)

### Hardware

2GB of RAM (minimum), 4GB or more of RAM (recommended)

Microphone and speakers (USB headset recommended)

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## **International Road Federation**

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