

As part of the Event



CremonaFiere, in collaboration with the  
Cultural Association "Armadillo" APS,  
organizes a

## **Masterclass of lutherie for acoustic guitar**

22<sup>nd</sup> – 23<sup>rd</sup> - 24<sup>th</sup> September, 2023

**Teachers:**  
**LEO BUENDIA (Argentina) – TREVOR GORE (Australia)**

Italian translation and assistance by Max Monterosso, Mirko Borghino

The places are limited

**Application deadline: 15<sup>th</sup> September 2023**

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### **TERMS AND CONDITIONS**

#### **CREMONAFIERE**

P.zza Zelioli Lanzini, 1 26100 Cremona  
Tel.0372.598011 | [info@cremonamondomusica.it](mailto:info@cremonamondomusica.it)

**Participants:**

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Luthiers, guitar makers, (amateur and professional), guitar fans

**Working methods:**

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Collective theoretical lectures

**Venue**

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The Masterclass Hall 1 is at CremonaFiere's offices

**Teachers & Programme**

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**Master luthier LEO BUENDIA**

Leo Buendia comes from Buenos Aires, Argentina, and has always been animated by a deep conviction in the value of music and artistic craftsmanship. With the perspective and experience of a musician, he began his luthier career in his hometown of Buenos Aires, moving years later to Oakland, California to specialize in building high-end steel-string acoustic guitars and attending as an apprentice for 40 months the famous luthier Ervin Somogyi. At the end of this long period alongside Somogyi he founded Buendia Guitars, starting to satisfy many professional guitarists with excellent instruments both in sound and in aesthetics. Everyone is touched by Leo's aesthetic, from the perfection of the headstock to the relief carved into the Brazilian rosewood bridge above the saddle; in all these details you can absolutely feel how much passion and art the instruments he produces are built.

<https://buendiaguitars.com/>

**Program:****"The Modern Guitar: Design & Aesthetics"****Friday 22<sup>nd</sup>, from 10am to 1pm:****Tonewoods in Guitars – Tonewood Selection and Evaluation**

*This is a hands-on workshop divided into three stages. First, I will briefly lecture on the structure and nature of wood. The second stage involves hands-on exercises for noticing and becoming aware of specific significant characteristics of tonewoods. The third stage involves relating these characteristics to tap tones and sound producing potential of the woods.*

**Saturday 23<sup>rd</sup> from 10am to 1pm:****Guitar design and physics of the guitar's neck and Head**

*This masterclass is oriented toward creating successful body contours. The shape of the guitar body: the bouts and the positive use of the waist. Scale length: the basics for layout and proportion. Bridge height. Guitar cutaway.*

**Sunday 24<sup>th</sup>, from 10am to 1pm:****Custom-made ornamentations, rosette and Inlays**

*This masterclass refers to the overall look at the guitar as a whole. It concerns how its various elements combine together and are arranged in concordance with an existing criterion of taste, proportion, and fashion. This masterclass will cover, among other topics, the designing of a headstock. Endgraft decorations. Back-of-the-neck inlays. Fretboard inlays. Bound fingerboards. Binding and purfling. Designing and inlaying a rosette. Hand-carved rosettes, end graft, and headstock.*

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## Master luthier TREVOR GORE

Trevor Gore hails from Sydney, Australia and is a builder of both classical and acoustic guitars. Graduated from Durham and Cambridge, UK, has been interested in guitars for 50 years and has been building them for 25 years. He has been a guitar design instructor for 14 years and author of the groundbreaking book "Contemporary Acoustic Guitar Design and Build". When he builds guitars he tries to understand music, mode to play and needs of the future guitarist buyer.

Together with the musician he discusses the options available for building an instrument that places the minimal impediment between him and his repertoire. Specific pieces of the woods chosen on the basis are selected to their measured acoustic properties and, using the design techniques that Trevor has developed, the thickness of the soundboard and the back and the dimensions and the distribution of the risers that will provide the sought sound.

His guitars are built with a very clear understanding of the interplay between resonances of the strings and the resonances of the guitar body, the resonances of the air and the resonances of the wood.

So his theory is that if you don't tune the body resonances in the right place as part of the design and construction process, you have a guitar that never sounds right in tune. This is what distinguishes and creates the diversity of its tools from many others.

<http://www.goreguitars.com.au/>

### Program:

#### How to control the sound of guitars

##### Whole course summary:

- How string and plates vibrate
- Visualising and understanding modes of vibration
- Relating modes of vibration to guitar frequency response curves (FRCs)
- Measuring frequency response curves
- Relating frequency response curves to generic guitar types (modern and tradition classical, steel string rhythm, steel string finger picking)
- Introduction to theory of modal vibrations
- Mechanical impedance and admittance
- Responsiveness and monopole mobility
- Targeting the "right" modal frequencies and avoiding the wrong ones
- Measuring material properties so that you can make the best of the wood you have rather than wishing for the wood you'd like
- Practical tuning of guitar modes: Moving from "as built" to "to design"

#### Friday 22nd, from 2pm to 5pm:

##### Fundamentals of Guitar Acoustics

- *Making waves on strings*
- *Calculating the shape of the moving string*
- *Forces exerted on soundboards by a moving string*
- *The nature of waves on plates, vibration of plates*
- *Visualising modes of vibration using Chladni patterns*
- *How Chladni patterns relate to guitar frequency response curves*
- *Setting up Visual Analyser and measuring frequency response curves*
- *Characteristic responses of different guitar types*

#### Saturday 23rd, from 2pm to 5pm:

##### Resonance, Vibration Sensitivity and Measuring material properties

- *The nature of vibrations*
- *Introduction to Simple Harmonic Motion*
- *The natural response of spring/mass systems*

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- *Resonance*
- *Vibration sensitivity*
- *Response curve for a simple driven oscillator*
- *Admittance and Impedance*
- *What makes a responsive guitar and how to measure that*
- *Adding "allure" to your instruments*
- *Coupling of components*
- *coupled vibrations*
- *Selecting targets*
- *mode frequencies*
- *the spread of mode frequencies*
- *Measuring material properties*
- *Flexural rigidity*
- *Measuring brace material*
- *Measuring plate material*

### **Sunday 24th, from 2pm to 5pm:**

Achieving your target performance – moving from "as built" to "to design"

- *Principles of resonance shifting*
- *Efficient guitars – only move a resonance if it's giving a problem*
- *Adding/subtracting mass/stiffness*
- *How to influence one mode and not another*
- *Process of resonance shifting*
- *Assessing the problem using the tests we have studied*
- *"Levers": Edge thinning, bridge mass/stiffness, back plate, side masses, hole size*
- *Adjusting the main air resonance – example*
- *Adjusting the main top resonance – example*
- *Adjusting other problematic resonances*

### **Admission**

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**The Masterclass must be paid for and has a limited enrolment number**

Admission to the Masterclass will take place, presenting simultaneously the **Application Form** with the payment for the participation fee by the **15<sup>th</sup> of September 2023**.

Sending the application without the concomitant payment will not be considered valid.

### **Participation Fee**

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Price per person: **€ 250.00** (VAT included)

- The registration fee must be paid in full.
- The registration fee is not refundable in case of withdrawal or missed MasterClass.
- The registration fee includes free pass to Cremona Musica-Acoustic Guitar Village ticket.

### **Application Procedure**

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The Application Form must be sent **by the 15<sup>th</sup> of September 2023**. In alternative, it must be sent by:

- fax +39 0372 598222
- mail: [ilaria.seghizzi@cremonafiore.it](mailto:ilaria.seghizzi@cremonafiore.it) and [info@armadilloclub.org](mailto:info@armadilloclub.org)

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together with a copy of the participation fee payment, by electronic bank transfer in favour of CremonaFiere spa (purpose of payment: *Lutherie masterclass 2023*) on the following bank account:

BANCA POPOLARE DI SONDRIO branch of Cremona Via Dante IBAN IT49S0569611400000003630X76 BIC POSOIT22
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### Information

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For any information regarding the contents of the masterclass, please contact:

**Cultural Association "Armadillo" APS**

*Alessio Ambrosi*

Email: [info@armadilloclub.org](mailto:info@armadilloclub.org)

Tel: + 39 (0)187 626993

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# Application Form

Masterclass of lutherie for acoustic guitar  
22<sup>nd</sup> - 23<sup>rd</sup> - 24<sup>th</sup> September, 2023

Teachers:  
LEO BUENDIA (Argentina) – TREVOR GORE (Australia)

*(Fill in Capital Letters)*

The undersigned:

SURNAME: \_\_\_\_\_

FIRST NAME: \_\_\_\_\_

ADDRESS \_\_\_\_\_

POSTAL CODE \_\_\_\_\_ TOWN \_\_\_\_\_

PROVINCE \_\_\_\_\_ Landline/mobile: \_\_\_\_\_

E-MAIL \_\_\_\_\_

I'm a ☐ natural person ☐ freelancer

Personal Identification number \_\_\_\_\_

(e.g. National Insurance Number, Identifikationsnummer, numéro de sécurité sociale, Número de Identificación Fiscal, etc...)

Tax/v.a.t. (Value Added Tax) number \_\_\_\_\_  
(only for companies or freelancers)

DATE OF BIRTH \_\_\_\_\_ IN \_\_\_\_\_

Asks for admission to the Masterclass of lutherie for acoustic guitar 2023 at CremonaFiere and claims to have read and accepted the Masterclass Rules

➔ Date \_\_\_\_\_ Signature \_\_\_\_\_

## **Privacy**

Personal data indicated in this registration form, collected for organizational purposes, will be treated in full compliance with the provisions of the Legislative Decree, 196/2003 and subsequent amendments or modifications. Any form of distribution/transfer of these data to third parties is excluded. You can request, at any time, the modification or removal, and exercise your rights towards the data controller, by sending an email to [info@cremonafiere.it](mailto:info@cremonafiere.it) or a fax to n. 0372 598222. The regulation is available at <http://www.cremonafiere.it/trattamento-dati/>. I acknowledge the terms and conditions and expressly consent the handling of my personal data. I acknowledge the terms and conditions, and consent the handling of my personal data.

➔ Date \_\_\_\_\_ Signature \_\_\_\_\_

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