Welcome

CB SYSTEMS ACROSS THE HR

Florence 14 - 17 January 2025

SOC

Camilla Danielski (INAF - OAA)
Mathieu Van der Swaelmen (INAF - OAA)
Stefan Dreizler (U. Göttingen)
Kaitlin Kratter (U. of Arizona)
Richard Nelson (Queen Mary University of London)
Paola Pinilla (MSSL - UCL)
Silvia Toonen (API, University of Amsterdam)
Amaury Triaud (U. of Birmingham)

LOC

Patrizia Braschi (INAF - OAA)
Camilla Danielski (INAF- OAA)
Mathieu Van der Swaelmen (INAF- OAA)
Laura Magrini (INAF- OAA)

Bringing together enthusiasts of circumbinary planets

eas 2022 Valencia

EUROPEAN ASTRONOMICAL SOCIETY ANNUAL MEETING

June 27th – July 1st, 2022
Valencia Conference Centre, Spain

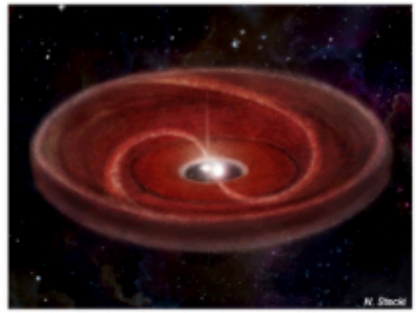
Expand All | Collapse All

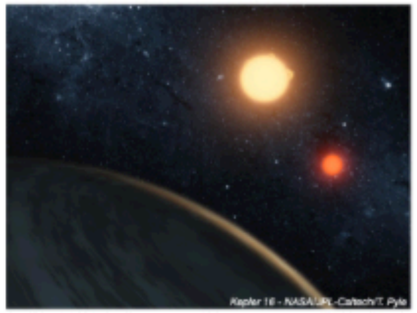
EAS 2022

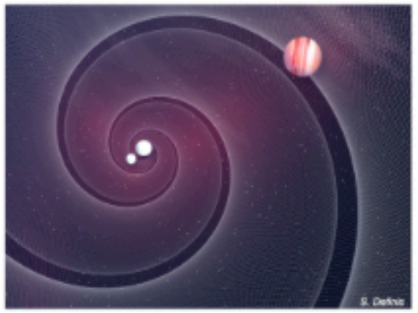
- Welcome & News
- About
- **COVID-19**
- Organisers
- **Code of conduct**
- FAQ
- Travel & Covid
- Venue
- Registration
- Abstract Submission

Special Session SS22 1 July 2022

A magnifying glass on circumbinary exoplanets: their formation and evolution throughout the H-R diagram







News: *This session is dedicated to the memory of Prof. Dr. Wilhelm ("Willy") Kley.*

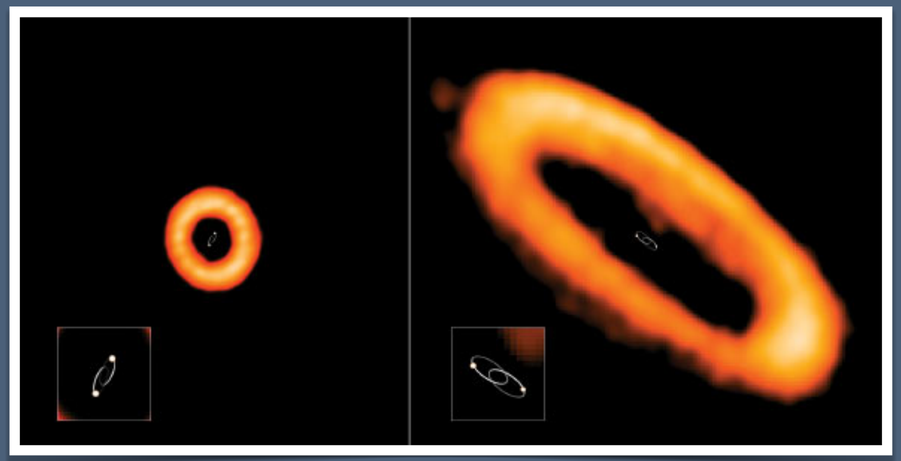
Bringing together enthusiasts of circumbinary planets

Then we figured, why not invite more people to the party?

Interdisciplinary workshop

Interdisciplinary workshop

CB disc environment + pl. formation



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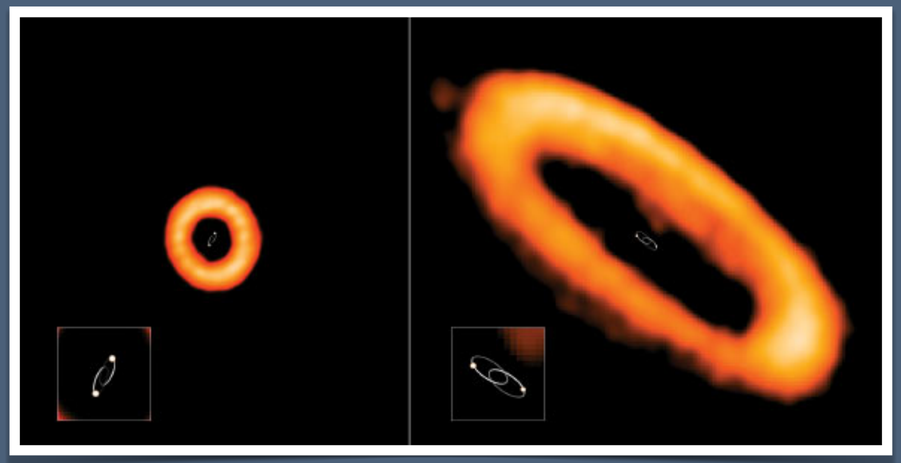

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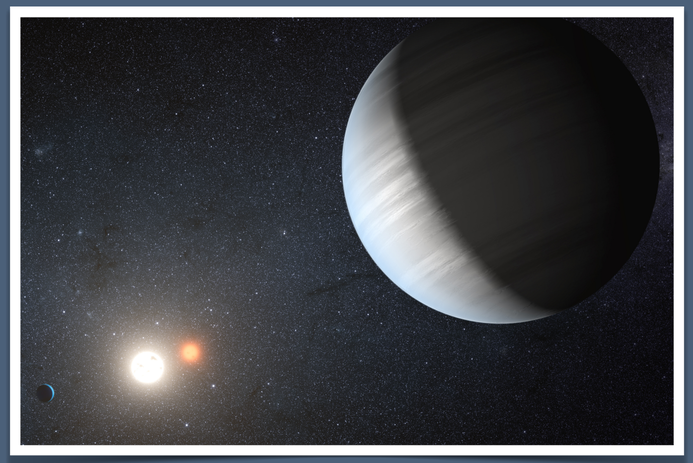
CBPs orbiting MS binaries



Kepler - 47 NASA/Ames/JPL-Caltech

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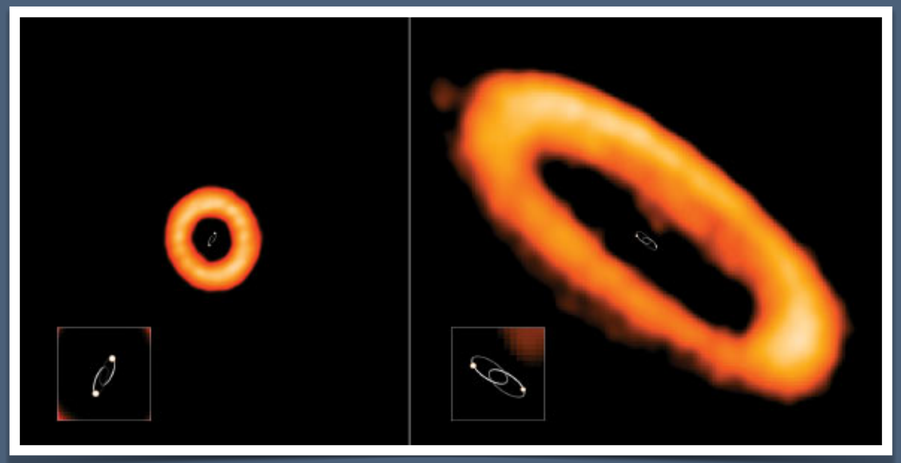

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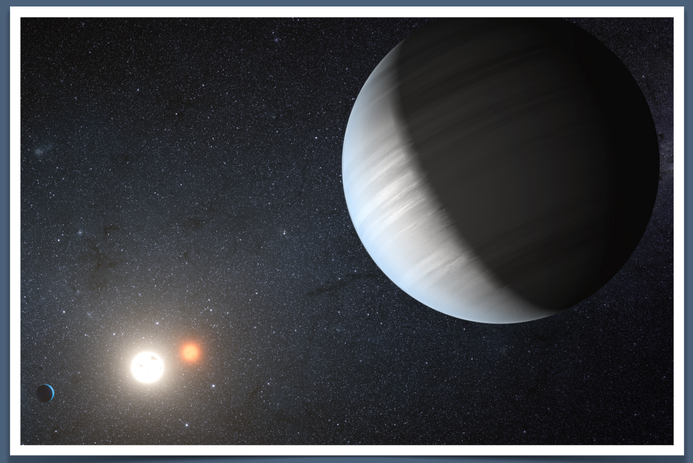

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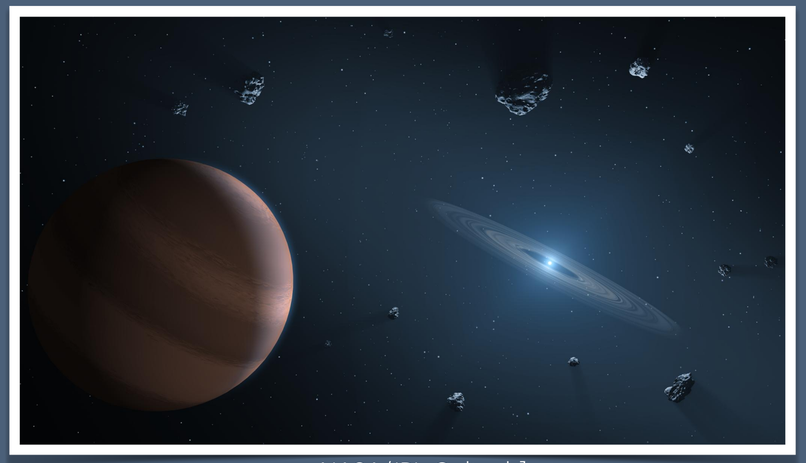
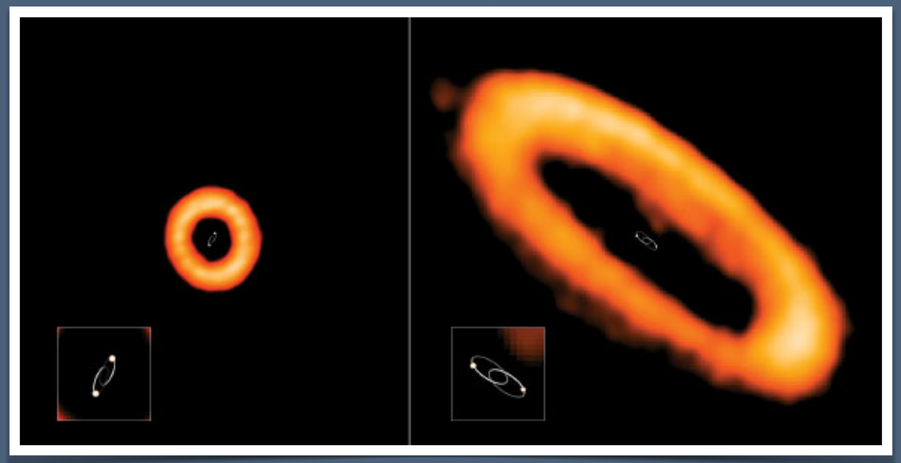


NASA/JPL-Caltech]

Survivals studies
and observations

Interdisciplinary workshop

CB disc environment + pl. formation



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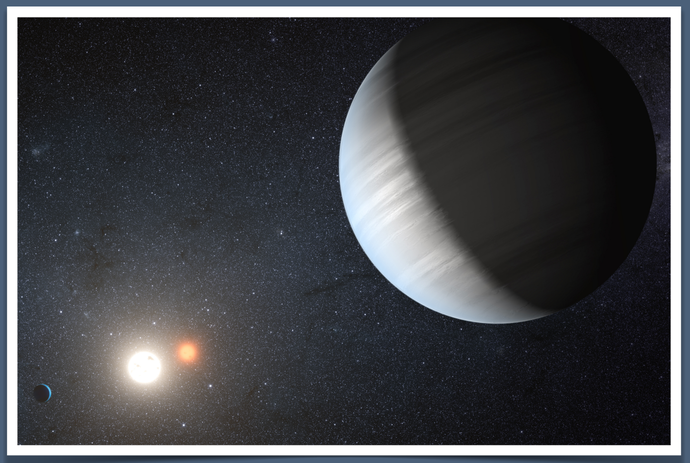
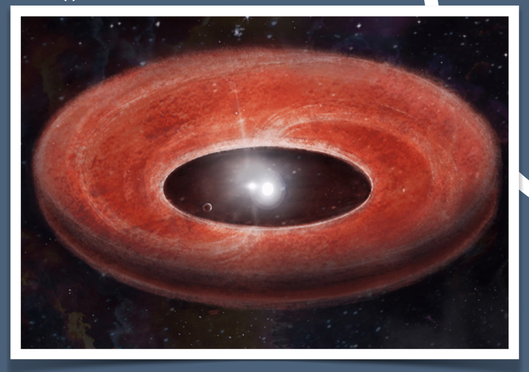
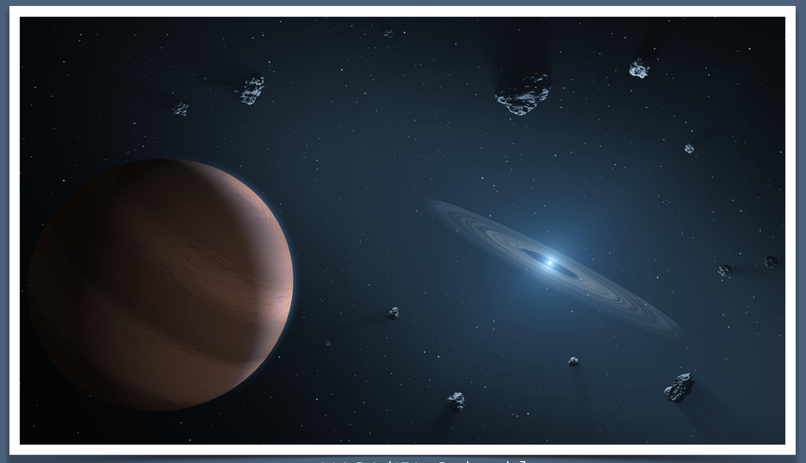


Kepler - 47 NASA/Ames/JPL-Caltech

Image credit: N. Stecki



Second generation formation



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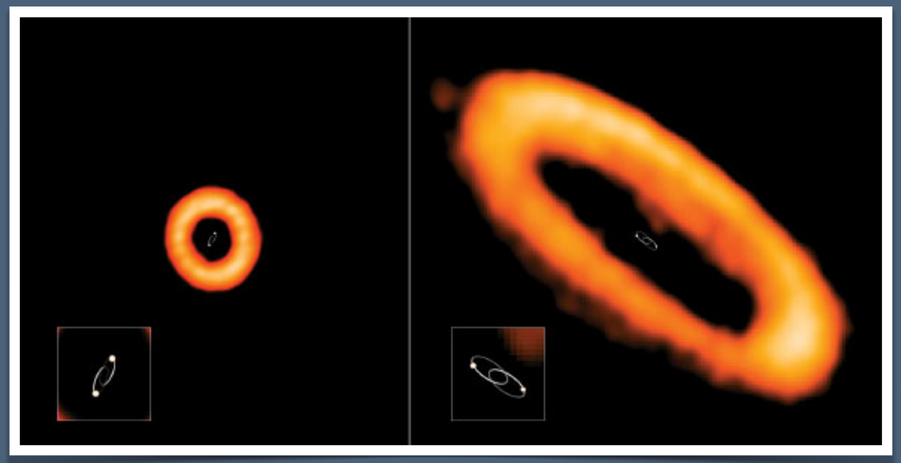

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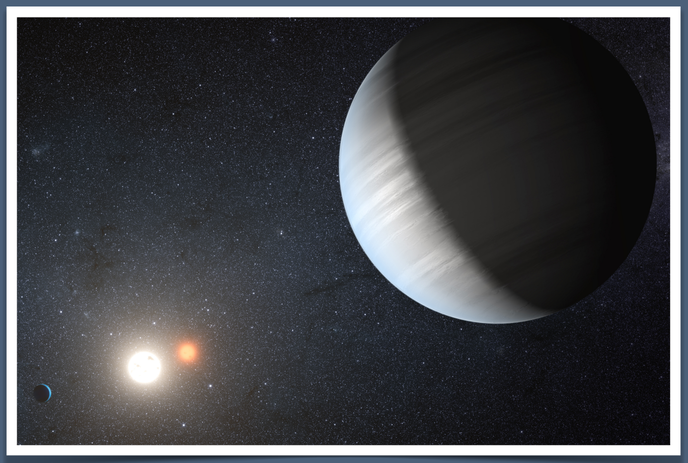

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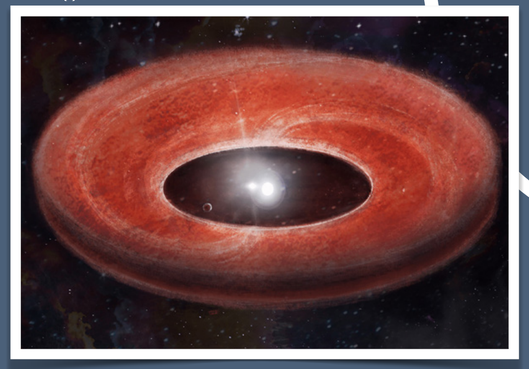
Stellar formation, evolution and dynamics

Image credit: N. Stecki



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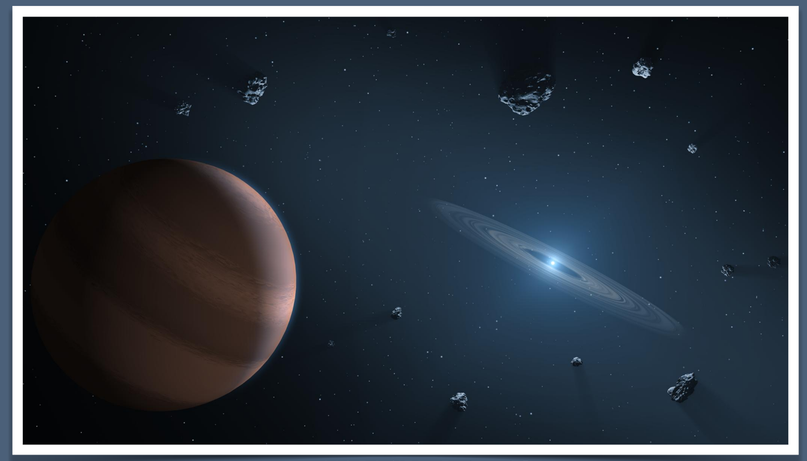

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Survivals studies
and observations

Workshop goals

The goal of the meeting is to gather together experts of **observations and theory** in these **four research areas** and discuss the fascinating array of scientific challenges and opportunities concerning CBPs.

1. **Formation and Stability**
   - How does the gravitational influence of two stars shape planet formation?
   - What factors determine the stability of their orbits, and how close can they orbit before instability arises?
   - What is the formation rate of CBPs in the Galaxy ?

2. **Inner Binary Evolution**
   - What role do tidal interactions and angular momentum exchange within the binary play in shaping the surrounding planetary system?
   - What is the effect of the stellar wind throughout evolution?

3. **Second-Generation and Hybrid Formation**
   - What conditions are necessary for second-generation or hybrid planet formation to occur, and how common might this process be?
   - Are differences in the CB disc chemistry/size (compared to pre-MS) affecting formation timescales and/or the likelihood of a specific class of planet to form ?

4. **Detection Challenges**
   - Why are circumbinary planets harder to detect, and how can observational methods be optimised?
   - What unique signatures (e.g., transits, radial velocity) do they produce as a function of their inner binary evolution?

5. **Population and diversity**
   - How common are circumbinary planets, and what types are most likely to form? Is there a bias toward gas giants, ice giants, or terrestrial planets in these environments?
   - Do the binary stars' gravitational interactions lead to unique orbital configurations?
   - How common are circumbinary planets in the Galaxy?

6. **Evolution and Long-Term Dynamics**
   - How do circumbinary planets evolve over time, and how are they affected by changes in the binary system?
   - Are planets more likely to be ejected, collide, or migrate in response to binary star evolution?
   - Can (and how?) detection of post-CE exoplanet can help constrain the CE phase of the binary ?

7. **Broader Implications**
   - What insights can circumbinary systems provide about planet formation and orbital dynamics in complex environments?
   - How can circumbinary planets inform our understanding of planetary diversity across different stellar environments?

Sessions

Tuesday (9:55 - 18-30)

1a. CB disc properties - observations
1b CB disc properties - theory

Wednesday (9:15 - 16:45)

2. MS systems - observations + theory

Thursday (10:00 - 17:45)

3. Binary and triple system evolution - theory
4a. Post MS systems - Observations

Friday (9:30 - 15:30)

4b. Post MS systems - theory
5. Future perspectives

All days include a 1 hr long discussion at the end

SOCIAL DINNER

Wednesday @ 8PM

Borderline Firenze Restaurant

Fixed Menu - 50 euros: 4 course meal + unlimited water and Chianti wine.

Receipts will be provided at the Restaurant

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Thursday morning the start is at 10 AM ;)

FEEL FLORENCE

Organize your trip | Experiences & Itineraries | Events | Points of interest | Info

VISIT FLORENCE

Welcome!

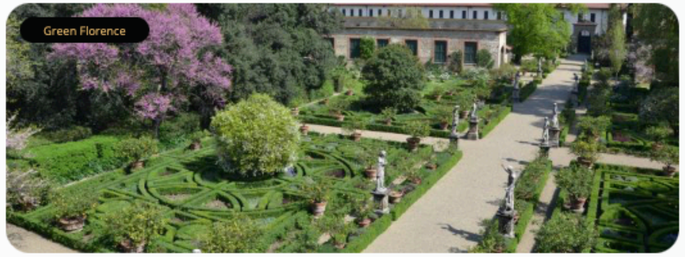
Discover Florence and its territory!

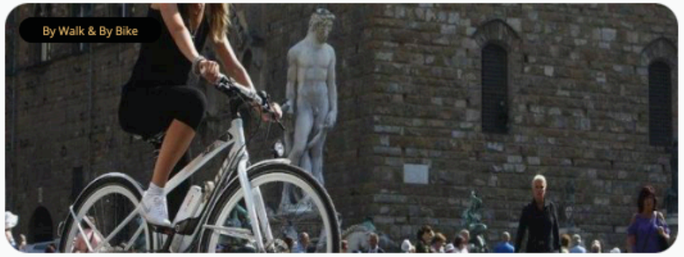
...over Florence and its Metropolitan Area

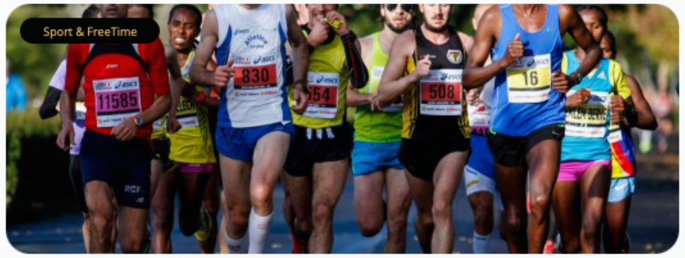
...l Tourism website of the Metropolitan City and of the Municipality of Florence.
...g points of interest, find the opening times of museums and all the events taking
...llow our tips and itineraries, try the most amazing experiences.

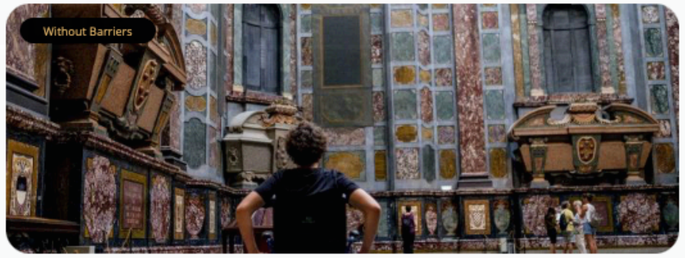
Sustainable Florence

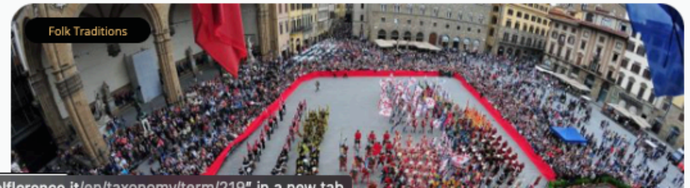
Learn More











VISIT FLORENCE

Events & point of interests...

FEEL FLORENCE

Organize your trip | Experiences & Itineraries | Events | Points of interest | Info

Welcome!

Discover Florence and its territory!

...over Florence and its Metrop...

...l Tourism website of the Metropolitan City and of the M...
...g points of interest, find the opening times of museums ...
...llow our tips and itineraries, try the most amazing expe...

Sustainable F...

Learn More

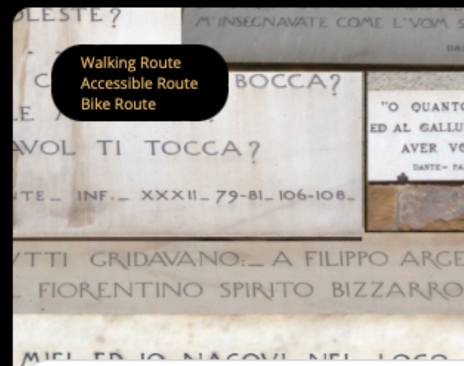
Keyword | Macrocategory: Art & Culture | Category: Accessible route | City: Firenze | District of Florence: - Any - | APPLY FILTER

Florence is also Street Art!

Firenze, Scandicci

From one Bridge to the next - Florence and its river

Firenze

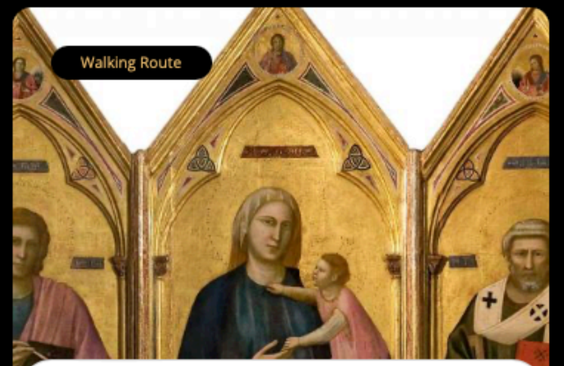


Dante's commemorative plaques in Florence

Firenze

A Baroque Itinerary in Florence

Firenze



Giotto in Florence

Firenze

San Niccolò ditrict

Firenze

Experience & itineraries
- walking tours (description + maps)
- bike/bus/car routes
etc..