



Cosmology and Statistics Days



1 Feb - 2 Feb, 2024



→ ARGOS-CDS, EU HORIZON-INFRADEV (2868 kEuros, 2023-2025)



TITAN

Artificial Intelligence
in Astrophysics

→ TITAN, EU HORIZON-WIDERA (2500 kEuros, 2023-2027), ERA Chair



→ TOSCA, ANR (500k, 2023-2028)



<https://indico.in2p3.fr/event/31718>

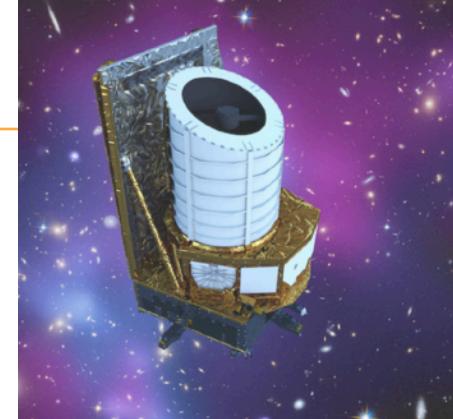




TOSCA

Start: 01/04/2023 End: 30th Sept 2027

- Duration : 54 months



New weak Lensing statistics: optimizing the synergy between Euclid and SKA

TOSCA

PROJECT WORK PACKAGES

Here is the break out of the analysis, and partners involved

WP1	WP2	WP3
Image Map Reconstruction from large surveys such as Euclid/SKA	Machine Learning for Convergence Map Reconstruction	Theoretical predictions for Weak Lensing observables in Euclid / SKA
NICE (<i>A.FERRARI</i>)	ENSI CAEN (<i>J.FADILI</i>) + CEA (<i>J.-L. STARCK</i>)	CEA + UNIV. GENEVA (<i>M.KUNZ</i>)
1 PhD x 3 years in Nice	1 postdoc x 2 years in CAEN	1 postdoc x 3 years at CEA

- 4 Partners

CEA Paris-Saclay: [J.L. Starck](#), M. Kilbinger, S. Farrens, F. Lanusse, L. Goh, V. TS, H.

Univ. de La Côte d'Azur: [A.Ferrari](#), S. Prunet, C. Richard, M. Spinelli, [P. Tripathi](#), S. Wang

ENSI Caen: [J.Fadili](#), [H. Leterme](#) **Univ. Genève:** [M. Kunz](#)

ESA: V. Pettorino



ARGOS

ARGOS



A leading-edge European radio telescope for multi-messenger astrophysics

ARGOS is a concept TRL2 for a leading-edge, low-cost, sustainable radio interferometer



PI: John Antoniadis (IA-FORTH)



The slide features a central white rounded rectangle containing logos for six organizations. From top-left to bottom-right, the logos are: FORTH (Foundation for Research and Technology-Hellas), Max Planck Institute for Radio Astronomy, University of Piraeus Research Center, CosmoStat, CEA, and AIM. To the right of each logo is a small national flag: Greece, Germany, Greece, France, and France respectively.

Around 30 members from 5 different institutions in 3 different countries.



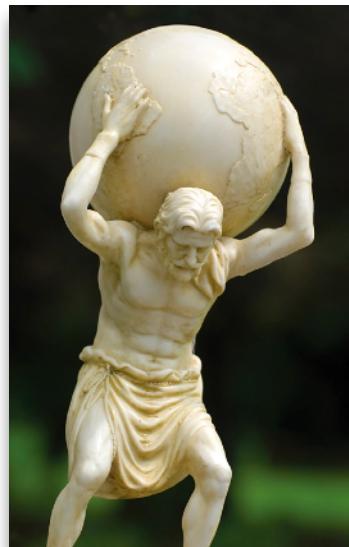
TITAN : 2023 to 2027



Frugal Artificial Intelligence and Application in Astrophysics, ERA Chair in Astro-Informatics at ICS-FORTH and IA-FORTH

Interdisciplinary center of excellence to develop the tools, methods and applications of computer science, machine learning and statistics for research and education in data-driven astronomy.

The TITAN team will work closely with the CosmoStat team on joint projects relating to multi-channel data analysis, high-dimensional data processing and weak lensing in the optical and radio domains.



Jean-Luc Starck (ERA Chair) and Panos Tsakalides (Coordinator)



TITAN TEAM at FORTH (IA & ICS)



J.L. Starck
ERA Chair



P. Tsakalides
Coordinator



Staff

G. Tsagkatakis. G. Tzagkarakis



IA

V. Charmandaris V. Vasiliki T. Diaz-Santos



Postdocs



A. Aidini



A. Gkogkou



V. Bonjean

?

Admin & Technical



M. Papadaki



S. Roumpakis

PhD



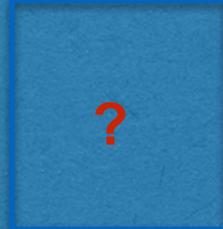
A. Ternesnov



P. Gorbatchev



A. Lahiry



FORTH Staff position



LCS Team



Staff

S. Farrens, M. Kilbinger , F. Lanusse, J.L. Starck



Engineers



Postdocs



L. Baumont

H. Leterme

Postdoc
TOSCA

Postdoc
ARGOS

Postdoc
Euclid

Calum Murray

Engineer/
Researcher
Weak Lensing

PhD



E. Centofanti

S. Guerini

L. Goh Wan Khee

Vilasini T.S.

F. Hervas Peters

?

Staff position



2023

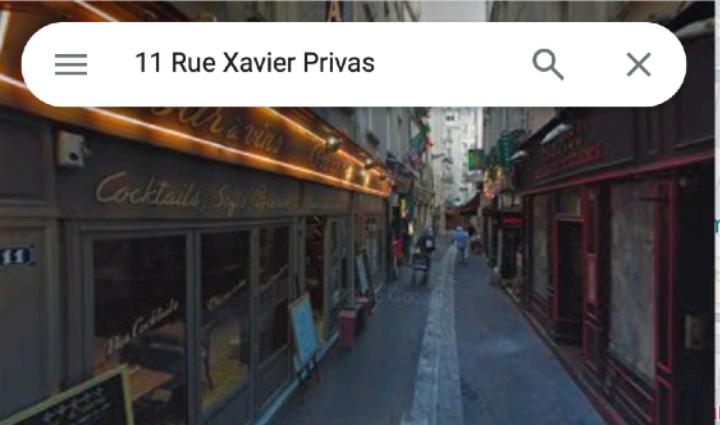


- ✓ Hiring many PhDs and postdocs
- ✓ Good Coordination with the CosmoStat team (visit of 6 CosmoStat researchers), and several visits during the winter from FORTH to CEA and a joint meeting on Feb 1-2, 2024 at CEA.
- ✓ 2023 Scientific Events
 - Seminar Serie
 - Summer School in Sept 2023.
 - 2 TOSCA meetings, 1 ARGOS meeting, monthly TITAN meeting
- ✓ Weak Lensing Collaboration working well (Andreas, Lucie, Martin, Vilasini, JL)

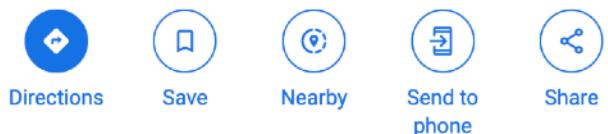
2024

- ✓ Expect more scientific results in Y2 when the team will be almost complete.
- ✓ Complete the hiring
- ✓ 2023 Scientific Events
 - COSMO21 conference in May 2024 (Chania, Arsenal conference center).
 - June 6-7: Next Joint ARGOS-TOSCA-TITAN meeting in Crete

Feb 1-2 CosmoStat Days



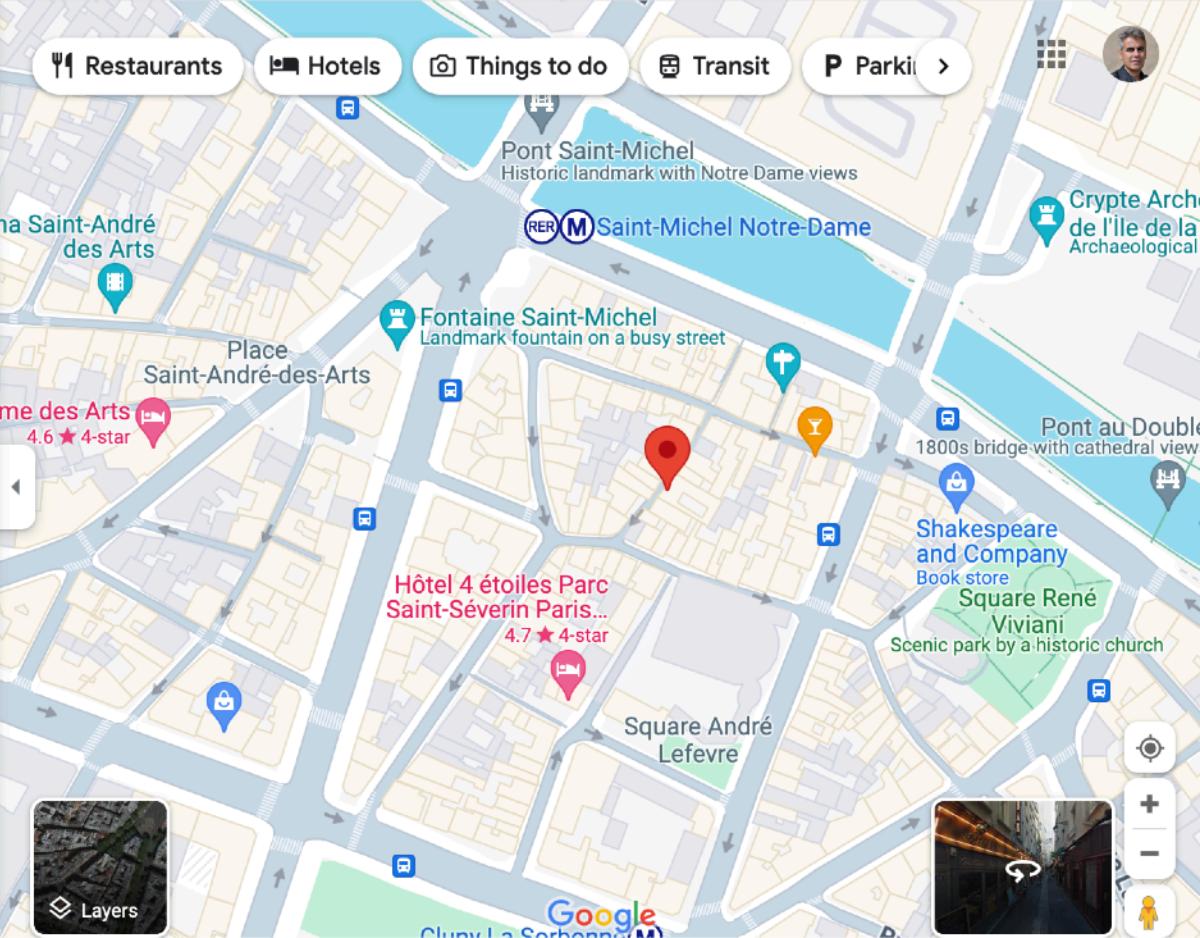
11 Rue Xavier Privas



11 Rue Xavier Privas, 75005 Paris

V83W+35 Paris

Suggest an edit on 11 Rue Xavier Privas



-Feb 2 evening, 20h: social dinner

11 Onze Wine-Cocktail-Tapas, 11 rue Xavier Privas , 75005 PARIS