



Lapo Cioni

Email address: lapo.cioni@unifi.it

Date of birth: 08/09/1994 Nationality: Italian

WORK EXPERIENCE

[01/11/2019 – Current] **Ph.D. in mathematics**

Università degli Studi di Firenze

City: Firenze

Country: Italy

EDUCATION AND TRAINING

[2016 – 2019] **Master degree in mathematics**

Università degli Studi di Firenze

Address: Firenze, Italy

Final grade: 110/110 cum laude

Thesis: Sorting permutations with stacks in series: combinatorics and algorithms

[2013 – 2016] **Bachelor degree in mathematics**

Università degli Studi di Firenze

Address: Firenze, Italy

Final grade: 110/110

Thesis: Enumerative Results on the Schröder Pattern Poset

[2013] **High school diploma**

Liceo scientifico Gobetti

Address: Bagno a Ripoli (FI), Italy

Final grade: 95/100

LANGUAGE SKILLS

Mother tongue(s): Italian

Other language(s):

English

LISTENING C1 READING C1 WRITING B2

SPOKEN PRODUCTION B2 SPOKEN INTERACTION B2

Spanish

LISTENING B1 READING B1 WRITING A2

SPOKEN PRODUCTION A2 SPOKEN INTERACTION A2

PUBLICATIONS

[2022]

The interval posets of permutations seen from the decomposition tree perspective

<https://arxiv.org/abs/2110.10000>

Mathilde Bouvel, Lapo Cioni, Benjamin Izart, The interval posets of permutations seen from the decomposition tree perspective.

Unpublished, currently in peer review.

[2022] **Preimages under the bubblesort operator**

<https://www.combinatorics.org/ojs/index.php/eljc/article/view/v29i4p32>

Mathilde Bouvel, Lapo Cioni, Luca Ferrari, Preimages under the bubblesort operator, Electronic Journal of Combinatorics, 29 (2022), #P4.32.

[2022] **Preimages under a popqueue-sorting algorithm**

<https://sciendo.com/article/10.2478/puma-2022-0010>

Lapo Cioni, Preimages under a popqueue-sorting algorithm, Pure Mathematics and Applications, vol.30, no.1, 2022, pp.63-67.

Conference proceedings.

[2021] **Preimages under the QueueSort algorithm**

<https://www.sciencedirect.com/science/article/abs/pii/S0012365X21002740>

Lapo Cioni, Luca Ferrari, Preimages under the QueueSort algorithm, Discrete Mathematics, Volume 344, Issue 11, November 2021, 112561.

[2021]

Characterization and enumeration of preimages under the QueueSort algorithm

https://link.springer.com/chapter/10.1007/978-3-030-83823-2_37

Lapo Cioni, Luca Ferrari, Characterization and Enumeration of Preimages Under the QueueSort Algorithm, Extended Abstracts EuroComb 2021. Birkhäuser, Cham, 2021. 234-240.

Conference proceedings.

[2020] **Stack Sorting with Increasing and Decreasing Stacks**

<https://www.combinatorics.org/ojs/index.php/eljc/article/view/v27i1p1>

Giulio Cerbai, Lapo Cioni, Luca Ferrari, Stack Sorting with Increasing and Decreasing Stacks, Electronic Journal of Combinatorics, 27 (2020) #P1.1 (17 pp.).

CONFERENCES AND SEMINARS

[06/09/2022 – 07/09/2022]

International Conference on Enumerative Combinatorics and Applications Virtual ICECA 2022

Virtual conference

[20/06/2022 – 24/06/2022] **Permutation Patterns 2022** Valparaiso University (Valparaiso, Indiana)

Presentation "The interval posets of permutations seen from the decomposition tree perspective"

[13/06/2022 – 15/06/2022] **GAScom 2022** Università dell'Insubria, Varese

Presentation "Preimages under a popqueue-sorting algorithm"

[06/09/2021 – 10/09/2021] **Eurocomb 2021** Virtual conference

Presentation "Characterization and enumeration of preimages under the Queuesort algorithm"

[21/06/2021 – 25/06/2021] **Lattice Paths 2021** Virtual conference

[15/06/2021 – 16/06/2021] **Permutation Patterns 2021** Virtual conference

Presentation "Sorting with a popqueue"

[30/06/2020 – 01/07/2020] **Permutation Patterns 2020** Virtual conference

Poster "Preimages under Queuesort"

[07/06/2017 – 09/06/2017] **Automata 2017** Università degli Studi di Milano - Bicocca

UNPUBLISHED CONFERENCE PROCEEDINGS

[2022]

The interval posets of permutations seen from the decomposition tree perspective

Mathilde Bouvel, Lapo Cioni, Benjamin Izart, The interval posets of permutations seen from the decomposition tree perspective, Permutation Patterns 2022.

<https://www.valpo.edu/mathematics-statistics/permutation-patterns-2022/program/>

[2021] **Sorting with a popqueue**

Lapo Cioni, Luca Ferrari, Sorting with a popqueue, Virtual Workshop on Permutation Patterns 2021.

<https://combinatorics.cis.strath.ac.uk/pp2021/>

[2020] **Preimages under the Queuesort algorithm**

Lapo Cioni, Luca Ferrari, Preimages under the Queuesort algorithm, Virtual Workshop on Permutation Patterns 2020.

[2017] **Enumerative Results on the Schröder Pattern Poset**

Lapo Cioni, Luca Ferrari, Enumerative Results on the Schröder Pattern Poset, Automata 2017 proceedings.

Lecture notes in computer science 10248, Springer 2017, ISBN 978-3-319-58630-4

<https://link.springer.com/book/10.1007/978-3-319-58631-1>

ORGANIZING CONFERENCES

GAScom 2022

Member of the organizing committee of GAScom 2022

<https://gascom2020.dista.uninsubria.it/>

OTHER SCIENTIFIC ACTIVITY

Peer review

Peer reviewer for Annals of Combinatorics

[19/06/2017 – 23/06/2017] **Modelling week**

Partecipation to the XI UCM Modelling Week, working on the problem "Real-time face recognition in live video streams"

http://www.mat.ucm.es/congresos/mweek/XI_Modelling_Week/index.htm

[2022] **INdAM-GNCS project**

Member of the 2022 INdAM-GNCS project "Stringhe e matrici. combinatoria, enumerazione e algoritmi".

[2020 – 2021] **INdAM-GNCS project**

Member of the 2020-2021 INdAM-GNCS project "Combinatoria delle permutazioni, delle parole e dei grafi: algoritmi e applicazioni".

DIGITAL SKILLS

My Digital Skills

Intermediate knowledge in HolLight | Microsoft Office | Windows

Programming languages

C basics | Macauley basics | Python basics

Math softwares

Advanced knowledge in LaTeX | Intermediate knowledge in Matlab