

Beatrice Sarti



EDUCATION AND TRAINING

2024 PhD – Computer Science **INF/01**

Apr Computer Science Department, University of Study of Milan, Milan (Italy)

2020 Master degree - Scienze per la conservazione e la diagnostica dei beni culturali Feb (Cultural heritage Conservation Science) **LM-11**

Science and Technology Faculty, University of Study of Milan, Milan (Italy)

2017 Bachelor degree - Scienze e tecnologie per lo studio e la conservazione dei Oct beni culturali e dei supporti per l'informazione (Science and Technology for Studying and Preserving the Cultural Heritage and Information Storage Media) **L-43**

Science and Technology Faculty, University of Study of Milan, Milan (Italy)

RESEARCH PROJECT

2024- Research Fellow for PRIN project:

2025 CHROMA(Bio)_Spectral reflectance profiles of colored subaerial biofilms as indicators of stone heritage susceptibility to biodeterioration

REVIEWING ACTIVITY

Reviewer for the following international journals:

- CCSJ (Color Culture and Science Journal)
- Color Research and Application
- JOSAA (Journal of the Optical Society of America A)

Reviewer for the following international books:

- RCASB (Research Culture And Science Books)

Reviewer for the following international conferences:

- Florence Heri-Tech International

SCIENTIFIC PUBLICATIONS

Papers on international journals

[IP07] M. Longoni, S. Scipioni, A. Plutino, B. Sarti, A. Rizzi, S. Bruni. "Chromogenic dyes in motion picture films at the turn of the 20th and 21st centuries: a multi-technique comparative study". *Microchemical Journal* 199 (2024), pp. 110120-1–110120-8, DOI: [10.1016/j.microc.2024.110120](https://doi.org/10.1016/j.microc.2024.110120)

[IP06] B. Sarti, A. Plutino and A. Rizzi. "HyperspectrACE: a hyperspectral approach to color and contrast image enhancement". *Journal of Imaging Science and Technology Journal of Imaging Science and Technology* 67.1 (2023), pp. 010506-1–010506-18, DOI: [10.2352/J.ImagingSci.Technol.2023.67.1.010506](https://doi.org/10.2352/J.ImagingSci.Technol.2023.67.1.010506)

[IP05] A. Cattao, B. Sarti, A. Plutino, A. Rizzi. "On the Identification of Colour Photographic Processes". *Heritage* 5.4 (2022), pp. 4074–4088, DOI: [10.3390/heritage5040210](https://doi.org/10.3390/heritage5040210)

[IP04] B. Sarti, A. Plutino, A. Crespi, G. Morabito, and A. Rizzi. "FiRe2: An Online Database for Photographic and Cinematographic Film Technical Data". *Journal on Computing and Cultural Heritage* 16.1 (2022), pp. 1–12, DOI: [10.1145/3532520](https://doi.org/10.1145/3532520)

[IP03] A. Plutino, B. Sarti, L. Armellini and A. Rizzi. "A computational model of human colour vision for film restoration". *Gestalt Theory* 44.1-2 (2022), pp. 175–182, DOI: [10.2478/gth-2022-0005](https://doi.org/10.2478/gth-2022-0005)

[IP02] A. Plutino, B. Sarti, G. Simone and A. Rizzi. "Movie barcode as support for video analysis and film restoration". *SCIRES-IT-SCientific RESearch and Information Technology* 11.2 (2021), pp. 33–40, DOI: [10.2423/i22394303v11n2p33](https://doi.org/10.2423/i22394303v11n2p33)

[IP01] A. Plutino, A. Crespi, G. Morabito, B. Sarti and A. Rizzi. "FiRe2: a Call for a Film Repository of Technical Data and Memories for Photo and Movie Restoration". *Cinergie – Il Cinema e le altre Arti* 20 (2021), pp. 69–83, DOI: [10.6092/issn.2280-9481/13106](https://doi.org/10.6092/issn.2280-9481/13106)

Chapters on books

Personal information

Postdoctoral Research Fellow

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Department of Computer Science.
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- [CB02] B. Sarti, A. Plutino and G. Simone. "Digital color acquisition and management of cultural heritage: from spectrophotometry to digital imaging" in "Digitally enhanced design. Breakthrough tools, processes, and expressive potentials". Franco Angeli, 2021. Chap. 2, pp. 29–46. ISBN: 9788835125716
- [CB01] S. Bruni, E. Castiglioni, M. Rottoli, B. Sarti and A. Zara. "I resti archeobotanici: analisi botaniche e chimiche" in "Nora. Il tempio romano 2008-2014 Volume II.1 - I Materiali preromani". Scavi di Nora X. Edizioni Quasar, 2021. Chap. 34, pp. 611–625. ISBN: 978-88-5491-148-2, DOI: [10.48235/1004](https://doi.org/10.48235/1004)

Papers on international conference proceedings

- [IC13] B. Sarti, F. Villa, F. Cappitelli and A. Rizzi "Chromatic bio-indicators of biofilm community structure on stone heritage". Proceedings of the 15th Congress of the International Colour Association 2023. International Colour Association (AIC), 2023, pp. 412–417, ISBN: 978-0-6484724-5-2
- [IC12] S. Dini, L. A. Ludovico, A. Rizzi, B. Sarti and M. J. Valero Gisbert "A Web Platform to Investigate the Relationship Between Sounds, Colors and Emotions". Computer-Human Interaction Research and Applications. Springer Nature, 2023, pp. 244–257, DOI: [10.1007/978-3-031-49368-3_15](https://doi.org/10.1007/978-3-031-49368-3_15)
- [IC11] B. Sarti, L. Armellin, A. Plutino and A. Rizzi. "Simplifying the colour rendering index". Proceedings of the 30th Session of the CIE. CIE, 2023, pp. 836–845, ISBN: 978-3-902842-77-0, DOI: [10.25039/x50.2023](https://doi.org/10.25039/x50.2023)
- [IC10] M. Longoni, B. Sarti, A. Plutino, A. Rizzi and S. Bruni. "Towards the identification of original dyes in chromogenic films: the development of an approach based on chemical analyses" Color and Colorimetry. Multi-disciplinary Contributions. Vol. XVIII A. Research Culture And Science Books series (RCASB). Gruppo del Colore - Associazione Italiana Colore, 2023, pp. 228–231. ISBN: 978-88-99513-22-1, DOI: [10.23738/RCASB.009](https://doi.org/10.23738/RCASB.009)
- [IC09] M. F. Gaspani, B. Sarti, A. Plutino and A. Rizzi. "Early Cinema: spectral and colorimetric analysis of Tinting dyes for film restoration" Color and Colorimetry. Multidisciplinary Contributions. Vol. XVIII A. Research Culture And Science Books series (RCASB). Gruppo del Colore - Associazione Italiana Colore, 2023, pp. 257–264. ISBN: 978-88-99513-22-1, DOI: [10.23738/RCASB.009](https://doi.org/10.23738/RCASB.009)
- [IC08] C. Thielemann, L. Armellin, B. Sarti and Alice Plutino. "Ozaphan films: preliminary study on color analysis and digitization" Color and Colorimetry. Multidisciplinary Contributions. Vol. XVIII A. Research Culture And Science Books series (RCASB). Gruppo del Colore - Associazione Italiana Colore, 2023, pp. 249–256. ISBN: 978-88-99513-22-1, DOI: [10.23738/RCASB.009](https://doi.org/10.23738/RCASB.009)
- [IC07] A. Buttazzoni, B. Sarti and A. Rizzi. "Modern boardgames: a colorimetric analysis from the point of view of color deficiencies" Color and Colorimetry. Multidisciplinary Contributions. Vol. XVIII A. Research Culture And Science Books series (RCASB). Gruppo del Colore - Associazione Italiana Colore, 2023, pp. 104–110. ISBN: 978-88-99513-22-1, DOI: [10.23738/RCASB.009](https://doi.org/10.23738/RCASB.009)
- [IC06] B. Sarti, A. Plutino, M. Longoni, A. Rizzi and S. Bruni. "Chemistry and colorimetry: preliminary investigation on chromogenic motion picture film". Colour Photography and Film: sharing knowledge of analysis, preservation, conservation, migration of analogue and digital materials 2022. Research Culture And Science Books series (RCASB). Gruppo del Colore - Associazione Italiana Colore, 2023, pp. 41–48. ISBN: 978-88-99513-20-7, DOI: [10.23738/RCASB.008](https://doi.org/10.23738/RCASB.008)
- [IC05] A. Cattaneo, B. Sarti, A. Plutino and A. Rizzi. "On the identification of colour photographic processes from the XX century". Colour Photography and Film: sharing knowledge of analysis, preservation, conservation, migration of analogue and digital materials 2022. Research Culture And Science Books series (RCASB). Gruppo del Colore - Associazione Italiana Colore, 2023, pp. 127–129. ISBN: 978-88-99513-20-7, DOI: [10.23738/RCASB.008](https://doi.org/10.23738/RCASB.008)
- [IC04] A. Plutino, B. Sarti and A. Rizzi. "Models and Mathematical Issues in Color Film Restorations". INdAM Workshop: Mathematical modeling and Analysis of degradation and restoration in Cultural Heritage. Vol. 55. Springer INdAM Series (SINDAMS). Springer, 2021, pp. 209–224, DOI: [10.1007/978-981-99-3679-3_13](https://doi.org/10.1007/978-981-99-3679-3_13)
- [IC03] B. Sarti, A. Crespi, G. Morabito, A. Plutino and A. Rizzi. "Film Repository for Restoration (FiRe2): identification of photographic and cinematographic films." Proceedings of the International Colour Association (AIC) Conference 2021. International Colour Association (AIC), 2021, pp. 1341–1346. ISBN: 978-0-6484724-3-8
- [IC02] A. Plutino, B. Sarti, G. Simone and A. Rizzi. "A Film in a Frame: Movie Barcodes for Film Restoration." Proceedings of the International Colour Association (AIC) Conference 2021. International Colour Association (AIC), 2021, pp. 1305–1310. ISBN: 978-0-6484724-3-8
- [IC01] J. Bonetto, S. Bruni, E. Castiglioni, E. Madrigali, M. C. Metelli, M. Rottoli, B. Sarti and A. Zara. "Nuovi dati sulla conservazione e sulla cottura di alimenti da due contesti fenicio-punici di Nora (Sardegna, Italia)" in "La Alimentacion en el mundo fenicio-púnico. Producciones, procesos y consumos" Vol. XXXII, Spal Monografías Arqueología. Editorial Universidad de Sevilla, 2020, pp. 253–274. ISBN: 9788447229321

Papers at international conferences without proceedings

- [OI01] B. Sarti, "Human visual system (HVS): Spatial mechanism, Retinex and Spatial Color Algorithms (SCA)" ETRA 2024 ACM Symposium on Eye Tracking Research and Applications – Tutorial 4 Eye-tracking and color vision deficiencies (Glasgow, United kingdom), 7th June 2024.

Papers at national conferences with proceedings

- [NC01] B. Sarti, A. Plutino, A. Rizzi, "Glare ottico nelle immagini iperspettrali", XVI Conferenza del colore, Bergamo, 3-4 September 2020.

Papers at national conferences without proceedings

- [ON03] A. Rizzi, B. Sarti, "Quanta sinestesia c'è in noi?", Dialoghi sulla sinestesia, secondo incontro: suono colore immagine, omaggio a Skrjabin nel 150mo della nascita, Conservatorio di musica F.A. Bonporti, Riva del Garda (Trento, Italy), 24th August 2022.
- [ON02] A. Cattaneo, B. Sarti, A. Plutino, A. Rizzi, "Identificazione e conservazione delle pellicole fotografiche a colori della seconda metà del XX secolo", A Conservation Carol 2020, Università degli Studi di Milano, 18th December 2020
- [ON01] B. Sarti, A. Plutino, N. Richard, A. Rizzi, "Analisi di imaging iperspettrale applicato ai beni culturali", A Conservation Carol 2019 – Approcci interdisciplinari nell'ambito della conservazione dei beni culturali, Milan, 20th December 2019