

PERSONAL INFORMATION

Carlo Combi

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 Scopus Author's ID 7003413825

Sex M | Date of birth 24/05/1962 | Nationality Italian

Current Position: Full Professor of Computer Science (INFO-01/A – Informatica)

Scientific Profile: Main research interests are related to the artificial intelligence, database and information system fields, with an emphasis on the management of clinical and temporal information.

The following specific research topics have been considered by Carlo Combi:

- Business processes: conceptual modeling, architectures, and management of clinical processes and pathways
- Temporal constraint networks: consistency and controllability
- Data warehouses
- Data and pattern mining
- Natural language processing to support Healthcare Decision Support Systems
- Clinical information visualization.

GOLDEN PARAGRAPH

He is author of more than 200 papers published on international journals and proceedings of international conferences. He is author, with Elpida Keravnou - University of Cyprus, and Yuval Shahar - Ben-Gurion University of the Negev, of the book "Temporal Information Systems in Medicine", Springer, 2010. He co-edited, with Giuseppe Pozzi - Politecnico di Milano, and Pierangelo Veltri - University Magna Grecia of Catanzaro, the book "Process Modeling and Management for Healthcare", Chapman & Hall/CRC Healthcare Informatics Series, 2018.

Bibliometric Indicators:

Publications: 242; # Citations 3483; H index 29 (Scopus, as of April 21, 2026)

Citations 5370; H index 40; H Index (5 y) 17 (Google Scholar, as of April 21, 2026)

WORK EXPERIENCE

2005 – Current

Full Professor of Computer Science, University of Verona

2001 – 2005

Associate Professor of Computer Science, University of Verona

1996 – 2001

Assistant Professor of Computer Engineering, University of Udine – Italy

EDUCATION AND
TRAINING

1994-1996

Post-Doc in Biomedical Informatics

Politecnico di Milano, ITALY (Temporal clinical databases: models and query languages)

1989-1993

PhD in Biomedical Engineering

Politecnico di Milano, ITALY (Modeling temporal data in Electronic Medical Records through an Object-Oriented Approach)

1981-1987

Laurea Degree in Electronic Engineering

Politecnico di Milano, ITALY (Data Compression techniques for ECG signals)

ORGANIZATIONAL/
MANAGERIAL
RESPONSIBILITIESOrganisational / Institutional
roles**2021 – Current**

Coordinator of the Collegio Didattico (Teaching Body) di Informatica of the University of Verona

2018 – 2019

Vice-Rector of the University of Verona

2013 – 2018

Member of the Executive Board of the University of Verona

2007 – 2012

Head of the Department of Computer Science – University of Verona

International Scientific
Organisational roles**2017 – Current**

Editor in Chief of the journal Artificial Intelligence in Medicine (AIIM - Elsevier), a top-ranked (Q1) journal in Artificial Intelligence, Medicine, Healthcare Informatics, and Biomedical Engineering

2022 – Current

Steering committee co-chair of TIME - International Symposium on Temporal Representation and Reasoning

2013 – Current

Steering committee co-chair of IEEE ICHI - IEEE International Conference on Healthcare Informatics

2018 – Current

Editorial board member of the "Journal of Healthcare Informatics Research (JHIR)" (Springer)

ADDITIONAL
INFORMATIONMost relevant publications
in the last 12 YearsHOLLAUF, F.S, POSENATO, R., **COMBI**, C., EDER, J. Modeling oracles in simple temporal networks with uncertainty. Inf. Comput. 307: 105382 (2025)AZZARI, A., BICEGO, M., **COMBI**, C., CRACCO, A., SALA, P. TSRF-Dist: a novel time series distance based on extremely randomized canonical interval forests. Data Min. Knowl. Discov. 39(3): 27 (2025)

- AMICO, B., **COMBI**, C., RIZZI, R., SALA, P. Predictive mining of multi-temporal relations. *Inf. Comput.*, 301: 105228 (2024)
- CRUCIANI, F., APARO, A., BRUSINI, L., **COMBI**, C., STORTI, S.F., ROSALBA GIUGNO, R., GLORIA MENEGAZ, G., BOSCOLO GALAZZO, I. Identifying the joint signature of brain atrophy and gene variant scores in Alzheimer's Disease. *Journal of Biomedical Informatics*, 2024, vol 149: 104569 (2024)
- POSENATO, R., **COMBI**, C. Flexible temporal constraint management in modularized processes. *Inf. Syst.* 118: 102257 (2023)
- COMBI**, C., JULIO C. FACELLI, PETER HADDAWY, JOHN H. HOLMES, SABINE KOCH, HONGFANG LIU, JOCHEN MEYER, MOR PELEG, POZZI, G., GREGOR STIGLIC, PIERANGELO VELTRI, CHRISTOPHER C. YANG: The IHI Rochester Report 2022 on Healthcare Informatics Research: Resuming After the CoViD-19. *J. Heal. Informatics Res.* 7(2): 169-202 (2023)
- COMBI**, C., OLIBONI, B., ZERBATO, F. Integrated Exploration of Data-Intensive Business Processes. *IEEE Trans. Serv. Comput.* 16(1): 383-397 (2023)
- COMBI, C., AMICO, B., BELLAZZI, R., ANDREAS HOLZINGER, JASON H. MOORE, MARINKA ZITNIK, JOHN H. HOLMES: A manifesto on explainability for artificial intelligence in medicine. *Artif. Intell. Medicine* 133: 102423 (2022)
- POSENATO, R., **COMBI**, C. Adding flexibility to uncertainty: Flexible Simple Temporal Networks with Uncertainty (FTNU). *Information Sciences*, 2023, vol. 584, p. 784-807
- SHORTLIFFE, E.H., PELEG, M., **COMBI**, C., CHANG, A.C., JUSTYNA VINCI, J. Publishing Artificial Intelligence Research Papers: A Tale of Three Journals. *Artificial Intelligence Medicine*, 2021, vol. 113: 102037
- COMBI**, C., OLIBONI, B., WESKE, M., ZERBATO, F. Seamless conceptual modeling of processes with transactional and analytical data. *Data and Knowledge Engineering*, 2021, vol. 134: 101895
- COMBI**, C., RIZZI, R., SALA, P. Checking Sets of Pure Evolving Association Rules. *Fundamenta Informaticae*, 2021, vol. 178(4), p. 283-313
- ZAVATTERI, M., **COMBI**, C., RIZZI, R., VIGANÒ, L. Consistency checking of STNs with decisions: Managing temporal and access-control constraints in a seamless way. *Information and Computation*, 2021, vol. 280: 104637
- ZAVATTERI, M., **COMBI**, C., VIGANÒ, L. Resource Controllability of Business Processes Under Conditional Uncertainty. *Journal of Data Semantics*, 2021, vol. 10(1-2), p. 19-39
- SALA, P., **COMBI**, C., MANTOVANI, M., RIZZI, R. Discovering Evolving Temporal Information: Theory and Application to Clinical Databases. *SN Computer Science*, 2020, vol. 1, n.3, p. 153-1 – 153-30
- COMBI**, C., OLIBONI, B., ZERBATO, F. A modular approach to the specification and management of time duration constraints in BPMN. *Information Systems*, 2019, vol. 84, p. 111-144
- COMBI**, C., POSENATO, R., VIGANÒ, L., ZAVATTERI, M. Conditional Simple Temporal Networks with Uncertainty and Resources. *Journal of Artificial Intelligence Research*, 2019, vol. 64, p. 931-985
- POSENATO, R., LANZ, A., **COMBI**, C., REICHERT, M. Managing time-awareness in modularized processes. *Software and System Modeling*, 2019, vol. 18(2), p. 1135-1154
- COMBI**, C., MASINI, A., OLIBONI, B., ZORZI, M. E. A hybrid logic for XML reference constraints. *Data and Knowledge Engineering*, 2018, vol. 115, p. 94-115
- COMBI**, C., ZORZI, M., POZZANI, G., MORETTI, U., ARZENTON, E. From narrative descriptions to MedDRA: automagically encoding adverse drug reactions. *Journal of Biomedical Informatics*, 2018, vol. 84, p.184-199

COMBI, C. Editorial from the new Editor-in-Chief: Artificial Intelligence in Medicine and the forthcoming challenges. *Artificial Intelligence in Medicine*, 2017, vol. 76, p. 37-39

COMBI, C., SALA P. Mining approximate interval-based temporal dependencies. *Acta Informatica*, 2015, vol. 53, p. 547-585

JUAREZ. J.M., OCHOTORENA, J.M., CAMPOS, M., **COMBI, C.** Spatiotemporal data visualisation for homecare monitoring of elderly people. *Artificial Intelligence in Medicine*, 2015, vol. 65, p. 97-111

PEEK, N., **COMBI, C.**, MARÍN, R., BELLAZZI, R. Thirty years of artificial intelligence in medicine (AIME) conferences: A review of research themes. *Artificial Intelligence in Medicine*, 2015, vol. 65, n. 1, p. 61-73

COMBI, C., MANTOVANI, M., SABAINI, A., SALA, P., Francesco AMADDEO, F., MORETTI, U., POZZI, G. Mining approximate temporal functional dependencies with pure temporal grouping in clinical databases. *Computers in Biology and Medicine*, 2015, vol. 62, p. 306-324

COMBI, C., LIU, J. Introduction to the ACM TIST Special Issue on Intelligent Healthcare Informatics. *ACM Transactions on Intelligent Systems and Technology*, 2015, vol. 6, n. 4, p. 51:1 – 51:3

MANTOVANI, M., AMICO, B., **COMBI, C.** Discovering predictive trend-event patterns in temporal clinical data. *ACM Symposium on Applied Computing SAC 2021*, p. 570-579

POSENATO, R., ZERBATO, F., **COMBI, C.** Managing Decision Tasks and Events in Time-Aware Business Process Models. *Business Process Management International Conference BPM 2018*, p. 102-118

COMBI, C., OLIBONI, B., WESKE, M., ZERBATO, F. Conceptual Modeling of Processes and Data: Connecting Different Perspectives. *International Conference on Conceptual Modeling ER 2018*, p. 236-250

COMBI, C., OLIBONI, B., WESKE, M., ZERBATO, F. Conceptual modeling of inter-dependencies between processes and data. *ACM Symposium on Applied Computing SAC 2018*, p. 110-119

Projects/Grants

2025-2027

Project DataGEMS, funded by the European Union's Horizon Europe Research and Innovation programme, under grant agreement No 101188416

2022-2025

Project "HEAL Italia per la Medicina di Precisione", Spoke 2: Intelligent Health, funded by European Union - PNRR Piano Nazionale di Ripresa e Resilienza

2023-2026

Project "PREPARE - Personalized Engine for Prostate cancer Evaluation", funded by European Union, Ministero Ministero delle Imprese e del Made in Italy

2022-2026

Project "NBFC National Biodiversity Future Center, CN5 Biodiversity", funded by European Union - PNRR Piano Nazionale di Ripresa e Resilienza

2020-2022

Project "FARm - Filiera dell'Agricoltura Responsabile", funded by Ministero dell'interno e Ministero del Lavoro e delle Politiche Sociali. Multidisciplinary project for the prevention of illegal hiring in agriculture

2019-2023

Project "Process-oriented information systems, Data Warehouses, OLAP and data mining for bank information systems", funded by P4Cards - SIA S.p.A.

2020-2022

Project "ADAIR: From air pollution to brain pollution - novel biomarkers to unravel the link of air pollution and Alzheimer disease", funded by EU - Joint Programme - Neurodegenerative Disease Research JPND

2020-2023

Project "EDIPO: A computational solution for bringing neuroimaging genetic into translational research", funded by CARIVERONA

2017-2018

Project "Extending OLAP data analysis with temporal and statistical operators" - funded by Università di Verona - RIBA

2015-2017

Project "WASPSS – Wise Antimicrobial Stewardship Support Systems" – funded by Ministry of Economy of Spain - project TIN2013-45491-R and by European Funds for Regional Development (EFRD)

2016-2017

Project GNCS 2016 "Integrating national and International spontaneous adverse drug reaction knowledge bases for pattern discovery in pharmacovigilance" funded by Istituto Nazionale di Alta Matematica – Gruppo Nazionale Calcolo Scientifico.

Conferences

Invited Lectures

"Publishing in Health Informatics: Perspectives from Editor-in-Chiefs", IEEE ICHI 2019, Xi'An, June 2019

"Modeling Care Pathways through BPMN and DMN", IEEE RTSI 2017 – 3° International Forum on Research and Technologies for Society and Industry, Modena, September 2017

Oral Communications

"Explainable Artificial Intelligence (XAI): Current Approaches and Paths to the Future." Panel with John H. Holmes, Riccardo Bellazzi, Jason H. Moore, Niels Peek: AMIA 2020 – American Medical Informatics Association

"Mapping Free Text into MedDRA by Natural Language Processing: A Modular Approach in Designing and Evaluating Software Extensions" ACM International Conference on Bioinformatics, Computational Biology, and Health Informatics BCB 2017

"Controlling Time-Awareness in Modularized Processes." Enterprise, Business-Process and Information Systems Modeling Conference BMMDS/EMMSAD 2016

"Automagically Encoding Adverse Drug Reactions in MedDRA." IEEE International Conference on Healthcare Informatics (ICHI 2015), 2015

Honours and awards

2022

AMICO, B., COMBI, C. A 3-Window Framework for the Discovery and Interpretation of Predictive Temporal Functional Dependencies.

AIME 2022 – 20th International Conference on Artificial Intelligence in Medicine, p. 299-309 (**Best Student Paper Award**)

2019

IEEE Award: Recognition for the outstanding organizational activities ICHI - IEEE International Conference on Healthcare Informatics

2016

COMBI, C., OLIBONI, B., ZARDINI, A., ZERBATO, F. Seamless Design of Decision-Intensive Care Pathways. IEEE International Conference on Healthcare Informatics - ICHI 2016, p. 35-45 (**Best Paper Award**)

According to law 679/2016 of the Regulation of the European Parliament of 27th April 2016, I hereby express my consent to process and use my data provided in this CV

Verona, April 21, 2026

Signature

A handwritten signature in black ink, appearing to read 'Carlo Combi', written in a cursive style.