

CURRICULUM VITAE

June 28, 2024

Stefano Merler, born in Trento (Italy) on December 13, 1968.
Director of the Center for Health Emergencies, Bruno Kessler Foundation.

Positions

1995 - 1996: Fellowship, ITC-IRST, Italy

1996 - 1999: Fellowship, Center of Alpine Ecology, Italy

1999 - present: Senior Researcher (permanent position), Bruno Kessler Foundation (FBK), Italy

2013 - 2020: Head of the DPCS (Dynamical Processes in Complex Societies) Research Unit at FBK

2018 - present: Head of the FBK-FEM Joint Research Unit EPILAB

2021 - present: Director of the FBK Center for Health Emergencies

2021 - present: Head of the FBK-ISS Joint Laboratory EPIQ

2022 - present: Head of the FBK-UNITN Joint Laboratory EPIMAT

Research

My research has covered a range of scientific topics related to the epidemiology of infectious diseases, the statistical, mathematical and computational modelling of infectious diseases transmission, the evaluation of the effectiveness of intervention measures. I have carried out research on emerging infectious diseases (influenza, SARS-CoV-2), vector-borne diseases

(chikungunya, yellow fever, Zika, dengue), antimicrobial resistance (Methicillin-resistant *Staphylococcus aureus*, *Klebsiella pneumoniae* carbapenemase producing), childhood diseases (morbillo, chickenpox, respiratory syncytial virus, tuberculosis), filoviruses (Zaire and Sudan ebolaviruses, Marburg), sexually transmitted diseases (mpox).

- Author of 179 research papers, with 159 academic papers for a cumulative JCR 2022 - Impact Factor (updated June 2023) of 1638.5 and 20 conference proceedings and book chapters; h-index: 62 (Google Scholar), 46 (Scopus); total citations: 24864 (Google Scholar), 14047 (Scopus).
- During the COVID-19 pandemic I served as scientific advisor for the Italian National Institute of Health (Istituto Superiore di Sanità), the Italian Ministry of Health, the Special Commissioner for the COVID-19 Emergency (Commissario Straordinario per l’Emergenza COVID-19) and the Italian Scientific and Technical Committee (Comitato Tecnico-Scientifico).
- During the 2009 H1N1 pandemic I served as scientific advisor for the Italian National Institute of Health (Istituto Superiore di Sanità).
- My research groups have obtained fundings of €5,279,922.
- National scientific qualification (2023) as full professor for the disciplinary field of 06/M1 - Hygiene, public health, nursing and medical statistics.
- Awarded with the 15th Bellman Prize (2015) for the paper by P. Poletti et al., *Risk perception and effectiveness of uncoordinated behavioral responses in an emerging epidemic*, *Mathematical Biosciences*, 238(2):80-89, 2012.
- Awarded with the 2016 Aspen Prize for the paper by S. Merler et al., *Spatiotemporal spread of the 2014 outbreak of Ebola virus disease in Liberia and the effectiveness of non-pharmaceutical interventions: a computational modelling analysis*, *The Lancet Infectious Diseases*, 15(2):204-211, 2015.
- Winner of the 2018 D4R Big Data Challenge for the paper by P. Bosetti et al., *Heterogeneity in social and epidemiological factors determines the risk of measles outbreaks*, *Proceedings of the National Academy of Sciences of the United States of America*, 117(48):30118-30125, 2020.
- In May 2021, the journal *Nature* summarised key COVID-19 papers one year into the pandemic (<https://www.nature.com/articles/d41586-020-00502-w>). Among those, two papers led by the FBK Center for Health Emergencies: J. Zhang et al., *Changes in contact patterns shape the dynamics of the COVID-19 outbreak in China*. *Science*, 368(6498):1481-1486, 2020; P. Poletti et al., *Association of Age With Likelihood of Developing Symptoms and Critical Disease Among Close Contacts Exposed to Patients With Confirmed SARS-CoV-2 Infection in Italy*. *JAMA Network Open*, 4(3):e211085, 2021.

Grants

- [1] EU-WISH - Wastewater Integrated Surveillance for Public Health.
EU4H-2022-DGA-MS-IBA-01-01: : enhance and/or improve national public health WGS and/or RT-PCR capacity, 2023-2026, €120.000
Role: Team member
- [2] SeCOV - Enhancing Whole Genome Sequencing (WGS), national infrastructures and capacities to respond to the Covid-19 pandemic in Italy.
EU4H-2022-DGA-MS-IBA-01-01: enhance and/or improve national public health WGS and/or RT-PCR capacity, 2023-2025, €183.899
Role: Team member
- [3] MONITOR - Convenzione con Regione Lombardia su metodi di epidemiologia quantitativa per la sorveglianza della pandemia SARS-CoV-2 e delle altre malattie infettive.
Lombardy Region, 2022-2024, €120.000
Role: Team Leader
- [4] INF-ACT - One Health Basic and Translational Research Actions addressing Unmet Needs on Emerging Infectious Diseases.
PNRR-PE, 2022-2025, €1.520.000.
Role: Team Leader, Co-Leader Node 4 -on Epidemiology, monitoring and modelling (EPI-MOD)
- [5] HEALTHY SAILING - Prevention, mitigation, management of infectious diseases on cruise ships and passenger ferries.
HORIZON-CL5-2021-D6-01: Safe, Resilient Transport and Smart Mobility services for passengers and goods (HORIZON-CL5-2021-D6-01-12 – Controlling infection on large passenger ships), 2022-2025, €213.000.
Role: Team Member
- [6] EPIQ - Quantitative epidemiology - Joint Lab FBK-ISS
Istituto Superiore di Sanità, 2022-2025, €366.000.
Role: Team Leader
- [7] VERDI - SARS-coV2 variants Evaluation in pRegnancy and paeDIiatrics cohorts.
HORIZON-HLTH-2021-CORONA-01: COVID19 – HERA Incubator (HORIZON-HLTH-2021-CORONA-01-02 – Cohorts united against COVID-19 variants of concern), 2021-2024, €110.000.
Role: Team Member
- [8] COVIDVAX - Impatto della vaccinazione COVID-19 su mortalità e misure di mitigazione.
Fondazione VRT, 2021-2022, €25.000.
Role: Team member

- [9] Effect of the introduction of FLUAD TETRATM influenza vaccine on existing influenza vaccination program in Italy: a modelling and cost-effectiveness analysis.
Seqirus S.r.l., 2020-2021, €50.000.
Role: Team Coordinator
- [10] COVIDTN - Epidemiologia e trasmissione di COVID-19 in Trentino.
Fondazione VRT, 2020-2020, €87.300.
Role: Team Coordinator
- [11] MOOD - Monitoring outbreak events for disease surveillance in a data science context. H2020-EU.3.1.2. – Preventing disease (SC1-BHC-13-2019 - Mining big data for early detection of infectious disease threats driven by climate change and other factors), 2020-2024, €309.000.
Role: Team Coordinator
- [12] VESTEC - Visual Exploration and Sampling Toolkit for Extreme Computing. H2020-EU.1.2.2. – FET Proactive (FETHPC-02-2017 – Transition to Exascale Computing), 2018-2021, €230.000.
Role: Team Member
- [13] Reinforcement of the surveillance system and control of infectious diseases in Ethiopia. Agenzia Italiana per la Cooperazione allo Sviluppo, 2018-2021, €543.677.
Role: Team Coordinator
- [14] Post-hoc cost-effectiveness analysis of the FLUCELVAX QUADRIVALENTTM influenza vaccine in Italy: analysis from a dynamic model of influenza transmission.
Seqirus S.r.l., 2019, €14.500.
Role: Team Coordinator
- [15] Effect of introduction of FLUCELVAX QUADRIVALENTTM influenza vaccine on existing influenza vaccination programme in Italy: a modelling and cost-effectiveness analysis.
Ospedale Pediatrico Bambino Gesù, 2018-2019, €32.500.
Role: Team Coordinator
- [16] Hypothesis of exogenous boosting and epidemiology of varicella and herpes zoster in the US.
Merck Sharp & Dohme Corp., 2018-2019, €98.000.
Role: Team member
- [17] Traiettoria evolutiva del virus USUTU in aree endemiche del nord-est d'Italia e valutazione del rischio di trasmissione all'uomo tramite trasfusione di sangue.
Italian Ministry of Health, 2018-2019, €30.000.
Role: Team Member

- [18] Modelling the transmission and control of methicillin-resistant *Staphylococcus aureus* in community and health care institutions.
Akershus University Hospital and Norwegian Institute of Public Health, 2017-2018, €15.000.
Role: Team Member
- [19] Training di un ricercatore FEM riguardo l'implementazione di tecniche computazionali per lo sviluppo di modelli epidemiologici per la diffusione di malattie trasmesse da zanzare ed in particolare dal virus Zika.
Fondazione Edmund Mach, 2017-2018, €15.000.
Role: Team Coordinator
- [20] CIMPLEX - Participatory, Interactive Social Exploratories: Bringing together Citizens, Models and Data.
H2020-EU.1.2.2. – FET Proactive (FETPROACT-1-2014 – Global Systems Science (GSS)), 2015-2018, €198.750.
Role: Team Coordinator
- [21] LEXEM - Laboratory of Excellence for Epidemiology and Modelling. Facing the invasion of Invasive Alien Species (IAS) into the territory of the Province of Trento.
Grandi Progetti, Provincia di Trento, 2013-2017, €216.390.
Role: Team Coordinator
- [22] EPIWORK - Developing the framework for an epidemic forecast infrastructure.
FP7-ICT – Specific Programme "Cooperation": Information and communication technologies (ICT-2007.8.4 – Science of complex systems for socially intelligent ICT), 2009-2013, €272.700.
Role: Team Coordinator
- [23] Vaccine preventable diseases modelling in the European Union and EEA/EFTA countries: forecasting the effect of introducing a new vaccine in a national/regional program.
European Centre for Disease Prevention and Control (ECDC), 2009-2012, €26.449.
Role: Team coordinator
- [24] Messa a punto di strumenti epidemiologici per il monitoraggio dell'influenza in Italia.
Italian Ministry of Health, 2009-2011, €30.000.
Role: Team coordinator
- [25] Supporto alle attività istituzionali correnti del CCM con particolare riguardo alle attività di sorveglianza, analisi e valutazione dei rischi per la salute pubblica nell'ambito della realizzazione e gestione di una sala situazioni e di una rete d'informazione rapida.
Italian Ministry of Health, 2009-2011, €140.000.
Role: Team coordinator

- [26] FLUMODCONT - Modelling the spread of pandemic influenza and strategies for its containment and mitigation.
FP7-HEALTH – Specific Programme "Cooperation": Health (HEALTH-2007-2.3.3-6 – Development of pandemic influenza containment and mitigation strategies), 2008-2011, €212.757.
Role: Team coordinator
- [27] Chikungunya virus infection: epidemiological and clinical features.
Italian Ministry of Health, 2008-2011, €100.000.
Role: Team coordinator

Publications¹

- [1] A. Zardini, F. Menegale, A. Gobbi, M. Manica, G. Guzzetta, V. d'Andrea, V. Marziano, F. Trentini, F. Montarsi, B. Caputo, A. Solimini, C. Marques-Toledo, A. B. B. Wilke, R. Rosà, G. Marini, D. Arnoldi, A. Pastore Y Piontti, A. Pugliese, G. Capelli, A. Della Torre, M. M. Teixeira, J. C. Beier, A. Rizzoli, A. Vespignani, M. Ajelli, S. Merler, and P. Poletti. Estimating the potential risk of transmission of arboviruses in the Americas and Europe: a modelling study. *The Lancet Planetary Health*, 8(1):e30–e40, 2024. **[impact factor: 25.700]**.
- [2] G. Guzzetta, V. Marziano, A. Mammone, A. Siddu, F. Ferraro, A. Caraglia, F. Maraglino, G. Rezza, A. Vespignani, I. Longini, M. Ajelli, and S. Merler. The decline of the 2022 Italian mpox epidemic: Role of behavior changes and control strategies. *Nature Communications*, 15(1):2283, 2024. **[impact factor: 16.600]**.
- [3] C. Sacco, M. Manica, V. Marziano, M. Fabiani, A. Mateo-Urdiales, G. Guzzetta, S. Merler, and P. Pezzotti. The impact of underreported infections on vaccine effectiveness estimates derived from retrospective cohort studies. *International Journal of Epidemiology*, 53(3), 2024. **[impact factor: 7.700]**.
- [4] V. d'Andrea, F. Trentini, V. Marziano, A. Zardini, M. Manica, G. Guzzetta, M. Ajelli, D. Petrone, M. Del Manso, C. Sacco, X. Andrianou, A. Bella, F. Riccardo, P. Pezzotti, P. Poletti, and S. Merler. Spatial spread of COVID-19 during the early pandemic phase in Italy. *BMC Infectious Diseases*, 24(1):450, 2024. **[impact factor: 3.700]**.
- [5] G. Guzzetta, M. Ajelli, A. Miglietta, C. Fazio, A. Neri, S. Merler, G. Rezza, and P. Stefanelli. Evaluating the effect of targeted strategies as control tools for hypervirulent meningococcal C outbreaks: a case study from Tuscany, Italy, 2015 to 2016. *Eurosurveillance*, 28(19), 2023. **[impact factor: 19.000]**.

¹JCR 2022 - Impact Factor, updated June 2023

- [6] F. Menegale, M. Manica, A. Zardini, G. Guzzetta, V. Marziano, V. d'Andrea, F. Trentini, M. Ajelli, P. Poletti, and S. Merler. Evaluation of Waning of SARS-CoV-2 Vaccine-Induced Immunity: A Systematic Review and Meta-analysis. *JAMA Network Open*, 6(5):e2310650, 2023. [**impact factor: 13.800**].
- [7] V. Marziano, G. Guzzetta, I. Longini, and S. Merler. Estimates of Serial Interval and Reproduction Number of Sudan Virus, Uganda, August-November 2022. *Emerging Infectious Diseases*, 29(7):1429–1432, 2023. [**impact factor: 11.800**].
- [8] H. J. Ang, F. Menegale, G. Preziosi, E. Pariani, M. Migliari, L. Pellegrinelli, G. M. Sechi, S. Buoro, S. Merler, D. Cereda, M. Tirani, P. Poletti, and I. Dorigatti. Reconstructing the impact of COVID-19 on the immunity gap and transmission of respiratory syncytial virus in Lombardy, Italy. *eBioMedicine*, 95:104745, 2023. [**impact factor: 11.100**].
- [9] G. Fedele, I. Schiavoni, F. Trentini, P. Leone, E. Olivetta, A. Fallucca, S. Fiore, A. Di Martino, S. Abrignani, V. Baldo, T. Baldovin, A. Bandera, P. Clerici, M. De Paschale, F. Diaco, A. Domnich, F. Fortunato, I. Giberti, A. Gori, R. Grifantini, T. Lazzarotto, V. Lodi, C. M. Mastroianni, R. Prato, V. Restivo, F. Vitale, S. Brusaferrero, S. Merler, A. T. Palamara, P. Stefanelli, and Study Group for the Immunological Monitoring post Covid19 vaccination. A 12-month follow-up of the immune response to SARS-CoV-2 primary vaccination: evidence from a real-world study. *Frontiers in Immunology*, 14:1272119, 2023. [**impact factor: 7.300**].
- [10] M. Galli, A. Zardini, W. N. Gamshie, S. Santini, A. Tsegaye, F. Trentini, V. Marziano, G. Guzzetta, M. Manica, V. d'Andrea, G. Putoto, F. Manenti, M. Ajelli, P. Poletti, and S. Merler. Priority age targets for COVID-19 vaccination in Ethiopia under limited vaccine supply. *Scientific Reports*, 13(1):5586, 2023. [**impact factor: 4.600**].
- [11] V. Marziano, G. Guzzetta, F. Menegale, C. Sacco, D. Petrone, A. Mateo Urdiales, M. Del Manso, A. Bella, M. Fabiani, M. F. Vescio, F. Riccardo, P. Poletti, M. Manica, A. Zardini, V. d'Andrea, F. Trentini, P. Stefanelli, G. Rezza, A. T. Palamara, S. Brusaferrero, M. Ajelli, P. Pezzotti, and S. Merler. Estimating SARS-CoV-2 infections and associated changes in COVID-19 severity and fatality. *Influenza and Other Respiratory Viruses*, 17(8):e13181, 2023. [**impact factor: 4.400**].
- [12] M. Manica, P. Poletti, S. Deandrea, G. Mosconi, C. Ancarani, S. Lodola, G. Guzzetta, V. d'Andrea, V. Marziano, A. Zardini, F. Trentini, A. Odone, M. Tirani, M. Ajelli, and S. Merler. Estimating SARS-CoV-2 transmission in educational settings: A retrospective cohort study. *Influenza and Other Respiratory Viruses*, 17:e13049, 2023. [**impact factor: 4.400**].
- [13] M. Manica, M. Litvinova, A. De Bellis, G. Guzzetta, P. Mancuso, M. Vicentini, F. Venturelli, E. Bisaccia, A. I. Bento, P. Poletti, V. Marziano, A. Zardini, V. d'Andrea, F. Trentini,

- A. Bella, F. Riccardo, P. Pezzotti, M. Ajelli, P. Giorgi Rossi, S. Merler, and Reggio Emilia COVID-19 Working Group. Estimation of the incubation period and generation time of SARS-CoV-2 Alpha and Delta variants from contact tracing data. *Epidemiology & Infection*, 151:e5, 2023. **[impact factor: 4.200]**.
- [14] M. Manica, G. Marini, A. Solimini, G. Guzzetta, P. Poletti, P. Scognamiglio, C. Virgillito, A. Della Torre, S. Merler, R. Rosà, F. Vairo, and B. Caputo. Reporting delays of chikungunya cases during the 2017 outbreak in Lazio region, Italy. *PLoS Neglected Tropical Diseases*, 17(9):e0011610, 2023. **[impact factor: 3.800]**.
- [15] C. Molina Grané, P. Mancuso, M. Vicentini, F. Venturelli, O. Djuric, M. Manica, G. Guzzetta, V. Marziano, A. Zardini, V. d’Andrea, F. Trentini, E. Bisaccia, E. Larosa, S. Cilloni, M. T. Cassinadri, P. Pezzotti, M. Ajelli, P. G. Rossi, S. Merler, and P. Poletti. SARS-CoV-2 transmission patterns in educational settings during the Alpha wave in Reggio-Emilia, Italy. *Epidemics*, 44:100712, 2023. **[impact factor: 3.800]**.
- [16] A. B. B. Wilke, D. Damian, M. Litvinova, T. Byrne, A. Zardini, P. Poletti, S. Merler, J.-P. Mutebi, J. Townsend, and M. Ajelli. Spatiotemporal distribution of vector mosquito species and areas at risk for arbovirus transmission in Maricopa County, Arizona. *Acta Tropica*, 240:106833, 2023. **[impact factor: 2.700]**.
- [17] M. Manica, A. De Bellis, G. Guzzetta, P. Mancuso, M. Vicentini, F. Venturelli, A. Zerbini, E. Bisaccia, M. Litvinova, F. Menegale, C. Molina Grané, P. Poletti, V. Marziano, A. Zardini, V. d’Andrea, F. Trentini, A. Bella, F. Riccardo, P. Pezzotti, M. Ajelli, P. Giorgi Rossi, S. Merler, and Reggio Emilia COVID-19 Working Group. Intrinsic generation time of the SARS-CoV-2 Omicron variant: An observational study of household transmission. *The Lancet Regional Health - Europe*, 19:100446, 2022. **[impact factor: 20.900]**.
- [18] P. Stefanelli, F. Trentini, D. Petrone, A. Mammone, L. Ambrosio, M. Manica, G. Guzzetta, V. d’Andrea, V. Marziano, A. Zardini, C. Molina Grane’, M. Ajelli, A. Di Martino, F. Riccardo, A. Bella, M. Sane Schepisi, F. Maraglino, P. Poletti, A. T. Palamara, S. Brusaferrò, G. Rezza, P. Pezzotti, S. Merler, Genomic SARS-CoV-2 National Surveillance Working Group, and Italian Integrated Surveillance of COVID-19 Study Group. Tracking the progressive spread of the SARS-CoV-2 Omicron variant in Italy, December 2021 to January 2022. *Eurosurveillance*, 27(45):pii=2200125, 2022. **[impact factor: 19.000]**.
- [19] P. Stefanelli, F. Trentini, G. Guzzetta, V. Marziano, A. Mammone, M. Sane Schepisi, P. Poletti, C. Molina Grané, M. Manica, M. Del Manso, X. Andrianou, M. Ajelli, G. Rezza, S. Brusaferrò, S. Merler, and COVID-19 National Microbiology Surveillance Study Group. Co-circulation of SARS-CoV-2 Alpha and Gamma variants in Italy, February and March 2021. *Eurosurveillance*, 27(5):pii=2100429, 2022. **[impact factor: 19.000]**.
- [20] Q.-H. Liu, J. Zhang, C. Peng, M. Litvinova, S. Huang, P. Poletti, F. Trentini, G. Guzzetta, V. Marziano, T. Zhou, C. Viboud, A. I. Bento, J. Lv, A. Vespignani, S. Merler, H. Yu, and

- M. Ajelli. Model-based evaluation of alternative reactive class closure strategies against COVID-19. *Nature Communications*, 13(1):322, 2022. [**impact factor: 16.600**].
- [21] G. Guzzetta, A. Mammone, F. Ferraro, A. Caraglia, A. Rapiti, V. Marziano, P. Poletti, D. Cereda, F. Vairo, G. Mattei, F. Maraglino, G. Rezza, and S. Merler. Early Estimates of Monkeypox Incubation Period, Generation Time, and Reproduction Number, Italy, May-June 2022. *Emerging Infectious Diseases*, 28(10), 2022. [**impact factor: 11.800**].
- [22] M. Manica, S. Pancheri, P. Poletti, G. Giovanazzi, G. Guzzetta, F. Trentini, V. Marziano, M. Ajelli, M. G. Zuccali, P. P. Benetollo, S. Merler, and A. Ferro. The risk of symptomatic infection during a second COVID-19 wave, in SARS-CoV-2 seropositive individuals. *Clinical Infectious Diseases*, 74(5):893–896, 2022. [**impact factor: 11.800**].
- [23] F. Riccardo, G. Guzzetta, A. M. Urdiales, M. Del Manso, X. D. Andrianou, A. Bella, P. Pezzotti, S. Carbone, T. De Vito, F. Maraglino, V. Demicheli, C. Dario, E. Coscioni, G. Rezza, A. Urbani, S. Merler, S. Brusaferrero, and Italian COVID-19 monitoring group. COVID-19 response: effectiveness of weekly rapid risk assessments, Italy. *Bulletin of the World Health Organization*, 100(2):161–167, 2022. [**impact factor: 11.100**].
- [24] G. Fedele, F. Trentini, I. Schiavoni, S. Abrignani, G. Antonelli, V. Baldo, T. Baldovin, A. Bandera, F. Bonura, P. Clerici, M. De Paschale, F. Fortunato, A. Gori, R. Grifantini, G. Icardi, T. Lazzarotto, V. Lodi, C. M. Mastroianni, A. Orsi, R. Prato, V. Restivo, R. Carsetti, E. Piano Mortari, P. Leone, E. Olivetta, S. Fiore, A. Di Martino, S. Brusaferrero, S. Merler, A. T. Palamara, P. Stefanelli, and the Study Group for the Immunological Monitoring post Covid-19 vaccination. Evaluation of humoral and cellular response to four vaccines against COVID-19 in different age groups: a longitudinal study. *Frontiers in Immunology*, 13:1021396, 2022. [**impact factor: 7.300**].
- [25] F. Trentini, V. Marziano, G. Guzzetta, M. Tirani, D. Cereda, P. Poletti, R. Piccarreta, A. Barone, G. Preziosi, F. Arduini, P. G. D. Valle, A. Zanella, F. Grosso, G. Castillo, A. Castrofino, G. Grasselli, A. Melegaro, A. Piatti, A. Andreassi, M. Gramegna, M. Ajelli, and S. Merler. The pressure on healthcare system and intensive care utilization during the COVID-19 outbreak in the Lombardy region: a retrospective observational study on 43,538 hospitalized patients. *American Journal of Epidemiology*, 191(1):137–146, 2022. [**impact factor: 5.000**].
- [26] P. F. Caruso, G. Angelotti, M. Greco, G. Guzzetta, D. Cereda, S. Merler, and M. Cecconi. Early prediction of SARS-CoV-2 reproductive number from environmental, atmospheric and mobility data: A supervised machine learning approach. *International Journal of Medical Informatics*, 162:104755, 2022. [**impact factor: 4.900**].
- [27] F. Trentini, E. Pariani, A. Bella, G. Diurno, L. Crottogini, C. Rizzo, S. Merler, and M. Ajelli. Characterizing the transmission patterns of seasonal influenza in Italy: lessons from the last decade. *BMC Public Health*, 22(1):19, 2022. [**impact factor: 4.500**].

- [28] F. Riccardo, E. M. Frisicale, G. Guzzetta, F. Ferraro, S. Merler, G. Maringhini, M. Spuri, D. Petrone, M. C. Rota, A. Rapiti, U. Angeloni, P. Rossi, M. Tallon, S. Giannitelli, P. Pezzotti, M. Del Manso, A. Bella, and F. P. Maraglino. Winning during a pandemic: epidemiology of SARS-CoV-2 during EURO2020 in Italy. *Epidemiology & Infection*, 150:1–7, 2022. **[impact factor: 4.200]**.
- [29] F. Trentini, A. Manna, N. Balbo, V. Marziano, G. Guzzetta, S. O’Dell, A. G. Kummer, M. Litvinova, S. Merler, M. Ajelli, P. Poletti, and A. Melegaro. Investigating the relationship between interventions, contact patterns, and SARS-CoV-2 transmissibility. *Epidemics*, 40:100601, 2022. **[impact factor: 3.800]**.
- [30] S. Marchetti, A. Borin, F. P. Conteduca, G. Ilardi, G. Guzzetta, P. Poletti, P. Pezzotti, A. Bella, P. Stefanelli, F. Riccardo, S. Merler, A. Brandolini, and S. Brusaferrò. An epidemic model for SARS-CoV-2 with self-adaptive containment measures. *PLoS One*, 17(7):e0272009, 2022. **[impact factor: 3.700]**.
- [31] L. Ambrosio, M. Chiara, A. Lo Presti, P. Poletti, C. Alteri, D. Cacchiarelli, V. Bouchè, M. Morgante, A. Ballabio, C. F. Perno, S. Merler, G. Pesole, and P. Stefanelli. SARS-CoV-2 variants: what have we learnt so far? Commentary. *Annali dell’Istituto Superiore di Sanità*, 58(2):81–84, 2022. **[impact factor: 2.100]**.
- [32] G. E. Calabrò, S. Boccalini, D. Panatto, C. Rizzo, M. L. Di Pietro, F. M. Abreha, M. Ajelli, D. Amicizia, A. Bechini, I. Giacchetta, P. L. Lai, S. Merler, C. Primieri, F. Trentini, S. Violi, P. Bonanni, and C. de Waure. The New Quadrivalent Adjuvanted Influenza Vaccine for the Italian Elderly: A Health Technology Assessment. *International Journal of Environmental Research and Public Health*, 19(7):4166, 2022. **[impact factor: -]**.
- [33] J. T. Davis, M. Chinazzi, N. Perra, K. Mu, A. P. Y. Piontti, M. Ajelli, N. E. Dean, C. Gioannini, M. Litvinova, S. Merler, L. Rossi, K. Sun, X. Xiong, I. M. Longini Jr, M. E. Halloran, C. Viboud, and A. Vespignani. Cryptic transmission of SARS-CoV-2 and the first COVID-19 wave. *Nature*, 600:127–132, 2021. **[impact factor: 64.800]**.
- [34] J. Yang, V. Marziano, X. Deng, G. Guzzetta, J. Zhang, F. Trentini, J. Cai, P. Poletti, W. Zheng, W. Wang, Q. Wu, Z. Zhao, K. Dong, G. Zhong, C. Viboud, S. Merler, M. Ajelli, and H. Yu. Despite vaccination, China needs non-pharmaceutical interventions to prevent widespread outbreaks of COVID-19 in 2021. *Nature Human Behaviour*, 5:1009–1020, 2021. **[impact factor: 29.900]**.
- [35] V. Marziano, G. Guzzetta, A. Mammone, F. Riccardo, P. Poletti, F. Trentini, M. Manica, A. Siddu, A. Bella, P. Stefanelli, P. Pezzotti, M. Ajelli, S. Brusaferrò, G. Rezza, and S. Merler. The effect of COVID-19 vaccination in Italy and perspectives for living with the virus. *Nature Communications*, 12(1):7272, 2021. **[impact factor: 16.600]**.

- [36] M. Manica, G. Guzzetta, F. Riccardo, A. Valenti, P. Poletti, V. Marziano, F. Trentini, X. Andrianou, A. Mateo-Urdiales, M. Del Manso, M. Fabiani, M. F. Vescio, M. Spuri, D. Petrone, A. Bella, S. Iavicoli, M. Ajelli, S. Brusaferrero, P. Pezzotti, and S. Merler. Impact of tiered restrictions on human activities and the epidemiology of the second wave of COVID-19 in Italy. *Nature Communications*, 12(1):4570, 2021. [**impact factor: 16.600**].
- [37] D. Mistry, M. Litvinova, A. Pastore Y Piontti, M. Chinazzi, L. Fumanelli, M. F. C. Gomes, S. A. Haque, Q.-H. Liu, K. Mu, X. Xiong, M. E. Halloran, I. M. Longini Jr, S. Merler, M. Ajelli, and A. Vespignani. Inferring high-resolution human mixing patterns for disease modeling. *Nature Communications*, 12(1):323, 2021. [**impact factor: 16.600**].
- [38] P. Stefanelli, A. Bella, G. Fedele, S. Pancheri, P. Leone, P. Vacca, A. Neri, A. Caranante, C. Fazio, E. Benedetti, S. Fiore, C. Fabiani, M. Simmaco, I. Santino, M. G. Zuccali, G. Bizzarri, R. Magnoni, P. P. Benetollo, S. Merler, S. Brusaferrero, G. Rezza, and A. Ferro. Prevalence of SARS-CoV-2 IgG antibodies in an area of northeastern Italy with a high incidence of COVID-19 cases: a population-based study. *Clinical Microbiology and Infection*, 27(4):633.e1–633.e7, 2021. [**impact factor: 14.200**].
- [39] P. Poletti, M. Tirani, D. Cereda, G. Guzzetta, F. Trentini, V. Marziano, C. Toso, A. Piatto, R. Piccarreta, A. Melegaro, A. Andreassi, M. Gramegna, M. Ajelli, and S. Merler. Seroprevalence of and Risk Factors Associated With SARS-CoV-2 Infection in Health Care Workers During the Early COVID-19 Pandemic in Italy. *JAMA Network Open*, 4(7):e2115699, 2021. [**impact factor: 13.800**].
- [40] P. Poletti, M. Tirani, D. Cereda, F. Trentini, G. Guzzetta, G. Sabatino, V. Marziano, A. Castrofino, F. Grosso, G. Del Castillo, R. Piccarreta, A. Andreassi, A. Melegaro, M. Gramegna, M. Ajelli, S. Merler, and ATS Lombardy COVID-19 Task Force. Association of Age With Likelihood of Developing Symptoms and Critical Disease Among Close Contacts Exposed to Patients With Confirmed SARS-CoV-2 Infection in Italy. *JAMA Network Open*, 4(3):e211085, 2021. [**impact factor: 13.800**].
- [41] G. Guzzetta, F. Riccardo, V. Marziano, P. Poletti, F. Trentini, A. Bella, X. Andrianou, M. Del Manso, M. Fabiani, S. Bellino, S. Boros, A. M. Urdiales, M. F. Vescio, A. Piccioli, COVID-19 Working Group., S. Brusaferrero, G. Rezza, P. Pezzotti, M. Ajelli, and S. Merler. Impact of a Nationwide Lockdown on SARS-CoV-2 Transmissibility, Italy. *Emerging Infectious Diseases*, 27(1):267–270, 2021. [**impact factor: 11.800**].
- [42] V. Marziano, G. Guzzetta, B. M. Rondinone, F. Boccuni, F. Riccardo, A. Bella, P. Poletti, F. Trentini, P. Pezzotti, S. Brusaferrero, G. Rezza, S. Iavicoli, M. Ajelli, and S. Merler. Retrospective analysis of the Italian exit strategy from COVID-19 lockdown. *Proceedings of the National Academy of Sciences of the United States of America*, 118(4):e2019617118, 2021. [**impact factor: 11.100**].

- [43] F. Trentini, G. Guzzetta, M. Galli, A. Zardini, F. Manenti, G. Putoto, V. Marziano, W. N. Gamshie, A. Tsegaye, A. Greblo, A. Melegaro, M. Ajelli, S. Merler, and P. Poletti. Modeling the interplay between demography, social contact patterns, and SARS-CoV-2 transmission in the South West Shewa Zone of Oromia Region, Ethiopia. *BMC Medicine*, 19(1):89, 2021. [**impact factor: 9.300**].
- [44] E. Del Fava, I. Adema, M. C. Kiti, P. Poletti, S. Merler, D. J. Nokes, P. Manfredi, and A. Melegaro. Individual’s daily behaviour and intergenerational mixing in different social contexts of Kenya. *Scientific Reports*, 11(1):21589, 2021. [**impact factor: 4.600**].
- [45] D. Cereda, M. Manica, M. Tirani, F. Rovida, V. Demicheli, M. Ajelli, P. Poletti, F. Trentini, G. Guzzetta, V. Marziano, R. Piccarreta, A. Barone, M. Magoni, S. Deandrea, G. Diurno, M. Lombardo, M. Faccini, A. Pan, R. Bruno, E. Pariani, G. Grasselli, A. Piatti, M. Gramegna, F. Baldanti, A. Melegaro, and S. Merler. The early phase of the COVID-19 epidemic in Lombardy, Italy. *Epidemics*, 37:100528, 2021. [**impact factor: 3.800**].
- [46] A. Zardini, M. Galli, M. Tirani, D. Cereda, M. Manica, F. Trentini, G. Guzzetta, V. Marziano, R. Piccarreta, A. Melegaro, M. Ajelli, P. Poletti, and S. Merler. A quantitative assessment of epidemiological parameters required to investigate COVID-19 burden. *Epidemics*, 37:100530, 2021. [**impact factor: 3.800**].
- [47] B. Benigni, M. Dallabona, E. Bravi, S. Merler, and M. De Domenico. Navigating Concepts in the Human Mind Unravels the Latent Geometry of Its Semantic Space. *Complexity*, 2021:1–13, 2021. [**impact factor: 2.300**].
- [48] G. Grasselli, A. Zangrillo, A. Zanella, M. Antonelli, L. Cabrini, A. Castelli, D. Cereda, A. Coluccello, G. Foti, R. Fumagalli, G. Iotti, N. Latronico, L. Lorini, S. Merler, G. Natalini, A. Piatti, M. V. Ranieri, A. M. Scandroglio, E. Storti, M. Cecconi, A. Pesenti, and COVID-19 Lombardy ICU Network. Baseline Characteristics and Outcomes of 1591 Patients Infected With SARS-CoV-2 Admitted to ICUs of the Lombardy Region, Italy. *JAMA*, 323(16):1574–1581, 2020. [**impact factor: 120.700**].
- [49] M. Chinazzi, J. T. Davis, M. Ajelli, C. Gioannini, M. Litvinova, S. Merler, A. Pastore Y Piontti, K. Mu, L. Rossi, K. Sun, C. Viboud, X. Xiong, H. Yu, M. E. Halloran, I. M. Longini Jr, and A. Vespignani. The effect of travel restrictions on the spread of the 2019 novel coronavirus (COVID-19) outbreak. *Science*, 368(6489):395–400, 2020. [**impact factor: 56.900**].
- [50] J. Zhang, M. Litvinova, Y. Liang, Y. Wang, W. Wang, S. Zhao, Q. Wu, S. Merler, C. Viboud, A. Vespignani, M. Ajelli, and H. Yu. Changes in contact patterns shape the dynamics of the COVID-19 outbreak in China. *Science*, 368(6498):1481–1486, 2020. [**impact factor: 56.900**].

- [51] J. Zhang, M. Litvinova, W. Wang, Y. Wang, X. Deng, X. Chen, M. Li, W. Zheng, L. Yi, X. Chen, Q. Wu, Y. Liang, X. Wang, J. Yang, K. Sun, I. M. Longini Jr, M. E. Halloran, P. Wu, B. J. Cowling, S. Merler, C. Viboud, A. Vespignani, M. Ajelli, and H. Yu. Evolving epidemiology and transmission dynamics of coronavirus disease 2019 outside Hubei province, China: a descriptive and modelling study. *The Lancet Infectious Diseases*, 20:793–802, 2020. [**impact factor: 56.300**].
- [52] A. Aleta, D. Martín-Corral, A. Pastore Y Piontti, M. Ajelli, M. Litvinova, M. Chinazzi, N. E. Dean, M. E. Halloran, I. M. Longini Jr, S. Merler, A. Pentland, A. Vespignani, E. Moro, and Y. Moreno. Modelling the impact of testing, contact tracing and household quarantine on second waves of COVID-19. *Nature Human Behaviour*, 4:964–971, 2020. [**impact factor: 29.900**].
- [53] F. Riccardo, M. Ajelli, X. D. Andrianou, A. Bella, M. Del Manso, M. Fabiani, S. Bellino, S. Boros, A. M. Urdiales, V. Marziano, M. C. Rota, A. Filia, F. D’Ancona, A. Siddu, O. Punzo, F. Trentini, G. Guzzetta, P. Poletti, P. Stefanelli, M. R. Castrucci, A. Ciervo, C. Di Benedetto, M. Tallon, A. Piccioli, S. Brusaferrò, G. Rezza, S. Merler, P. Pezzotti, and COVID-19 working group. Epidemiological characteristics of COVID-19 cases and estimates of the reproductive numbers 1 month into the epidemic, Italy, 28 January to 31 March 2020. *Eurosurveillance*, 25(49):pii=2000790, 2020. [**impact factor: 19.000**].
- [54] P. Poletti, M. Tirani, D. Cereda, F. Trentini, G. Guzzetta, V. Marziano, S. Buoro, S. Riboli, L. Crottogini, R. Piccarreta, A. Piatti, G. Grasselli, A. Melegaro, M. Gramegna, M. Ajelli, and S. Merler. Age-specific SARS-CoV-2 infection fatality ratio and associated risk factors, Italy, February to April 2020. *Eurosurveillance*, 25(31):pii=2001383, 2020. [**impact factor: 19.000**].
- [55] G. Guzzetta, P. Poletti, M. Ajelli, F. Trentini, V. Marziano, D. Cereda, M. Tirani, G. Diurno, A. Bodina, A. Barone, L. Crottogini, M. Gramegna, A. Melegaro, and S. Merler. Potential short-term outcome of an uncontrolled COVID-19 epidemic in Lombardy, Italy, February to March 2020. *Eurosurveillance*, 25(12):pii=2000293, 2020. [**impact factor: 19.000**].
- [56] P. Bosetti, P. Poletti, M. Stella, B. Lepri, S. Merler, and M. De Domenico. Heterogeneity in social and epidemiological factors determines the risk of measles outbreaks. *Proceedings of the National Academy of Sciences of the United States of America*, 117(48):30118–30125, 2020. [**impact factor: 11.100**].
- [57] G. Guzzetta, F. Vairo, A. Mammone, S. Lanini, P. Poletti, M. Manica, R. Rosa, B. Caputo, A. Solimini, A. D. Torre, P. Scognamiglio, A. Zumla, G. Ippolito, and S. Merler. Spatial modes for transmission of chikungunya virus during a large chikungunya outbreak in Italy: a modeling analysis. *BMC Medicine*, 18(1):226, 2020. [**impact factor: 9.300**].

- [58] G. E. Calabrò, M. L. Specchia, S. Boccalini, D. Panatto, C. Rizzo, S. Merler, A. M. Ferrero, M. L. Di Pietro, P. Bonanni, and C. de Waure. Strengthening the Evidence-Based Approach to Guiding Effective Influenza Vaccination Policies. *Vaccines*, 8(3):342, 2020. **[impact factor: 7.800]**.
- [59] S. Sarubbo, M. Tate, A. De Benedictis, S. Merler, S. Moritz-Gasser, G. Herbet, and H. Duffau. Mapping critical cortical hubs and white matter pathways by direct electrical stimulation: an original functional atlas of the human brain. *NeuroImage*, 205:116237, 2020. **[impact factor: 5.700]**.
- [60] Q.-H. Liu, A. I. Bento, K. Yang, H. Zhang, X. Yang, S. Merler, A. Vespignani, J. Lv, H. Yu, W. Zhang, T. Zhou, and M. Ajelli. The COVID-19 outbreak in Sichuan, China: Epidemiology and impact of interventions. *PLoS Computational Biology*, 16(12):e1008467, 2020. **[impact factor: 4.300]**.
- [61] B. Caputo, G. Russo, M. Manica, F. Vairo, P. Poletti, G. Guzzetta, S. Merler, C. Scagnolari, and A. Solimini. A comparative analysis of the 2007 and 2017 Italian chikungunya outbreaks and implication for public health response. *PLoS Neglected Tropical Diseases*, 14(6):e0008159, 2020. **[impact factor: 3.800]**.
- [62] S. Sarubbo, M. Tate, A. De Benedictis, S. Merler, S. Moritz-Gasser, G. Herbet, and H. Duffau. A normalized dataset of 1821 cortical and subcortical functional responses collected during direct electrical stimulation in patients undergoing awake brain surgery. *Data in Brief*, 28:104892, 2020. **[impact factor: -]**.
- [63] S. Lanini, J. P. A. Ioannidis, F. Vairo, M. Pletschette, G. Portella, V. Di Bari, A. Mammone, R. Pisapia, S. Merler, B. Nguhuni, M. Langer, A. Di Caro, S. J. L. Edwards, N. Petrosillo, A. Zumla, and G. Ippolito. Non-inferiority versus superiority trial design for new antibiotics in an era of high antimicrobial resistance: the case for post-marketing, adaptive randomised controlled trials. *The Lancet Infectious Diseases*, 19(12):e444–e451, 2019. **[impact factor: 56.300]**.
- [64] F. Di Ruscio, G. Guzzetta, J. V. Bjørnholt, T. M. Leegaard, A. E. F. Moen, S. Merler, and B. Freiesleben de Blasio. Quantifying the transmission dynamics of MRSA in the community and healthcare settings in a low-prevalence country. *Proceedings of the National Academy of Sciences of the United States of America*, 116(29):14599–14605, 2019. **[impact factor: 11.100]**.
- [65] F. Trentini, P. Poletti, A. Melegaro, and S. Merler. The introduction of ‘No jab, No school’ policy and the refinement of measles immunisation strategies in high-income countries. *BMC Medicine*, 17(1):86, 2019. **[impact factor: 9.300]**.

- [66] V. Marziano, P. Poletti, F. Trentini, A. Melegaro, M. Ajelli, and S. Merler. Parental vaccination to reduce measles immunity gaps in Italy. *eLife*, 8:e44942, 2019. [**impact factor: 7.700**].
- [67] G. Marini, G. Guzzetta, C. A. Marques Toledo, M. Teixeira, R. Rosà, and S. Merler. Effectiveness of Ultra-Low Volume insecticide spraying to prevent dengue in a non-endemic metropolitan area of Brazil. *PLoS Computational Biology*, 15(3):e1006831, 2019. [**impact factor: 4.300**].
- [68] G. Guzzetta, C. Minosse, R. Pisapia, E. Giombini, A. Mammone, F. Vairo, A. R. Garbuglia, P. Scognamiglio, M. R. Capobianchi, S. Merler, G. Ippolito, and S. Lanini. Household transmission and disease transmissibility of a large HAV outbreak in Lazio, Italy, 2016-2017. *Epidemics*, 29:100351, 2019. [**impact factor: 3.800**].
- [69] M. Manica, G. Guzzetta, F. Filippini, A. Solimini, B. Caputo, A. Della Torre, R. Rosà, and S. Merler. Assessing the risk of autochthonous yellow fever transmission in Lazio, central Italy. *PLoS Neglected Tropical Diseases*, 13(1):e0006970, 2019. [**impact factor: 3.800**].
- [70] G. Marini, D. Arnoldi, F. Baldacchino, G. Capelli, G. Guzzetta, S. Merler, F. Montarsi, A. Rizzoli, and R. Rosà. First report of the influence of temperature on the bionomics and population dynamics of *Aedes koreicus*, a new invasive alien species in Europe. *Parasites & Vectors*, 12(1):524, 2019. [**impact factor: 3.200**].
- [71] G. Guzzetta, C. A. Marques-Toledo, R. Rosà, M. Teixeira, and S. Merler. Quantifying the spatial spread of dengue in a non-endemic Brazilian metropolis via transmission chain reconstruction. *Nature Communications*, 9(1):2837, 2018. [**impact factor: 16.600**].
- [72] Q.-H. Liu, M. Ajelli, A. Aleta, S. Merler, Y. Moreno, and A. Vespignani. Measurability of the epidemic reproduction number in data-driven contact networks. *Proceedings of the National Academy of Sciences of the United States of America*, 115(50):12680–12685, 2018. [**impact factor: 11.100**].
- [73] P. Poletti, S. Parlamento, T. Fayyisaa, R. Feyyiss, M. Lusiani, A. Tsegaye, G. Segafredo, G. Putoto, F. Manenti, and S. Merler. The hidden burden of measles in Ethiopia: how distance to hospital shapes the disease mortality rate. *BMC Medicine*, 16(1):177, 2018. [**impact factor: 9.300**].
- [74] K. Sun, Q. Zhang, A. Pastore-Piontti, M. Chinazzi, D. Mistry, N. E. Dean, D. P. Rojas, S. Merler, P. Poletti, L. Rossi, M. E. Halloran, I. M. Longini Jr, and A. Vespignani. Quantifying the risk of local Zika virus transmission in the contiguous US during the 2015-2016 ZIKV epidemic. *BMC Medicine*, 16(1):195, 2018. [**impact factor: 9.300**].

- [75] A. Melegaro, V. Marziano, E. Del Fava, P. Poletti, M. Tirani, C. Rizzo, and S. Merler. The impact of demographic changes, exogenous boosting and new vaccination policies on varicella and herpes zoster in Italy: a modelling and cost-effectiveness study. *BMC Medicine*, 16(1):117, 2018. [**impact factor: 9.300**].
- [76] F. Trentini, P. Poletti, F. Baldacchino, A. Drago, F. Montarsi, G. Capelli, A. Rizzoli, R. Rosà, C. Rizzo, S. Merler, and A. Melegaro. The containment of potential outbreaks triggered by imported Chikungunya cases in Italy: a cost utility epidemiological assessment of vector control measures. *Scientific Reports*, 8(1):9034, 2018. [**impact factor: 4.600**].
- [77] V. Marziano, P. Poletti, G. Béraud, P.-Y. Boëlle, S. Merler, and V. Colizza. Modeling the impact of changes in day-care contact patterns on the dynamics of varicella transmission in France between 1991 and 2015. *PLoS Computational Biology*, 14(8):e1006334, 2018. [**impact factor: 4.300**].
- [78] M. Ajelli, Q. Zhang, K. Sun, S. Merler, L. Fumanelli, G. Chowell, L. Simonsen, C. Viboud, and A. Vespignani. The RAPIDD Ebola forecasting challenge: Model description and synthetic data generation. *Epidemics*, 22:3–12, 2018. [**impact factor: 3.800**].
- [79] C. Viboud, K. Sun, R. Gaffey, M. Ajelli, L. Fumanelli, S. Merler, Q. Zhang, G. Chowell, L. Simonsen, A. Vespignani, and the RAPIDD Ebola Forecasting Challenge group. The RAPIDD Ebola Forecasting Challenge: Synthesis and Lessons Learnt. *Epidemics*, 22:13–21, 2018. [**impact factor: 3.800**].
- [80] S. Piffer, V. Bignamini, U. Rozzanigo, P. Poletti, S. Merler, E. Gremes, and D. M. Bonifati. Different Clinical Phenotypes of Embolic Stroke of Undetermined Source: A Subgroup Analysis of 86 Patients. *Journal of Stroke & Cerebrovascular Diseases*, 27(12):3578–3586, 2018. [**impact factor: 2.500**].
- [81] F. Trentini, P. Poletti, S. Merler, and A. Melegaro. Measles immunity gaps and the progress towards elimination: a multi-country modelling analysis. *The Lancet Infectious Diseases*, 17(10):1089–1097, 2017. [**impact factor: 56.300**].
- [82] M. Manica, G. Guzzetta, P. Poletti, F. Filippini, A. Solimini, B. Caputo, A. della Torre, R. Rosà, and S. Merler. Transmission dynamics of the ongoing chikungunya outbreak in Central Italy: from coastal areas to the metropolitan city of Rome, summer 2017. *Eurosurveillance*, 22(44):pii=17-00685, 2017. [**impact factor: 19.000**].
- [83] G. Marini, G. Guzzetta, R. Rosà, and S. Merler. First outbreak of Zika virus in the continental United States: a modelling analysis. *Eurosurveillance*, 22(37):pii=30612, 2017. [**impact factor: 19.000**].

- [84] Q. Zhang, K. Sun, M. Chinazzi, A. Pastore Y Piontti, N. E. Dean, D. P. Rojas, S. Merler, D. Mistry, P. Poletti, L. Rossi, M. Bray, M. E. Halloran, I. M. Longini Jr, and A. Vespignani. Spread of Zika virus in the Americas. *Proceedings of the National Academy of Sciences of the United States of America*, 114(22):E4334–E4343, 2017. [**impact factor: 11.100**].
- [85] G. Chowell, C. Viboud, L. Simonsen, S. Merler, and A. Vespignani. Perspectives on model forecasts of the 2014-2015 Ebola epidemic in West Africa: lessons and the way forward. *BMC Medicine*, 15(1):42, 2017. [**impact factor: 9.300**].
- [86] G. Guzzetta, V. Tagliapietra, S. E. Perkins, H. C. Hauffe, P. Poletti, S. Merler, and A. Rizzoli. Population dynamics of wild rodents induce stochastic fadeouts of a zoonotic pathogen. *Journal of Animal Ecology*, 86(3):451–459, 2017. [**impact factor: 4.800**].
- [87] V. Marziano, A. Pugliese, S. Merler, and M. Ajelli. Detecting a Surprisingly Low Transmission Distance in the Early Phase of the 2009 Influenza Pandemic. *Scientific Reports*, 7(1):12324, 2017. [**impact factor: 4.600**].
- [88] G. Guzzetta, F. Trentini, P. Poletti, F. A. Baldacchino, F. Montarsi, G. Capelli, A. Rizzoli, R. Rosà, S. Merler, and A. Melegaro. Effectiveness and economic assessment of routine larviciding for prevention of chikungunya and dengue in temperate urban settings in Europe. *PLoS Neglected Tropical Diseases*, 11(9):e0005918, 2017. [**impact factor: 3.800**].
- [89] P. Poletti, R. Visintainer, B. Lepri, and S. Merler. The interplay between individual social behavior and clinical symptoms in small clustered groups. *BMC Infectious Diseases*, 17(1):521, 2017. [**impact factor: 3.700**].
- [90] A. Melegaro, E. Del Fava, P. Poletti, S. Merler, C. Nyamukapa, J. Williams, S. Gregson, and P. Manfredi. Social Contact Structures and Time Use Patterns in the Manicaland Province of Zimbabwe. *PloS One*, 12(1):e0170459, 2017. [**impact factor: 3.700**].
- [91] G. Marini, G. Guzzetta, F. Baldacchino, D. Arnoldi, F. Montarsi, G. Capelli, A. Rizzoli, S. Merler, and R. Rosà. The effect of interspecific competition on the temporal dynamics of *Aedes albopictus* and *Culex pipiens*. *Parasites & Vectors*, 10(1):102, 2017. [**impact factor: 3.200**].
- [92] M. Dallabona, S. Sarubbo, S. Merler, F. Corsini, G. Pulcrano, U. Rozzanigo, M. Barbareschi, and F. Chioffi. Impact of mass effect, tumor location, age, and surgery on the cognitive outcome of patients with high-grade gliomas: a longitudinal study. *Neuro-Oncology Practice*, 4(4):229–240, 2017. [**impact factor: 2.700**].
- [93] G. Guzzetta, P. Poletti, F. Montarsi, F. Baldacchino, G. Capelli, A. Rizzoli, R. Rosà, and S. Merler. Assessing the potential risk of Zika virus epidemics in temperate areas with established *Aedes albopictus* populations. *Eurosurveillance*, 21(15):pii=30199, 2016. [**impact factor: 19.000**].

- [94] S. Merler. Effects of clustered transmission on epidemic growth Comment on "Mathematical models to characterize early epidemic growth: A review" by Gerardo Chowell et al. *Physics of Life Reviews*, 18:112–113, 2016. [**impact factor: 11.700**].
- [95] M. Ajelli, S. Merler, L. Fumanelli, A. Pastore Y Piontti, N. E. Dean, I. M. Longini Jr, M. E. Halloran, and A. Vespignani. Spatiotemporal dynamics of the Ebola epidemic in Guinea and implications for vaccination and disease elimination: a computational modeling analysis. *BMC Medicine*, 14(1):130, 2016. [**impact factor: 9.300**].
- [96] G. Guzzetta, P. Poletti, S. Merler, and P. Manfredi. The Epidemiology of Herpes Zoster After Varicella Immunization Under Different Biological Hypotheses: Perspectives From Mathematical Modeling. *American Journal of Epidemiology*, 183(8):765–73, 2016. [**impact factor: 5.000**].
- [97] S. Sarubbo, A. De Benedictis, S. Merler, E. Mandonnet, M. Barbareschi, M. Dallabona, F. Chioffi, and H. Duffau. Structural and functional integration between dorsal and ventral language streams as revealed by blunt dissection and direct electrical stimulation. *Human Brain Mapping*, 37(11):3858–3872, 2016. [**impact factor: 4.800**].
- [98] L. Fumanelli, M. Ajelli, S. Merler, N. M. Ferguson, and S. Cauchemez. Model-Based Comprehensive Analysis of School Closure Policies for Mitigating Influenza Epidemics and Pandemics. *PLoS Computational Biology*, 12(1):e1004681, 2016. [**impact factor: 4.300**].
- [99] S. Merler, M. Ajelli, L. Fumanelli, S. Parlamento, A. Pastore Y Piontti, N. E. Dean, G. Putoto, D. Carraro, I. M. Longini Jr, M. E. Halloran, and A. Vespignani. Containing Ebola at the Source with Ring Vaccination. *PLoS Neglected Tropical Diseases*, 10(11):e0005093, 2016. [**impact factor: 3.800**].
- [100] G. Guzzetta, F. Montarsi, F. A. Baldacchino, M. Metz, G. Capelli, A. Rizzoli, A. Pugliese, R. Rosà, P. Poletti, and S. Merler. Potential Risk of Dengue and Chikungunya Outbreaks in Northern Italy Based on a Population Model of *Aedes albopictus* (Diptera: Culicidae). *PLoS Neglected Tropical Diseases*, 10(6):e0004762, 2016. [**impact factor: 3.800**].
- [101] C. Ciavarella, L. Fumanelli, S. Merler, C. Cattuto, and M. Ajelli. School closure policies at municipality level for mitigating influenza spread: a model-based evaluation. *BMC Infectious Diseases*, 16(1):576, 2016. [**impact factor: 3.700**].
- [102] G. Marini, P. Poletti, M. Giacobini, A. Pugliese, S. Merler, and R. Rosà. The Role of Climatic and Density Dependent Factors in Shaping Mosquito Population Dynamics: The Case of *Culex pipiens* in Northwestern Italy. *PLoS One*, 11(4):e0154018, 2016. [**impact factor: 3.700**].

- [103] S. Merler, M. Ajelli, L. Fumanelli, M. F. C. Gomes, A. P. Y. Piontti, L. Rossi, D. L. Chao, I. M. Longini Jr, M. E. Halloran, and A. Vespignani. Spatiotemporal spread of the 2014 outbreak of Ebola virus disease in Liberia and the effectiveness of non-pharmaceutical interventions: a computational modelling analysis. *The Lancet Infectious Diseases*, 15(2):204–211, 2015. **[impact factor: 56.300]**.
- [104] M. Ajelli, S. Parlamento, D. Bome, A. Kebbi, A. Atzori, C. Frasson, G. Putoto, D. Carraro, and S. Merler. The 2014 Ebola virus disease outbreak in Pujehun, Sierra Leone: epidemiology and impact of interventions. *BMC Medicine*, 13:281, 2015. **[impact factor: 9.300]**.
- [105] P. Poletti, S. Merler, M. Ajelli, P. Manfredi, P. K. Munywoki, D. Nokes, and A. Melegaro. Evaluating vaccination strategies for reducing infant respiratory syncytial virus infection in low-income settings. *BMC Medicine*, 13:49, 2015. **[impact factor: 9.300]**.
- [106] S. Sarubbo, A. De Benedictis, S. Merler, E. Mandonnet, S. Balbi, E. Granieri, and H. Duffau. Towards a functional atlas of human white matter. *Human Brain Mapping*, 36(8):3117–3136, 2015. **[impact factor: 4.800]**.
- [107] V. Marziano, P. Poletti, G. Guzzetta, M. Ajelli, P. Manfredi, and S. Merler. The impact of demographic changes on the epidemiology of herpes zoster: Spain as a case study. *Proceedings of The Royal Society B: Biological Sciences*, 282(1804):20142509, 2015. **[impact factor: 4.700]**.
- [108] G. Guzzetta, M. Ajelli, Z. Yang, L. N. Mukasa, N. Patil, J. H. Bates, D. E. Kirschner, and S. Merler. Effectiveness of contact investigations for tuberculosis control in Arkansas. *Journal of Theoretical Biology*, 380:238–246, 2015. **[impact factor: 2.000]**.
- [109] S. Merler and M. Ajelli. Deciphering the relative weights of demographic transition and vaccination in the decrease of measles incidence in Italy. *Proceedings of The Royal Society B: Biological Sciences*, 281(1777):20132676, 2014. **[impact factor: 4.700]**.
- [110] M. Ajelli, P. Poletti, A. Melegaro, and S. Merler. The role of different social contexts in shaping influenza transmission during the 2009 pandemic. *Scientific Reports*, 4:7218, 2014. **[impact factor: 4.600]**.
- [111] M. Ajelli, S. Merler, L. Fumanelli, A. Bella, and C. Rizzo. Estimating measles transmission potential in Italy over the period 2010–2011. *Annali dell’Istituto Superiore di Sanità*, 50(4):351–356, 2014. **[impact factor: 2.100]**.
- [112] S. Merler, M. Ajelli, L. Fumanelli, and A. Vespignani. Containing the accidental laboratory escape of potential pandemic influenza viruses. *BMC Medicine*, 11:252, 2013. **[impact factor: 9.300]**.

- [113] G. Guzzetta, P. Poletti, E. Del Fava, M. Ajelli, G. P. Scalia Tomba, S. Merler, and P. Manfredi. Hope-Simpson’s progressive immunity hypothesis as a possible explanation for herpes zoster incidence data. *American Journal of Epidemiology*, 177(10):1134–1142, 2013. [**impact factor: 5.000**].
- [114] S. Merler, M. Ajelli, B. Camilloni, S. Puzelli, A. Bella, M. C. Rota, A. E. Tozzi, M. Muraca, M. Meledandri, A. M. Iorio, I. Donatelli, and C. Rizzo. Pandemic influenza A/H1N1pdm in Italy: age, risk and population susceptibility. *PloS One*, 8(10):e74785, 2013. [**impact factor: 3.700**].
- [115] P. Poletti, A. Melegaro, M. Ajelli, E. Del Fava, G. Guzzetta, L. Faustini, G. Scalia Tomba, P. Lopalco, C. Rizzo, S. Merler, and P. Manfredi. Perspectives on the impact of varicella immunization on herpes zoster. A model-based evaluation from three European countries. *PloS One*, 8(4):e60732, 2013. [**impact factor: 3.700**].
- [116] S. Merler and G. Jurman. A combinatorial model of malware diffusion via bluetooth connections. *PloS One*, 8(3):e59468, 2013. [**impact factor: 3.700**].
- [117] L. Fumanelli, M. Ajelli, P. Manfredi, A. Vespignani, and S. Merler. Inferring the structure of social contacts from demographic data in the analysis of infectious diseases spread. *PLoS Computational Biology*, 8(9):e1002673, 2012. [**impact factor: 4.300**].
- [118] P. Poletti, M. Ajelli, and S. Merler. Risk perception and effectiveness of uncoordinated behavioral responses in an emerging epidemic. *Mathematical Biosciences*, 238(2):80–89, 2012. [**impact factor: 4.300**].
- [119] M. Ajelli and S. Merler. Transmission potential and design of adequate control measures for Marburg hemorrhagic fever. *PloS One*, 7(12):e50948, 2012. [**impact factor: 3.700**].
- [120] C. Rizzo, M. Ajelli, S. Merler, A. Pugliese, I. Barbetta, S. Salmaso, and P. Manfredi. Epidemiology and transmission dynamics of the 1918-19 pandemic influenza in Florence, Italy. *Vaccine*, 29 Suppl 2:B27–B32, 2011. [**impact factor: 5.500**].
- [121] M. Ajelli, A. Pugliese, S. Merler, S. Declich, and C. Rizzo. Evaluation of model prediction during the early phase of the 2009 influenza pandemic in Italy. *Influenza and Other Respiratory Viruses*, 5:222–226, 2011. [**impact factor: 4.400**].
- [122] S. Merler, M. Ajelli, A. Pugliese, and N. M. Ferguson. Determinants of the spatiotemporal dynamics of the 2009 H1N1 pandemic in Europe: implications for real-time modelling. *PLoS Computational Biology*, 7(9):e1002205, 2011. [**impact factor: 4.300**].
- [123] M. Ajelli, S. Merler, A. Pugliese, and C. Rizzo. Model predictions and evaluation of possible control strategies for the 2009 A/H1N1v influenza pandemic in Italy. *Epidemiology & Infection*, 139(01):68–79, 2011. [**impact factor: 4.200**].

- [124] P. Poletti, G. Messeri, M. Ajelli, R. Vallorani, C. Rizzo, and S. Merler. Transmission potential of chikungunya virus and control measures: the case of Italy. *PloS One*, 6(5):e18860, 2011. [**impact factor: 3.700**].
- [125] P. Poletti, M. Ajelli, and S. Merler. The effect of risk perception on the 2009 H1N1 pandemic influenza dynamics. *PloS One*, 6(2):e16460, 2011. [**impact factor: 3.700**].
- [126] G. Guzzetta, M. Ajelli, Z. Yang, S. Merler, C. Furlanello, and D. Kirschner. Modeling socio-demography to capture tuberculosis transmission dynamics in a low burden setting. *Journal of Theoretical Biology*, 289:197–205, 2011. [**impact factor: 2.000**].
- [127] M. Ajelli, L. Fumanelli, P. Manfredi, and S. Merler. Spatiotemporal dynamics of viral hepatitis A in Italy. *Theoretical Population Biology*, 79(1–2):1–11, 2011. [**impact factor: 1.400**].
- [128] S. Merler and M. Ajelli. The role of population heterogeneity and human mobility in the spread of pandemic influenza. *Proceedings of The Royal Society B: Biological Sciences*, 277(1681):557–565, 2010. [**impact factor: 4.700**].
- [129] F. Iozzi, F. Trusiano, M. Chinazzi, F. C. Billari, E. Zagheni, S. Merler, M. Ajelli, E. Del Fava, and P. Manfredi. Little Italy: an agent-based approach to the estimation of contact patterns- fitting predicted matrices to serological data. *PLoS Computational Biology*, 6(12):e1001021, 2010. [**impact factor: 4.300**].
- [130] M. Ajelli, B. Gonçalves, D. Balcan, V. Colizza, H. Hu, J. J. Ramasco, S. Merler, and A. Vespignani. Comparing large-scale computational approaches to epidemic modeling: agent-based versus structured metapopulation models. *BMC Infectious Diseases*, 10:190, 2010. [**impact factor: 3.700**].
- [131] M. L. Moro, C. Gagliotti, G. Silvi, R. Angelini, V. Sambri, G. Rezza, E. Massimiliani, A. Mattivi, E. Grilli, A. C. Finarelli, N. Spataro, A. M. Pierro, T. Seyler, P. Macini, and The Chikungunya Study Group. Chikungunya virus in North-Eastern Italy: a seroprevalence survey. *American Journal of Tropical Medicine and Hygiene*, 82(3):508–511, 2010. [**impact factor: 3.300**].
- [132] S. Merler and M. Ajelli. Human mobility and population heterogeneity in the spread of an epidemic. *Procedia of Computer Science*, 1(1):2237–2244, 2010. [**impact factor: -**].
- [133] S. Merler, M. Ajelli, and C. Rizzo. Age-prioritized use of antivirals during an influenza pandemic. *BMC Infectious Diseases*, 9:117, 2009. [**impact factor: 3.700**].
- [134] P. Poletti, B. Caprile, M. Ajelli, A. Pugliese, and S. Merler. Spontaneous behavioural changes in response to epidemics. *Journal of Theoretical Biology*, 260(1):31–40, 2009. [**impact factor: 2.000**].

- [135] M. Ajelli and S. Merler. An individual-based model of hepatitis A transmission. *Journal of Theoretical Biology*, 259(3):478–488, 2009. [**impact factor: 2.000**].
- [136] A. Barla, G. Jurman, S. Riccadonna, S. Merler, M. Chierici, and C. Furlanello. Machine learning methods for predictive proteomics. *Briefings in Bioinformatics*, 9(2):119–128, 2008. [**impact factor: 9.500**].
- [137] G. Jurman, S. Merler, A. Barla, S. Paoli, A. Galea, and C. Furlanello. Algebraic stability indicators for ranked lists in molecular profiling. *Bioinformatics*, 24(2):258–264, 2008. [**impact factor: 5.800**].
- [138] S. Paoli, G. Jurman, D. Albanese, S. Merler, and C. Furlanello. Integrating gene expression profiling and clinical data. *International Journal of Approximate Reasoning*, 47(1):58–69, 2008. [**impact factor: 3.900**].
- [139] M. L. Ciofi degli Atti, S. Merler, C. Rizzo, M. Ajelli, M. Massari, P. Manfredi, C. Furlanello, G. Scalia Tomba, and M. Iannelli. Mitigation measures for pandemic influenza in Italy: an individual based model considering different scenarios. *PloS One*, 3(3):e1790, 2008. [**impact factor: 3.700**].
- [140] M. Ajelli and S. Merler. The impact of the unstructured contacts component in influenza pandemic modeling. *PloS One*, 3(1):e1519, 2008. [**impact factor: 3.700**].
- [141] S. Merler, P. Poletti, M. Ajelli, B. Caprile, and P. Manfredi. Coinfection can trigger multiple pandemic waves. *Journal of Theoretical Biology*, 254(2):499–507, 2008. [**impact factor: 2.000**].
- [142] M. L. Ciofi degli Atti, C. Rizzo, A. Bella, M. Massari, M. Iannelli, A. Lunelli, A. Pugliese, J. Ripoll, P. Manfredi, G. Scalia Tomba, S. Merler, G. Jurman, and C. Furlanello. Modelling scenarios of diffusion and control of pandemic influenza, Italy. *Eurosurveillance*, 12(1):pii=3105, 2007. [**impact factor: 19.000**].
- [143] M. Cannataro, A. Barla, R. Flor, G. Jurman, S. Merler, S. Paoli, G. Tradigo, P. Veltri, and C. Furlanello. A grid environment for high-throughput proteomics. *IEEE Transactions on Nanobioscience*, 6(2):117–123, 2007. [**impact factor: 3.900**].
- [144] S. Merler, B. Caprile, and C. Furlanello. Parallelizing AdaBoost by weights dynamics. *Computational Statistics & Data Analysis*, 51(5):2487–2498, 2007. [**impact factor: 1.800**].
- [145] S. Riccadonna, G. Jurman, S. Merler, S. Paoli, A. Quattrone, and C. Furlanello. Supervised classification of combined copy number and gene expression data. *Journal of Integrative Bioinformatics*, 4(3):168–185, 2007. [**impact factor: -**].

- [146] S. Merler and G. Jurman. Terminated Ramp-Support vector machines: a nonparametric data dependent kernel. *Neural Networks*, 19(10):1597–1611, 2006. **[impact factor: 7.800]**.
- [147] C. Furlanello, S. Merler, and G. Jurman. Combining feature selection and DTW for time-varying functional genomics. *IEEE Transactions on Signal Processing*, 54(6):2436–2443, 2006. **[impact factor: 5.400]**.
- [148] C. Furlanello, M. Serafini, S. Merler, and G. Jurman. Semisupervised learning for molecular profiling. *IEEE/ACM Transactions on Computational Biology and Bioinformatics / IEEE, ACM*, 2(2):110–118, 2005. **[impact factor: 4.500]**.
- [149] M. Neteler, D. Grasso, I. Michelazzi, L. Miori, S. Merler, and C. Furlanello. An integrated toolbox for image registration, fusion and classification. *International Journal of Geoinformatics*, 1(1):51–61, 2005. **[impact factor: -]**.
- [150] S. Merler, B. Caprile, and C. Furlanello. Bias-variance control via hard points shaving. *International Journal of Pattern Recognition and Artificial Intelligence*, 18(05):891–903, 2004. **[impact factor: 1.500]**.
- [151] S. Merler, C. Furlanello, B. Larcher, and A. Sboner. Automatic model selection in cost-sensitive boosting. *Information Fusion*, 4(1):3–10, 2003. **[impact factor: 18.600]**.
- [152] C. Furlanello, M. Serafini, S. Merler, and G. Jurman. An accelerated procedure for recursive feature ranking on microarray data. *Neural Networks*, 16(5):641–648, 2003. **[impact factor: 7.800]**.
- [153] C. Furlanello, M. Serafini, S. Merler, and G. Jurman. Entropy-based gene ranking without selection bias for the predictive classification of microarray data. *BMC Bioinformatics*, 4:54, 2003. **[impact factor: 3.000]**.
- [154] A. Rizzoli, S. Merler, C. Furlanello, and C. Genchi. Geographical information systems and bootstrap aggregation (bagging) of tree-based classifiers for Lyme disease risk prediction in Trentino, Italian Alps. *Journal of Medical Entomology*, 39(3):485–492, 2002. **[impact factor: 2.100]**.
- [155] I. M. Cattadori, S. Merler, and P. J. Hudson. Searching for mechanisms of synchrony in spatially structured gamebird populations. *Journal of Animal Ecology*, 69(4):620–638, 2000. **[impact factor: 4.800]**.
- [156] I. Cattadori, P. Hudson, S. Merler, and A. Rizzoli. Synchrony, scale and temporal dynamics of rock partridge (*Alectoris graeca saxatilis*) populations in the Dolomites. *Journal of Animal Ecology*, 68(3):540–549, 1999. **[impact factor: 4.800]**.

- [157] C. Furlanello, D. Giuliani, E. Trentin, and S. Merler. Speaker normalization and model selection of combined neural networks. *Connection Sciences*, 9(1):31–50, 1997. [**impact factor: 5.300**].
- [158] S. Merler and C. Furlanello. Selection of Tree-Biased Classifiers with the Bootstrap 632+ Rule. *Biometrical Journal*, 39(3):369–382, 1997. [**impact factor: 1.700**].
- [159] S. Merler, C. Furlanello, C. Chemini, and G. Nicolini. Classification tree methods for analysis of mesoscale distribution of *Ixodes ricinus* (Acari: Ixodidae) in Trentino, Italian Alps. *Journal of Medical Entomology*, 33(6):888–893, 1996. [**impact factor: 2.100**].