

Personal information

First name, Surname	Gabriele Lobaccaro
Date of birth	09 June 1983
Nationality	Italian
Researcher unique identifiers	ORCID: 0000-0003-1603-3520
	ResearcherID: O-4697-2017
	Scopus Author ID: 55979502000
URL for personal website	NTNU profile – Research Gate profile

**Education**

Year	Faculty/department - University/institution - Country
2013	PhD in Building Engineering Faculty of Building Engineer and Architecture; Dept. of Architecture, Built environment and Construction engineering (ABC); Politecnico di Milano (POLIMI), Italy/ Faculty of Built Environment, University of New South Wales (UNSW), Sydney, Australia
2008	MSc in Building Engineering and Architecture Faculty of Building Engineer and Architecture; Dept. ABC; POLIMI

Positions - current and previous

Year	Job title – Employer - Country
2020 →	Associate Professor Faculty of Engineering; Dept. of Civil and Environmental Engineering (IBM) Norwegian University of Science and Technology, NTNU, Trondheim, Norway
2017-2020	Researcher Faculty of Architecture and Design; Dept. of Architecture and Technology; NTNU
2013-2017	Postdoctoral Research Fellow in Smart Sustainable Cities Faculty of Architecture and Design; Dept. of Architecture and Planning; NTNU
2010-2013	PhD Candidate in Building Engineering Faculty of Building Engineer and Architecture; Dept. of Architecture, Built environment and Construction engineering; POLIMI/ Faculty of Built Environment, UNSW

Supervision of students, Ph.Ds. and Postdoctoral Research Fellow

	University/institution - Country
BSc/MSc students	24 Master students (16) MSc in Sustainable Architecture, (2BSc/6) Civil and Env. Eng. at NTNU; (2) MSc Faculty of Building Eng. and Arch.; Dept. ABC; POLIMI. 11 Master Students and trainees within the EU programme ERASMUS+ (2) Università di Perugia, Italy; (2) Università Politecnica delle Marche, Italy (2) POLIMI, Italy; (1) Università degli Studi di Padova, Italy (2) Politecnico di Torino, Italy; (1) Claude Bernard University Lyon 1, (1) INES-LOCIE France
Ph.Ds.	3 Ph.Ds. as Main supervisor (ongoing) NTNU-IBM and 7 Ph.Ds. as Co-supervisor (5) NTNU; (1) EURAC, Institute for Renewable Energy, Bolzano, Italy; (1) CIRIAF/Univ. degli Studi di Perugia, Italy
Postdocs	2 NTNU-IBM (ongoing)

Project management experience

Year	Project owner - Project - Role – Funder – Administrative roles
2024 →	Coordinator of Activity A3 – BIPV in our society PVPS Task 15 - Enabling Framework for the Development of BIPV
2021 →	Project manager of NFR FRIPRO FRINATEK project HELIOS (see details below)
2021 →	Coordinator of the Building Technology Research Group at IBM, NTNU.
2021 →	IEA SHC Task 63 «Solar Neighborhood Planning» Leader of Subtask D “Case Studies”
2021 →	Member of the PhD Board of the Faculty of Engineering at NTNU
2021 →	Member of the management group of the Gemini-Solar Cells
2021 →	Member of the management group of the NTNU Energy Team Solar
2013-2017	IEA SHC Task 51 «Solar Energy in Urban Planning» Leader of Subtask C “Case Studies and Action Research”

Career breaks

Year	Reason
2017-2022	Paternity Leave: 25 equivalent calendar days (ECD) in 2017, 57 ECD in 2018, 53 ECD in 2020, 55 ECD in 2021, 40 ECD in 2022

Other relevant professional experiences**Commissions of trust**

Year	Role
2023 →	Executive board member of Research project - KSP SafeBESS -Technology and building design for safe operation of battery energy storage systems
2021 →	Executive board member of Fire Research and Innovation Centre (FRIC)
2016 →	Scientific committee member: NSB2023, Eurosun2022, IBPSA BuildSim Nordic 2020 conference; 10 th IAQVEC 2019 – International conference on indoor air quality, ventilation and energy in buildings; SWC 2017/2019/2021/2023/2024 - ISES Solar World Congress - International Conference on Solar Heating and Cooling for Buildings and Industry; West Africa Built Environment Research Conference 2017; 8 th International Conference on Sustainability in Energy and Building 2016
2014 →	Reviewer peer-reviewed journals: Building and Environment, Energies, Energy and Buildings, Solar Energy, Solar Energy Advances, Energy for Sustainable Development, Sustainability, Urban Climate, Sustainable Cities and Society, Buildings, Applied Energy, Energy and Climate Change, Urban Forestry & Urban Greening, Urban governance, Frontiers, IEEE Journal of Photovoltaics, IEEE Scholar One, Renewable & Sustainable Energy Reviews, Renewable Energy, Sustainable Energy Technologies and Assessments.

Teaching activities

Year	Programme, institute, and selection of courses
2020 →	MSc Civil Engineering - NTNU (Full list - NTNU Profile) Coordinator of the course of Building Physics, Basic Course (7.5 ECTS). Responsible of the Branch A - “Solar building design - modeling & simulation”, course of Building Performance Simulation (7.5 ECTS)
2017-2020	MArch Architecture - NTNU Teaching duties of the course of Building Physics for Architects (7.5 ECTS).
2014-2020	Msc of Sustainable Architecture - NTNU, Trondheim, Norway. Courses: Integrated Energy Design (15 ECTS); Theory & Design of Zero Emission (15 ECTS), Climate and Built form (15 - ECTS).
2008-2013	Msc in Building Engineering and Architecture - POLIMI Teaching duties in the courses: Sustainable Construction Technologies + Technological Design Lab (9 ECTS); Building elements design, (12 ECTS).

PhD/Master thesis committee member

Year	Number, programme and institute
2019 →	12 Master thesis: (1) Università degli Studi di Padova (1) POLIMI, Italy (1) University of Calgary (9) NTNU-IBM
2020 →	13 PhD thesis defences – Role as opponent (list of selection) 1. Candidate: Benjamin Govehovitch (University Claude Bernard Lyon 1, France) - Topic: Implementation of an integrated methodology for the assessment of the photovoltaic potential on a district scale – Focus on the buildings’ vertical facades. 2. Candidate: Marco Lovati (EURAC, Institute for Renewable Energy, Bolzano, Italy) - Topic: Methods and tools for BiPV implementation in the early stages of architectural design. 3. Candidate: Hassan Gholami (University of Stavanger, Norway) - Topic: Feasibility Study of Building Integrated Photovoltaic (BiPV) as a Building Envelope Material in Europe.

Fellowships and awards

Year	Fellowships and awards
2022 →	NTNU Outstanding Academic Fellows Programme
2021 →	NFR FRIPRO FRINATEK project HELIOS (see details below)
2019-2020	Åsgard Research+ programme 2018, 2019 and 2020 (NFR - Institut français de Norvège)
2013	ISSNAF/CNI Summer program expanded/USA-Italy Scholarship - Visiting scholar period at MIT - Massachusetts Institute of Technology, Cambridge MA Mobile Experience Lab

Mobility

Year	Experience and host institute
2012	International collaborative PhD research experience (1 year) Faculty of Built Environment, University of New South Wales, Sydney, Australia
2013	Short-Term Scientific Missions for visiting research period (3 weeks) at Tecnalia Research & Innovation Spatial Development and Urban Sustainability Area, Energy and Environment Division, Bilbao, Spain
2019 -2020	Short-Term Scientific Missions for visiting research period (3 weeks) at Claude Bernard University Lyon 1 INSA, University of Savoy Mont Blanc CETHIL, France

Memberships of scientific societies

Year	Scientific society
2017 →	Member of International Solar Energy Society

Teaching activities

Year	Recent projects and international collaborations
2024 →	IEA PVPS Task 15 - Enabling Framework for the Development of BIPV – Co-leader of the activity A3 - BIPV in our society. – Participant and active member contributing in other activities and deliverables.
2021 →	NFR FRIPRO FRINATEK project HELIOS - enHancing optimal ExpLoltatoion of solar energy in NOrdic cities through the digitalization of the built environment (Total budget: 16 MNOK) – Project Manager and Primary Investigator
2019 →	IEA SHC Task 63 “Solar Neighborhood Planning” – Co-leader of the Subtask D “Case studies” – Participant and active member contributing to Task’s deliverables.
2018 - 2019	iSTAR – interdisciplinary intensive SusTainable ARchitecture course (UTFORSK) – Double Degree program on Sustainable Architecture and design of Zero Emission buildings between NTNU and Xi’an University of Architecture and Technology (China).
2018 - 2020	REINVENT - REsponsive, INtegrated, VENTilated windows (Double Skin Façade system) – Researcher
2017 - 2022	COST Action PEARL PV - Participant to “WG4: PV in the built environment”
2014 - 2018	EU FP7 RAMSES - Reconciling Adaptation, Mitigation and Sustainable Development for CitiES (Total budget: 5.2 M€) – Contribution WP2 - Taxonomy of Architecture and Infrastructure indicators. – Contribution WP4 - Climate change scenario for urban agglomerations.
2014-2018	EU FP7 CoSSMic - Collaborating Smart Solar-powered Microgrids (Budget: 4.2 M€) – Contribution in WP3 - Technical architecture and technology – Contribution in WP4 - Agent design and implementation
2013-2017	IEA SHC Task 51 “Solar Energy in Urban Planning” – Participant and Leader of Subtask C “Case Studies and Action Research”

Early achievements track record

Gabriele Lobaccaro is **Associate Professor** in *Solar Design and Building Performance Simulation* at the Dept. of Civil and Environmental Engineering at Norwegian University of Science and Technology. From August 2021, he is the **coordinator** of research and education for the **Building Technology research group**.

Gabriele’s **background** is grounded on building engineer and architecture knowledge. His technical expertise covers, among others: solar energy systems integration at building and district level, urban energy planning, climate-based solutions, mitigation, and adaptation strategies, environmental, microclimate and energy analyses, monitoring data, building simulation tools, building technology, daylighting, sustainable architecture, energy efficient buildings, resilient and smart cities, parametric modelling.

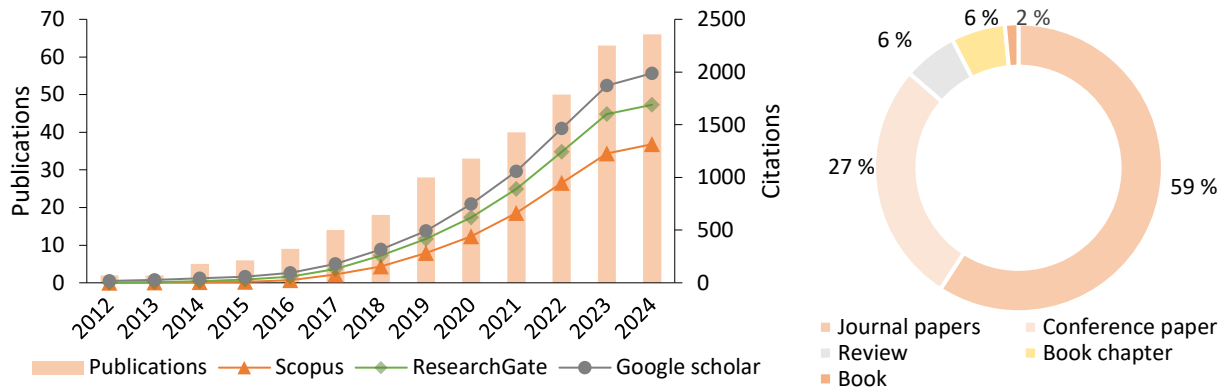
Gabriele is **emerging researcher in the field of solar energy in built environment** and he is contributing to advance the-state-of-the-art through the definition of solar neighbourhood’s archetypes, approaches, methods, and tools to accelerate the use of solar energy in complex urban environments. In that regard, he coordinated the *Subtask C “Case studies and Action research”* in the *IEA Task 51 Solar Energy in Urban Planning* and *Subtask D “Case studies”* in the *IEA Task 63 Solar Neighbourhood Planning*. He is *co-leader of the Activity A3 – BIPV in our society within the PVPS Task 15 - Enabling Framework for the Development of BIPV*. He is active member of the management group of the *NTNU Energy Team Solar* and of the *Gemini Centre Solar Cells*. He experienced in several national (REINVENT, HELIOS), European (Exploit4InnoMat, RAMSES, CoSSMic) and international research projects (SEniC, SiNoPSE, iSTAR).

Gabriele has co-/author of **more than 65 publications**, including research articles in international high impact peer-reviewed journals for which he is also reviewer. His h-index is 20 and has received more than 1300 citations (Scopus). He is the **top-ranking cited researcher for Solar potential** (Google Scholar). His scientific recognition growing nationally and internationally through invited presentations in international conferences, public seminar, academic lecture, contributions in journal articles for special issues.

Gabriele coordinates the course of **Building physics**, and he is responsible for the Branch A - “Solar building design - modeling & simulation” within the course of **Building performance simulation** and coordinates the master thesis in Building and Material Eng. He organized several international workshops for students and professionals he has taken part in several international summer schools as tutor. He has supervised more than 35 master/bachelor students, hosted 4 trainees, supervised for 3 Ph.Ds. as main supervisor and as co-supervision of 7 Ph.D. students and he has been opponents in Ph.D. defences more than 15 times.

1. NUMBER OF PUBLICATION and BIBLIOMETRIC INDICATORS

Measure	Indices
Publications	39 Peer-reviewed journals, 4 Review, 19 Peer-reviewed conference proceedings, 1 Book, 4 Book chapters (one is in press phase)
H-index:	20 (Scopus) / 23 (Google Scholar) / 21 (Research Gate)
Citations	1315 (Scopus) / 1692 (Google Scholar) / 2000 (Research Gate)

**2. SELECTED PEER REVIEWED PUBLICATIONS****List of five publications in major peer-reviewed scientific journals (full list at Google Scholar)**

- Lobaccaro G.**, Lisowska M.M., Saretta E., Bonomo P., Frontini F., *A methodological analysis approach to assess solar energy potential at the neighborhood scale*, *Energies*, Vol. 12, (2019), art. 3554, (Citations: 41 Scopus; 57 Google Scholar; 54 Research Gate)
- Lobaccaro G.**, Croce S., Lindkvist C., Munari Probst M.C., Scognamiglio A., Dahlberg J., Lundgren M., Wall M., *A cross-country perspective on solar energy in urban planning: Lessons learned from international case studies*, *Renewable and Sustainable Energy Reviews*, Vol. 108, (2019), pp. 209-237. (Citations: 82 Scopus, 103 Google Scholar, 90 Research Gate)
- Lobaccaro G.**, Croce S., Vettorato D., Carlucci S., *A holistic approach to assess the exploitation of renewable energy sources for design interventions in the early design phases*, *Energy and Buildings*, Vol. 175, (2018), pp. 235-256. (Citations: 24 Scopus; 30 Google Scholar; 30 Research Gate)
- Lobaccaro G.**, Carlucci S., Croce S., Paparella R., Finocchiaro L., *Boosting solar accessibility and potential of urban districts in the Nordic climate: A case study in Trondheim*, *Solar Energy*, Vol. 149, (2017), pp. 347-369. (Citations: 62 Scopus; 86 Google Scholar; 78 Research Gate)
- Good C.S., **Lobaccaro G.**, Hårklau S., *Optimization of solar energy potential for buildings in urban areas - a Norwegian case study*, *Energy Procedia*, Vol. 58 (2014) pp 166-171. (Citations: 34 Scopus; 41 Google Scholar; 50 Research Gate)
- Lobaccaro G.**, Frontini F., *Solar Energy in urban environment: how urban densification effect existing buildings*, *Energy Procedia*, Vol. 48, (2014), pp. 1559-1569. (Citations: 66 Scopus; 76 Google Scholar; 78 Research Gate)

3. INVITED PRESENTATION TO PEER-REVIEWED, INTERNATIONAL CONFERENCE**More than 20 International conference presentations. (a selection in solar conferences)**

- Urban planning for solar energy - IEA SHC TASK 51, Oral presentation - ISES Solar World Conference and 5th International Conference on Solar Heating and Cooling Conference for Buildings and Industry 2017; Oct 29 – Nov 02, Abu Dhabi; UAE
- Solar Optimization of Housing Development; Poster presentation at International Conference of Solar Heating and Cooling for Building and industry 2015, Istanbul (Turkey).
- A digital language for a new sustainable urban planning: a combination of design and simulation tools for solar architecture; Oral presentation at Building Simulation and Optimization 2014 Conference, June 23-24, 2014, London (UK).
- An interactive workflow for urban solar design approach: a case study of Norway; Oral presentation at 20th Annual International Sustainable Development Research Conference, NTNU, June 18-20, 2014, Trondheim (Norway).
- Solar Energy in urban environment: how urban densification effect existing buildings; Oral presentation at International Conference of Solar Heating and Cooling for Building and industry 2013, Freiburg (Germany)

More than 20 Invited presentations. (a selection list).

- Public seminar - Solenergi i Bykvarterer Copenhagen, Oral presentation entitled "Subtask D. Case Studies - Solar Neighborhood Planning: lesson learned collection of case studies", 29th November 2023, Copenhagen, Denmark
- Public Seminar on SOLAR NEIGHBORHOODS, Oral presentation entitled "Solar digitalization techniques to enhance optimal exploitation of solar energy in the Nordics", 23rd September 2022, Calgary, Canada
- Solar energy in Nordic built environments: opportunities, challenges and barriers. Oral presentation at COST Action PEARL PV - WG4 Workshop: Photovoltaic Systems in the Built Environment (around 30 people), Jan 19, 2022 (Digital)
- Solar energy in Nordic climate: the case studies of Trondheim. Oral presentation at COST Action PEARL PV – Cross fertilization S3 Simulation of complex shading for BIPV (around 30 people), Feb 26, 2020 Utrecht, The Netherlands
- Solar and micro-climate analyses in new and existing neighbourhoods and buildings: research and educational experiences, Oral presentation in public seminar (30 people), INES Le Bourget-du-Lac, France, Oct 9, 2018.
- Solar Energy in Urban Environment, Oral presentation in student classroom (20 students), Oct 5, 2018, University Claude Bernard Lyon 1, Lyon, France