Curriculum Vitae

A Personal Data

Surname	Franchini
Name	Cesare
Place of Birth	Modena, Italy
Date of Birth	October 3rd, 1975
Citizenship	Italian
Marital status	Married, one child
Contact Vienna	Faculty of Physics, University of Vienna Computational Materials Physics Kolingasse 14-16/03.65, A-1090 Vienna, Austria phone: +43 1 4277 73315 email: cesare.franchini@univie.ac.at web: `http://homepage.univie.ac.at/cesare.franchini/`
Contact Bologna	Dipartimento di Fisica e Astronomia "Augusto Righi" Alma Mater Studiorum - Universita di Bologna Viale Berti Pichat 6/2, 40127 Bologna, Italy phone: +39 051 20 9 5145 email: cesare.franchini2@unibo.it web: `https://www.unibo.it/sitoweb/cesare.franchini2/`
Research ID	B-2084-2009
ORCID	0000-0002-7990-2984

B Education

2002, PhD Physics	Technical University of Vienna (Austria) *excellent*
1999, MS Physics	University of Cagliari (Italy) 110/110 *cum laude*

C Career History

From 2017	Full Professor, *Quantum Materials Modelling*, University of Vienna (Austria)
From 2018	Associate Professor, University of Bologna (Italy)
2014 - 2017	Associate Professor, University of Vienna (Austria)
2012 - 2014	Assistant Professor (Tenure Track), University of Vienna (Austria)
2013	Parental Leave
2007 - 2012	University Assistant, University of Vienna (Austria)
2004 - 2007	PostDoc, University of Vienna (Austria)
2002 - 2004	PostDoc, University of Cagliari (Italy)

C.1 Awards

2017	Shield of honor, Abbottabad University, Pakistan
2017	National Scientific Habilitation (Italy), Full Prof.
	Sector: 02/B2 - Theoretical physics of matter
2015	Outstanding Referee, American Physical Society
2013	National Scientific Habilitation (Italy), Assoc. Prof.
	Sector: 02/B2 - Theoretical physics of matter
2010	Young International Scientist Fellowship, Chinese Academy of Sciences

C.2 Referee activity

Deutsche Forschungsgemeinschaft (DFG)
Department of Energy, DOE (USA)
The Velux Foundations (Denmark)
USA-Israel Binational Science Foundation (USA)
Czech Science Foundation (GACR, Czech Republic)
FONDECYT (Chile)
COST actions
Several scientific journals

D Main Scientific Interests and research achievements

Cesare Franchini's research is concerned with the theoretical understanding and computational modeling of complex materials using quantum mechanical methodologies based on Density Functional Theory (DFT), Hartee-Fock, Many-body perturbation theory (GW, RPA, BSE), Diagrammatic Monte Carlo, model effective Hamiltonians, molecular dynamics and machine learning. Computational quantum materials: spin-orbit coupled correlated materials, non-collinear and multipolar magnetism, insulator-to-metal transitions; Computational surface science: energetics, catalysis, defects, polarity; Polaron physics: formation, dynamics, quasi-particle many-body properties. Cesare Franchini is a leading expert in the first principle modelling of quantum materials. He leads a research group including 10 PhD students, two postDOCs and a few master students (as detailed in the list of supervised Master/PhD students and postDOC in Sec. M) and is involved in many international collaborations (as detailed in Sec. N)

D.0.1 Most relevant scientific results

1. *Polarons.* First direct view and characterization of polarons in materials by means of (experimental and simulated) scanning tunneling microscopy study; First evidence of polaron-driven structural reconstruction; First evidence on the interaction between polarons and adsorbates; First numerical modelling of bipolarons. First many-body description of the acoustic polaron using Diagrammatic Monte Carlo. Recent review on polarons published in materials in Nature Review Materials.

2. *Computational Surface Science.* Polarity compensation mechanisms in the incipient ferroelectric perovskite $kTaO_3$; Oxygen incorporation mechanism in $SrTiO_3$; extensive work on magnetite surface: single-atom catalysis (Science, Angew.Chem.), water adsorption, oxygen exchange (accepted in Nature Communications).

3. *Magnetism.* DFT and DMFT based calculations of Dzyaloshinskii-Moriya interaction, elusive multipolar exchanges, anisotropic exchnages and magnetic octupolar ordering in spin-orbit entangled oxides. Extension of DFT+U to non-collinear spins. Years-long experience in mapping first principles and effective spin Hamiltonian to extract spin-spin interactions.

4. *Beyond DFT Methods for strongly correlated oxides.* Reference works on the description of the structural, electronic and magnetic of multivalent and strongly correlated transition metal oxides using beyond DFT approaches (hybrid functionals , GW and BSE.

E Publications

E.1 Bibliometric Data (updated 02/11/2021)

148 papers	ISI	Google Scholar
h-index	37	45
Citations	5892	8328

E.2 Selected Publications [16]

The full list of publications is given in Sec. O. Citations exported from Google scholar are also indicated.

1. *Ferro-octupolar order and low-energy excitations in d2 double perovskites of osmium*, Leonid V. Pourovskii, Dario Fiore Mosca, and Cesare Franchini,

   Phys. Rev. Lett., accepted (2021).

2. *Polarons in Materials*, C. Franchini, M. Reticcioli, M. Setvin, U. Diebold,

   Nat. Rev. Mater. 6, 560-586 (2021).

   DOI: `https://doi.org/10.1038/s41578-021-00289-w`

   Citations: 18

3. *Unravelling CO Adsorption on Model Single-Atom Catalysts* J. Hulva, M. Meier, R. Bliem, Z. Jakub, F. Kraushofer, M. Schmid, U. Diebold, C. Franchini, G. S. Parkinson,

   Science 371, 375 (2021).

   DOI: `https://www.science.org/doi/10.1126/science.abe5757`.

   Role: leading the theoretical and computational part.

   Citations: 23

4. *Interplay between adsorbates and polarons: CO on rutile TiO2(110)* Michele Reticcioli, Igor Sokolovic, Michael Schmid, Ulrike Diebold, Martin Setvin, Cesare Franchini,

   Phys. Rev. Lett. 112, 016805 (2019).

   DOI:`https://doi.org/10.1103/PhysRevLett.122.016805`

   Citations: 36

5. *Local Structure and Coordination Effects Define Adsorption in a Model Ir1/Fe3O4 Single-Atom Catalyst* Zdenek Jakub, Jan Hulva, Matthias Meier, Roland Bliem, Florian Kraushofer, Martin Setvin, Michael Schmid, Ulrike Diebold, Cesare Franchini, Gareth S. Parkinson,

   Angew.Chem.Int.Ed. 58, 13961-13968 (2019)

   DOI: `10.1002/anie.201907536`

   Role: leading the theoretical and computational part

   Citations: 47

6. *Polarity compensation mechanisms on the perovskite surface $KTaO_3$ (001)* M. Setvin, M. Retticioli, F. Polzleitner, J. Hulva, M. Schmid, C. Franchini, U. Diebold,

   Science 359, 572 (2018).

   DOI: `https://doi.org/10.1126/science.aar2287`

   Role: leading the theoretical and computational part.

   Citations: 63

7. *Tunable metal-insulator transition, Rashba effect and Weyl Fermions in a relativistic charge-ordered ferroelectric oxide* J. He, D. Di Sante, R. Li, X. Chen, J.M. Rondinelli, C. Franchini,

   Nature Communications 9, 492 (2018).

   DOI: `https://doi.org/10.1038/s41467-017-02814-4`

   Citations: 27

8. *Polaron-Driven Surface Reconstructions* M. Reticcioli, M. Setvin, X. Hao, P. Flauger, G. Kresse, M. Schmid, U. Diebold, C. Franchini,

   Phys. Rev. X 7, 031053 (2017)

   DOI: `https://doi.org/10.1103/PhysRevX.7.031053`

   Citations: 39

9. *Anisotropic magnetic couplings and structure-driven canted to collinear transitions in Sr_2IrO_4 by magnetically constrained noncollinear DFT*, P. Liu, S. Khmelevskyi, B. Kim, M. Marsman, D. Li, XQ Chen, D.D. Sarma, G. Kresse, C. Franchini,

   Phys. Rev. B **91**, 085204 (2015).

   DOI: `http://dx.doi.org/10.1103/PhysRevB.92.054428`

   Citations: 75

10. *Coexistence of trapped and free excess electrons in SrTiO3*, Xianfeng Hao, Zhiming Wang, Michael Schmid, Ulrike Diebold, Cesare Franchini,

    Phys. Rev. B **91**, 085204 (2015).

    DOI: `https://journals.aps.org/prb/abstract/10.1103/PhysRevB.91.085204`

    Citations: 78

11. *Stacking effects on the electronic and optical properties of bilayer transition metal dichalcogenides MoS_2, $MoSe_2$, WS_2, and WSe_2*, J. He, K. Hummer and C. Franchini,

    Phys. Rev. B **89**, 075409 (2014).

    DOI: `https://doi.org/10.1103/PhysRevB.89.075409`

    Citations: 399

12. *Direct View at Excess Electrons in TiO_2 Rutile and Anatase*, M. Setvin, C. Franchini, X. Hao, M. Schmid, A. Janotti, M. Kaltak, C. G. Van de Walle, G. Kresse, U. Diebold

Phys. Rev. Lett. 113, 086402 (2014).

DOI: `https://doi.org/10.1103/PhysRevLett.113.086402`

Role: Main responsible of the computational part

Citations: 323

13. *Hybrid functionals applied to perovskites*, C. Franchini,

    J. Phys.: Condens. Matter **26**, 253202 (2014).

    DOI: `https://iopscience.iop.org/article/10.1088/0953-8984/26/25/253202/meta`

    Citations: 111

14. *Screened hybrid functional applied to $3d^0 \rightarrow 3d^8$ transition-metal perovskites $LaMO_3$ (M=Sc-Cu): Influence of the exchange mixing parameter on the structural, electronic, and magnetic properties*, J. He and Cesare Franchini,

    Phys. Rev. B **86**, 235117 (2012).

    DOI: `https://journals.aps.org/prb/abstract/10.1103/PhysRevB.86.235117`

    Citations: 150

15. *Polaronic hole-trapping in doped $BaBiO_3$* C. Franchini, G. Kresse and R. Podloucky

    Phys. Rev. Lett. 102, 256402 (2009).

    DOI: `https://doi.org/10.1103/PhysRevLett.102.256402`

    Citations: 91

16. *Ground-state properties of multivalent manganese oxides: Density functional and hybrid density functional calculations*
    C. Franchini, R. Podloucky, J. Paier, M. Marsman, G. Kresse

    Phys. Rev. B **75**, 195128 (2007).

    DOI: `https://journals.aps.org/prb/abstract/10.1103/PhysRevB.75.195128`

    Citations: 312

F Invited Talks

About 60 ($\sim$ 30 invited/key-note) talks & seminars. Contributed talks are not listed.

Conferences and workshops

23. Charge-ordered states on incipient ferroelectric perovskite
    DPG 2022;
    Regensnburg, Germany 6-11 March 2021 $\rightarrow$ 6-9 September 2022

    Invited.

22. Quantum Surfaces
    ZCAM-ASEVA Workshop on Metal-oxide ultrathin films and nanostructures;
    Zaragoza, Spain, July 6-10 2020 $\rightarrow$ postponed to July 5-9, 2022.

    Invited.

21. Polarons in the gap
    2020 E-MRS Fall Meeting, Warsaw;
    September 2020 $\Rightarrow$ moved to 2021.

    Invited.

20. *Electron-lattice interactions in (quantum) oxide surfaces*
    University of Hamburg - SFB986;
    Hamburg (Germany), June 21 2019.

    Invited

19. *Predicting properties of complex materials: electrons and quasielectrons*
    EMRS fall meeting;
    Warsaw (Poland), September 17-20 2018.

    Invited

18. *Computational Quantum Materials*
    International conference on modeling and simulations of emerging materials;
    Abbottabad University (Pakistan), July 2-4 2018.

    Keynote.

17. *Tunable quantum-phases in spin-orbit oxides*
    7th International Symposium on Structure-Property Relationships in Solid State Materials;
    Montesilvano-Pescara (Italy), June 8-13 2018.

    Invited.

16. *Correlation effects and magnetism in relativistic oxides*
    CIMTEC 2018 - 14th International Ceramics Congress & 8th Forum on New Materials;
    Perugia (Italy), June 4-20 2018.

    Invited.

15. *Computational Materials Modelling by First Principles*
Workshop on Materials Modeling and Simulations;
Abbottabad University (Pakistan), February 2017.

    Keynote.

14. *Collective effects in relativistic oxides*
CECAM workshop: Computational methods towards engineering novel correlated materials;
Lausanne (Switzerland), October 2016.

    Invited.

13. *Polaron-driven (1×2)-reconstruction of rutile TiO_2(110)*
Annual meeting of the Austrian Physical Society;
Vienna (Austria), September 2016.

    Invited.

12. *Hybrid functionals for simulating complex oxides*
APS March Meeting Meeting;
Baltimora (USA), March 2016.

    Invited.

11. *Electronic Structure of Perovskites: Lessons from Hybrid Functionals*
Autumn School on Correlated Electrons: Many-Body Physics: From Kondo to Hubbard;
Jülich (Germany), September 2015.

    Invited.

10. *Small and Large Polarons in TiO2 Rutile and Anatase surfaces*
1st International Conference on Computational Design and Simulation of Materials;
Shenyang (China), August 2015.

    Invited.

9. *Small and Large Polarons in TiO2 Rutile and Anatase surfaces*
MRS Fall Meeting;
Boston (USA), December 2014.

    Invited.

8. *Perovskites for oxide electronics and photovoltaic applications*
International Conference of Young Researchers on Advances Materials;
Haikou (China), October 2014.

    Invited.

7. *Electron-Lattice Interaction and Electronic Correlation in $BaBiO_3$*
CECAM Workshop (Towards) Room Temperature Superconductivity;
Lorentz Center, Leiden (Netherlands), July 2014.

    Invited.

6. *Electron localization in anatase and rutile TiO_2* Collaborative Conference on Crystal Growth; Cancun (Mexico), June 2013.

   Invited.

5. *Screened Hybrid functionals applied to 3d-4d-5d compounds*
   International Conference on Advances Materials Modelling;
   Nantes (France), June 2012.

   Invited.

4. *Screened hybrid density functionals applied to 3d, 4d, and 5d transition metal perovskites*
   Joint European Magnetic Symposia;
   Parma (Italy), June 2012.

   Invited.

3. *Hybrid Functionals and GW for oxides: a beyond-DFT perspective*
   CECAM Workshop;
   Zaragoza (Spain), June 2011.

   Invited.

2. *Multivalency and polaronic hole trapping in $BaBiO_3$*
   APS March Meeting;
   Portland (USA), March 2010.

   Invited.

1. *Magnetism in transition metal oxides by post-DFT methods*
   Psi-k Workshop on Magnetism in Complex Systems;
   Vienna (Austria), April 2009.

   Invited.

Seminars

10. Diagrams and tensors in Computational (Materials) Physics
    Seminars on particle physics;
    University of Vienna
    May 29 2020.

    Invited.

9. *Quantum Materials by DFT*
   Korea Institute for Advanced Study (KIAS);
   Seoul (South Korea), August 30 2019.

   Invited

8. *Computational Quantum Materials: Protocols & Examples*
   University of Duisburg;
   Duisburg (Germany), June 18 2019.

   Invited

7. *Ab initio modelling beyond DFT*
   SNRC Colloqium;
   Spanish National Research Council, Madrid (Spain), November 2017.

   Invited Colloqium.

6. *Excess electrons and holes in oxides*
   University of Modena;
   Modena (Italy), October 2015.

   Invited.

5. *Orbital-Lattice-Spin Interactions in Functional Materials*
   University of Pavia;
   Pavia (Italy), April 2015.

   Invited.

4. *Post-DFT methods for complex oxides*
   Shenyang National Laboratory for Materials Science;
   Shenyang (China), February 2011.

   Invited.

3. *Small polarons in semiconductors by hybrid functionals*
   Young International Scientist Fellowship, award ceremony, Chinese Academy of Sciences;
   Shenyang (China), October 2010.

   Invited.

2. *Multivalency and polaronic hole trapping in* $BaBiO_3$
   University of California Santa Barbara;
   Santa Barbara (USA), March 2010.

   Invited.

1. *DFT for superconductors*
   Talk @ Institute of Physical Chemistry, University of Vienna;
   Vienna (Austria), May 2005.

   Invited.

G Teaching

The focus of my teaching activity is *Computational Physics* and *Materials Physics* at all levels of studies (Bachelor, Master and PhD). The available teaching evaluations are collected in Sec. O.1
List of courses:

Advanced Electronic Structure

Level	Master in Physics
Type	Lecture
Where	University of Vienna
Years	2019-now
CFU	6

Advanced Electronic Structure

Level	Master in Physics
Type	Exercises
Where	University of Vienna
Years	2019-now
CFU	4

Computational Concepts in Physics I

Level	Master in Computational Science
Type	Lecture
Where	University of Vienna
Years	2015-now
CFU	3

Physics of Matter

Level	Bachelor in Physics
Type	Lecture
Where	University of Bologna
Years	2020-now
CFU	10

Computational Materials Physics

Level	Master in Physics
Type	Lecture + Computational Laboratory
Where	University of Bologna
Years	2019-now
CFU	4 (lecture) + 2 (lab)

Lab: Computational Quantum Mechanics

Level	Bachelor in Physics
Type	Computational Laboratory
Where	University of Vienna
Years	2016-now
CFU	7

Lab: Computational Materials Physics

Level	Master in Physics
Type	Computational Laboratory
Where	University of Vienna
Years	2020-now
CFU	10

Surface Science

Level	Master in Physics
Type	Lecture
Where	University of Vienna
Years	2020-now
CFU	5

PhD special courses

Level	PhD in Physics
Type	Lecture
Where	University of Vienna
Years	2020-now
CFU	10

Transition Metal Oxides

Level	PhD in Physics
Type	Lecture
Where	University of Modena
Years	2017
CFU	3

Electronic Structure of Materials

Level	Master in Physics
Type	Lecture
Where	University of Vienna
Years	2014-2018
CFU	3

Computational Quantum Mechanics

Level	Master in Physics
Type	Lecture
Where	University of Vienna
Years	2011-2014
CFU	3

Exercises in Fortran 90

Level	Bachelor in Physics
Type	Computational Exercises
Where	University of Vienna
Years	2013-2018
CFU	3

Exercises for solid state physics

Level	Bachelor in Physics
Type	Exercises
Where	University of Vienna
Years	2004 and 2008
CFU	3

H Third-party granted projects

1. **COST action**

   Title: "Advancing knowledge on physics, materials and chemical processes".

   Duration: 3 years (End 2021-2024).

   Role: Management Committee member.

   Funding Agency: EU-funded.

   Budget: travel and networking.

2. **FWF Spezialforschunbereich Project.**

   Title: "Taming Complexity in Materials Modeling".

   Duration: 4 years (2021- 2015).

   Role: sub-Project P.I.

   Funding Agency: Austrian Science Founds (FWF, Austria).

   Budget: 400.00,00 EURO.

3. **OeAD WTZ Austria-Korean exchange program.**

   Title: "Novel properties of correlated oxide surfaces"

   Duration: 2 years (2020-2022).

   Role: P.I.

   Funding Agency: OeaD, Austria).

   Budget: 15.000,00 EURO

4. **FWO-FWF Austrian-Belgium International Research Project.**

   Title: "Ab-initio calculations for anharmonic polarons in hydrides"

   Duration: 4 years (2020-2024).

   Role: P.I.

   Funding Agency: Austrian Science Founds (FWF, Austria).

   Budget: 400.000,00 EURO

5. **H2020-MSCA-IF-2019.**

   Title: "aB-IniTio calculations and MAchine learning for suPerconducting collective phenomena in novel materials"

   Duration: 3 years (2020-2024).

   Role: supervisor (winner: Dr. Domenico di Sante)

   Funding Agency: H2020

   Budget: 269.000,00 EURO

6. **doc.funds "Hierarchical Design of Hybrid Systems"**

   Title of subproject: Spin-orbit effects in defective van der Waals heterostructures

   Role: Subproject P.I.

   Funding Agency: Austrian Science Founds (FWF, Austria).

   Budget required: 1 PhD student for 3.5 years (2021-2024)

7. **FWF Research Project.**

   Title: "Surface science of bulk-terminated cubic perovskite oxides (SUPER)"

   Duration: 3.5 years (2019-2023).

   Role: co-P.I.

   Funding Agency: Austrian Science Founds (FWF, Austria).

   Budget: 130.000,00 EURO

8. **Exchange I-LINK2017 program, CSIC (Spain-Austria)**

   Title: " Interplay between relativistic and electronic correlation effects in complex oxides "

   Duration: 2 years (2018-2020).

   Role: Austrian P.I.

   Funding Agency: CSIC (Spain).

   Budget: 20.000,00 EURO.

9. **Belgium-Austria Joint Research Project.**

   Title: "Polarons in oxides: model Hamiltonian and ab initio study"

   Duration: 3 years (2016-2019).

   Role: Austrian P.I.

   Funding Agency: Austrian Science Founds (FWF, Austria).

   Budget: 330.000,00 EURO.

10. **FWF Spezialforschunbereich Project.**

    Title: "Collective Phenomena in Oxide films and Heterostructures".

    Duration: 3.5 years (2015- 2018).

    Role: Project Partner.

    Funding Agency: Austrian Science Founds (FWF, Austria).

    Budget: 125.650,00 EURO.

11. **COST action**

    Title: "Towards Oxide Based Electronics".

    Duration: 3 years (End 2014-2017).

    Role: Management Committee member.

Funding Agency: EU-funded.

Budget: travel and networking.

12. **India-Austria Joint Research Project.**

    Title: "Electron correlation and spin-orbit coupling in $4d$ and $5d$ transition metal oxides: a joint experimental and theoretical frontier research".

    Duration: 3 years (2014-2017).

    Role: Austrian P.I.

    Funding Agency: Austrian Science Founds (FWF, Austria).

    Budget: 350.000,00 EURO.

13. **Collaboration within the FWF START Grant (P.I:: Gareth Parkinson).**

    Title: "Unravelling Single-Atom Catalysis: A Surface-Science Approach".

    Duration: 2 years (2016-2018).

    Role: Project Collaborator (external)

    Funding Agency: FWF.

    Budget: 120.000,00 EURO (1 Post-Doc position)

14. **Collaboration within the ERC Advanced Research Grant (P.I:: Ulrike Diebold).**

    Title: "OxideSurfaces".

    Duration: 2 years (2012-2014).

    Role: Project Collaborator (external)

    Funding Agency: European Research Council.

    Budget: 120.000,00 EURO (1 Post-Doc position)

15. **FP7 Collaborative Projects (EU-India-2)**

    Title: "Advanced Theories for functional oxides: new routes to handle the devices of the future";

    Duration: 3 years (2009-2012).

    Role: Austrian P.I.

    Funding Agency: EU-funded.

    Budget: 250.000,00 EURO

16. **International (Regional) Cooperation and Exchange Program**

    Title: Modeling complex strongly correlated oxides;

    Duration: 1 year (2010).

    Role: P. I.

    Funding Agency: National Science Fundation China.

    Budget: 22.870,00 EURO.

I Organization, direction and coordination of research groups

1. Group leader of the research group *Quantum Materials Modelling* at the University of Vienna. The group is composed by 9 PhD students, 2 postDocs and a number of master students (at present 2). See Sec. M for more detailed on the group members.

2. Group leader of the research group *Computational Quntum Materials* at the University of Bologna. The group includes 1 PhD, 1 postDOC (RTD-b) and a few master students (at present 3). See Sec. M for more detailed on the group members.

3. Austrian coordinator of the OeAD WTZ research network Austria-Korean exchange program (5 members per team).

4. Austrian coordinator of the Spain-Austria Exchange I-LINK2017 program (2 members per team).

5. Computational and theoretical coordinator of a few joint theory-exepriment research teams. Main active research networks:

   - Surface Science group at TU Wien (U. Diebold and G. Parkinson). More than 20 joint publications (see publication list, Sec. O).
   - D. D. Sarma's group, Indian Institute of Science (Bengaluru, India). 7 joint publications (see publication list, Sec. O).
   - M. Setvin, Charles University Prague (Czech Republic). 11 joint publications (see publication list, Sec. O).
   - S. Sanna, University of Bologna (Italy). 2 publications (see publication list, Sec. O).

6. Organizer and co-coordinator of the research netwrok *2D phosphorene: DFT, machine learning and experiment* in the context of the doc-funds doctoral schooal at Vienna University. Composed by three groups: C. Franchini, C. Dellago and J. Kotakoski.

J Organizational Activity: Conference, workshops and school

2025	Topology in hard and soft matter Enrico Fermi School, Varenna (Italy) Role: organizer and chairperson
2019	Novel Electronic and Magnetic Phases in Correlated Spin Systems SPICE Workshop, Mainz, November Role: organizer and chairperson
2019	Polarons in the 21^{st} century CECAM-ESI Workshop, Vienna, December Role: organizer and chairperson
2019	South Korea - Austria mini Symposium Workshop, Vienna, November Role: organizer and chairperson

2019	Computational Approaches to Magnetic Systems PCS-IBS Workshop, Daejeon (South Korea), August Role: organizer and chairperson
2018	Computational Magnetism POSTECH, Workshop, Pohang (South Korea), August Role: organizer and chairperson
2017	International Conference on Strongly Correlated Electron Systems Symposium: "Novel electronic and magnetic phases in correlated relativistic oxides" Prague (Czech Republic) Role: organizer and chairperson
2017	Winter School of Magnetism Vienna (Austria) Role: organizer and chairperson
2016	17th International conference of the Asia Materials Sciences Qingdao (China) Role: organizer
2015	1st International Conference on Computational Designs and Simulations of Materials Shenyang (China) Role: organizer
2014	Symposium: *Computational Materials Methods. Design and Applications* International Conference of Young Researchers on Advances Materials; Haikou (China) Role: organizer and chairperson
2012	EU-FP7 School: *School for advanced modeling of magnetic oxides* Calcutta (India) Role: organizer

The conferences and workshops where C.F. had the role of chairperson only ($\sim$ 15) are not listed.

K Editorial Activity

2021 Festschrift for Prof. Sandro Massidda: Novel superconducting and magnetic materials
J. of Phys.: Condens. Mat. (2020)
Co-editor (6 Guest Editors)
20 invited papers from international experts on magnetism and superconductivty.

2020 Handbook of Materials Modeling, Springer
DOI: 10.1007/978-3-319-50257-1
Section editor of part: Oxides in Energy and Information Technologiesi, Vol II Part VII
11 chapters.
Intro: Challenges and Opportunities in Modeling Oxides for Energy and Information Devices

L University service activities

1. Member of the working group for the planning of the new course of studies 'Scienza dei Materiali' at the University of Bologna.
2. Member of the commission for a postdoc competition at Alma Mater Studiorum, University of Bologna, 25.10.2021.
3. Member of the commission for a postdoc competition at Alma Mater Studiorum, University of Bologna, 23.08.2021.
4. Secretary of the commission for a postdoc competition at Alma Mater Studiorum, University of Bologna, 25.01.2021.
5. Member of the PhD commission for the entrance competition for a PhD phyiscs at Alma Mater Studiorum, University of Bologna, June 2020.
6. Member of the Habilitation committee of Dr. Marcello Sega, University of Vienna, May 2017.
7. Since 2017 permanent member of the board of the Vienna Doctoral School of Physics at the University of Vienna.

M List of supervised students and postDOC

Location: V (Vienna), B (Bologna), C (Cagliari)

Type	Name	Topic	Location-Period
Researcher	Domenico Di Sante	Quantum Machine Learning	B 2021-
Post-Doc	Michele Reticcioli	Polarons	V 2019-
Post-Doc	Matthias Meier	Computational Surface Science	V 2016-
Post-Doc	Liang Si	Strongly correlatied oxides	V 2017-2018
Post-Doc	Bongjae Kim	Relativistic Oxides	V 2014-2017
Post-Doc	Xianfeng Hao	Computational Surface Science	V 2012-2015
Post-Doc	Jiangang He	Hybrid functional for oxides	V 2011-2013
PhD	Lorenzo Celiberti	*Quantum Magnetism*	V 2022-
PhD	Marco Corrias	*Machine Learning in perovskites*	V 2021-
PhD	Stefano Ragni	*Anharmonic phonons in DiagMC*	V 2021-
PhD	Andrea Angeletti	*Machine Learning in 2D vdW materials*	V 2021-
PhD	Viktor Birschitzky	*Machine Learning for Polarons*	V 2020-
PhD	Florian Ellinger	*Quantum paraelectric surfaces*	V 2020-
PhD	Panukorn Sombut	*Single atom catalysis*	B 2020-
PhD	Lorenzo Varrassi	*High throughput BSE*	V 2019-
PhD	Dario Fiore Mosca	*Multipolar Magnetism*	V 2019-
PhD	Thomas Hahn	*Diagrammatic MC*	V 2017-
PhD	Michele Reticcioli	*Polarons in rutile* TiO_2	V 2015-2019
PhD	Zeynep Ergonenc	*GW for Perovskites*	V 2014-2018
PhD	Peitao Liu	*Spin-orbit coupling in Iridates*	V 2013-2017
PhD	Sowmya S. Murthy	$RMnO_3$*: ab initio + Hamiltonian*	V 2010-2013
PhD	Veronika Bayer	*MnO surfaces*	V 2004-2007
PhD	Zeeshan Muhammad	*Exciton in halide perovskites*	V 2019
PhD	Shujaat Ali Khan	*Mexenes*	V 2017
PhD	Muhmmad Shafiq	*Polarons in* $SrTiO_3$*(100) surface*	V 2015
PhD	Sun Yan	*Topological Insulators*	V 2012
Master	Siliang Liu	*Automatized ab-initio calculations*	B 2022-
Master	David Dirnberger	*Band Unfolding scheme in VASP*	V 2021-
Master	Josef Huber	*Phonons of paraelectric perovskites*	V 2021-
Master	Lorenzo Celiberti	*Spin-orbit coupled Polaorns*	B 2021-
Master	Marco Corrias	*Polaorn MD*	B 2021
Master	Stefano Ragni	*Diagrammatic Monte Carlo*	B 2020
Master	Martin Hassler	*MC code for Heisemberg Ham.*	V 2020
Master	Luigi Rannali	*Anharmonic phonons*	B 2021
Master	Andrea Angeletti	*Polaron in* WO_3	B 2021
Master	Viktor Birschitzky	*Machine Learning for polarons*	V 2020
Master	Florian Ellinger	*GW database*	V 2020

Master	Lorenzo Varrassi	*BSE for perovskites*	B 2018
Master	Dario Fiore Mosca	*Quantum Magnetism*	V 2018
Master	Karl Prikopa	*GW bandgap database*	V 2015-
Master	Laszlo Papp	*Oxygen vacancies in* $BaBiO_3$	V 2016-2017
Master	Sabine Dobrowitz	*Electron doping in* $NaOsO_3$	V 2017
Master	Thomas Hahn	*Diagrammatic Monte Carlo*	V 2016-2017
Master	Antonio Sanna	*Strongly correlated oxides*	C 2003-2004
Bachelor	Samuele De Amicis	*Superconductivity*	B 2022
Bachelor	Francesco Barilari	*Band structure of solids*	B 2022
Bachelor	Davide Mattei	*Landau phase transitions*	B 2022
Bachelor	Matteo Costa	*Phonons: statistics and first principles*	B 2022
Bachelor	Nicolo Montalti	*Polarons*	B 2022
Bachelor	Enrico Trombetti	*Theory of spin glasses*	B 2022
Bachelor	Mattia Di Pierno	*Computational solution of the Ising model*	B 2022
Bachelor	Luca Leoni	*Hyrdogen incorporation in Pt-Mg(0001)*	B 2021
Bachelor	Alessandro Ciavatta	*Numerical solution of the BCS eq.*	B 2021
Bachelor	Anja Heim	*Layered Topological Insulator*	V 2021
Bachelor	Samuel Recker	*Magnetic Anisotropy in Na2IrO3*	V 2019
Bachelor	Philip Misof	*Topological Insulators and Weyl Semimetals*	V 2019
Bachelor	Alexander Kornell	*Quantum spin systems*	V 2019
Bachelor	Lorenzo Papa	*Simulations of Thermal Material Properties*	V 2019
Bachelor	Leander Schlarmann	*Dimerization on the C(111)-2x1 surface*	V 2019
Bachelor	Michael Adamas	*Kronig Penny model*	V 2018
Bachelor	Aljosa Thurner	*Numerical solution of the Schrödinger eq.*	V 2018
Bachelor	Viktor Birschitzky	*Variational Monte Carlo*	V 2018
Bachelor	Alexander Hübner	*Ab initio colors*	V 2018
Bachelor	Franziska Fritsche	*Numerical Quantum Mechanics*	V 2017
Bachelor	Florian Ellinger	*Magnetic couplings*	V 2016-2017
Bachelor	Bernhard Schmiedmayer	*Surface phase diagram of* Fe_3O_4	V 2016-2017
Bachelor	David Dirnberger	*Effective band structure method*	V 2016
Bachelor	Peter Flauger	*Polaron statistics*	V 2016
Bachelor	Nikolaus Gürtler	*GW band structure of* WTe_2	V 2016
Bachelor	Thomas Ullmann	*Charge ordering in* $BaBiO_3$	V 2016
Bachelor	Benedikt Vitecek	*Fermi Surface program*	V 2016
Bachelor	Martin Hassler	*Ising Model in 1D, 2D and 3D*	V 2015
Bachelor	Raphael Holzinger	*Variational Monte Carlo for atoms*	V 2015

N Main international collaborations

1. A. Mishchenko & N. Nagaosa, RIKEN (Japan)
2. U. Diebold & G. Parkinson, TU-Wirn (Austria)

3. L. Pourovskii, Ecole Polytechnique (Paris, France)
4. J. Tempere & S. Klimin, University of Antwerpen (Belgium)
5. M. Setvin, Charles University Prague (Czech Republic)
6. D.D. Sarma, Indian Institute of Science (Bengaluru, India)
7. A. Millis, Center for Computational Quantum Physics (New York, US)
8. V. Mitrovic, Brown University (US)
9. A few experimental groups at Paul Scherrer Institut (PSI, Switzerland)
10. X.-Q. Chen, Shenyang University (China)
11. G. Sangiovanni, University of Würzburg (Germany)
12. C. A. Kuntscher, University of Augsburg (Germany)
13. I. Ahmad, Gomal University (Pakistan)

O Publication List

145. *Revealing the Quasiparticle Electronic and Excitonic Nature in Cubic, Tetragonal and Hexagonal Phases of FAPbI3*, Zeeshan Muhammd, Peitao Liu, Rashid Ahmad, Saeid Jalali Asadabadi, Cesare Franchini, Iftikhar Ahmad, Accepted, AIP Advances (2022)

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O.1 Aggregate Teaching Evaluation

O.1.1 Teaching evaluation (Vienna)

This section shows the summary of available teaching evaluation as obtained from the Quality Assurance of the University of Vienna. All lecture-type courses have been evaluated with $1 - 1.4$ ($\approx$ *sehr gut*), the practicum with 1.6 and the F90-exercises with 1.9-2.7. Updated to 2017.

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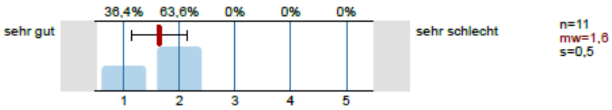
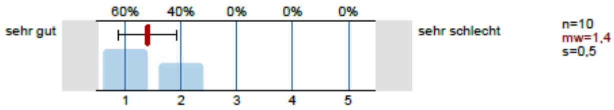
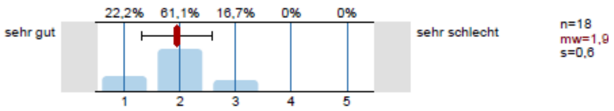
Quality Assurance

Assoz. Prof. Dr. Cesare Franchini - Evaluation of Courses by Students

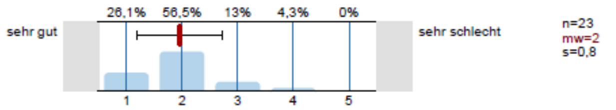
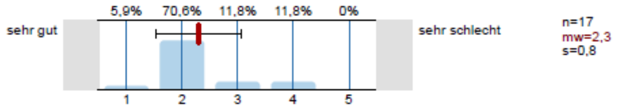
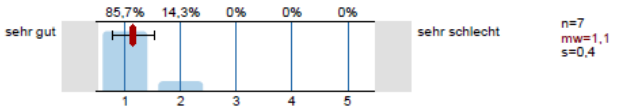
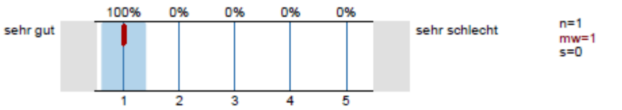
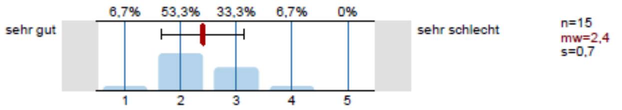
Student evaluations at the University of Vienna serve the following purposes:

- feedback instrument for teachers,
- feedback and planning instrument for Directors of Study Programs.

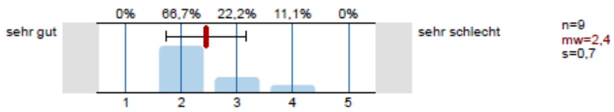
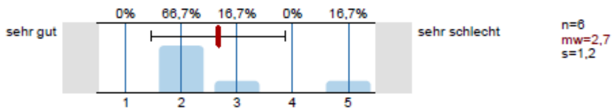
Course evaluation consists of a mandatory and voluntary part: All courses have to be assessed in a three-semester cycle. Moreover, Directors of Study Programs can introduce mandatory course evaluations within their area of competence. Every teacher is free to conduct voluntary student evaluations in addition to the mandatory evaluations.

Semester	Number	Title	M/V	ECTS	Mean and Bar Chart	SP-Mean
2016W	260041	Laboratory Computational Quantum Mechanics	M	10		not yet available
2016W	269002	Computational Concepts in Physics I	M	3		not yet available
2015S	260022	Informatics - Introduction to numerical programming in Fortran 90 - practical sessions Group 3	M	2		mw=2.0

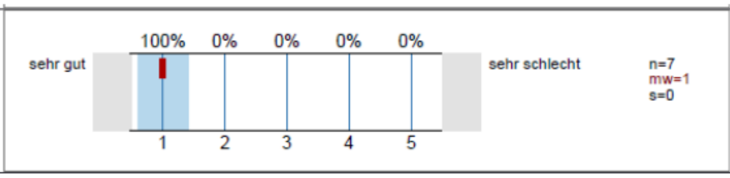
Explanation:
Semester: 2012S = summer term 2012; 2012W = winter term 2012/13; …
Number: Course-Number
M/V: mandatory/voluntary semester (mandatory every 3rd semester)
Bar chart: sehr gut = very good; sehr schlecht = very bad / n = number / mw = mean / s = standard deviation
SP-Mean: Overall-Mean of the study program (same type of questionnaire)

Semester	Number	Title	M/V	ECTS	Mean and Bar Chart	SP-Mean
2015S	260022	Informatics - Introduction to numerical programming in Fortran 90 - practical sessions Group 4	M	2		mw=2.0
2015S	260022	Informatics - Introduction to numerical programming in Fortran 90 - practical sessions Group 5	M	2		mw=2.0
2015S	260028	Electronic Structure of Materials	M	2.5		mw=2.0
2013S	260026	Computational quantum mechanics	M	2.5		mw=1.8
2013S	260022	Informatics - Introduction to numerical programming in Fortran 90 - practical sessions Group 3	M	2		mw=2.1

Explanation:
Semester: 2012S = summer term 2012; 2012W = winter term 2012/13; …
Number: Course-Number
M/V: mandatory/voluntary semester (mandatory every 3rd semester)
Bar chart: sehr gut = very good; sehr schlecht = very bad / n = number / mw = mean / s = standard deviation
SP-Mean: Overall-Mean of the study program (same type of questionnaire)

Semester	Number	Title	M/V	ECTS	Mean and Bar Chart	SP-Mean
2013S	260022	Informatics - Introduction to numerical programming in Fortran 90 - practical sessions Group 4	M	2		mw=2.1
2013S	260022	Informatics - Introduction to numerical programming in Fortran 90 - practical sessions Group 41	M	2		mw=1.8

Explanation:
Semester: 2012S = summer term 2012; 2012W = winter term 2012/13; …
Number: Course-Number
M/V: mandatory/voluntary semester (mandatory every 3rd semester)
Bar chart: sehr gut = very good; sehr schlecht = very bad / n = number / mw = mean / s = standard deviation
SP-Mean: Overall-Mean of the study program (same type of questionnaire)

Semester	Number	Title	M/V	ECTS	Mean and Bar Chart	SP-Mean
SS10	260065	Computational quantum mechanics	M	2.5		mw=1.9

Explanation:
Semester: SS07 = summer term 2007; WS07/08 = winter term 2007/08; ...
Number: Course-Number
M/V: mandatory/voluntary
Bar chart: sehr gut = very good; sehr schlecht = very bad / n = number / mw = mean / s = standard deviation
SP-Mean: Overall-Mean of the study program (same type of questionnaire) p. 2

O.1.2 Teaching evaluation (Bologna)

This section shows the summary of available teaching evaluation as obtained from the Quality Assurance of the University of Bologna. Updated to 2021.

Codice CdS: **9245**
Insegnamento: **COMPUTATIONAL MATERIAL PHYSICS**
Nr. di schede compilate: **12**
Modulo: -
Titolare dell'insegnamento: **FRANCHINI CESARE**
Sdoppiamento: -

		Giudizi negativi (%)		Giudizi positivi (%)				% Giudizi positivi*
Testo	delle domande	Decisa-mente NO	Più NO che sì	Più Sì che no	Decisa-mente Sì	Non indicato	Totale giudizi	Insegnamento
01	Le conoscenze preliminari possedute sono risultate sufficienti per la comprensione degli argomenti previsti nel programma d'esame?	8,3	16,7	58,3	16,7	0,0	100	75,0
02	Il carico di studio dell'insegnamento è proporzionato ai crediti assegnati?	0,0	25,0	50,0	25,0	0,0	100	75,0
03	Il materiale didattico (indicato e disponibile) è adeguato per lo studio della materia?	0,0	8,3	41,7	50,0	0,0	100	91,7
04	Le modalità d'esame sono state definite in modo chiaro?	0,0	25,0	41,7	33,3	0,0	100	75,0
05	Gli orari di svolgimento di lezioni, esercitazioni e altre eventuali attività didattiche sono rispettati?	0,0	0,0	25,0	75,0	0,0	100	100,0
06	Il docente stimola / motiva l'interesse verso la disciplina?	0,0	8,3	25,0	66,7	0,0	100	91,7
07	Il docente espone gli argomenti in modo chiaro?	0,0	0,0	50,0	50,0	0,0	100	100,0
09	L'insegnamento è stato svolto in maniera coerente con quanto dichiarato sul sito Web del corso di studio?	0,0	0,0	25,0	75,0	0,0	100	100,0
10	Il docente è reperibile per chiarimenti e spiegazioni?	0,0	0,0	16,7	83,3	0,0	100	100,0
11	Sei interessato/a agli argomenti trattati nell'insegnamento?	0,0	0,0	50,0	50,0	0,0	100	100,0
12	Sei complessivamente soddisfatto/a di come è stato svolto questo insegnamento?	0,0	8,3	50,0	41,7	0,0	100	91,7
13	Tutte le lezioni che hai frequentato sono state svolte o comunque presiedute dal titolare dell'insegnamento?	0,0	0,0	16,7	83,3	0,0	100	100,0
14	Le aule in cui si sono svolte le lezioni sono risultate adeguate (si vede, si sente, si trova posto)?	33,3	25,0	16,7	25,0	0,0	100	41,7
15	L'orario delle lezioni degli insegnamenti previsti nel periodo di riferimento è stato congegnato in modo tale da consentire una frequenza e una attività di studio individuale adeguate?	0,0	33,3	41,7	25,0	0,0	100	66,7
17	Il docente ha attribuito sufficiente importanza al questionario (cioè ha fornito le istruzioni e il tempo necessario alla compilazione, ha spiegato lo scopo della rilevazione, ecc.)?	8,3	0,0	50,0	41,7	0,0	100	91,7

**Le percentuali sono calcolate sui soli casi validi non tenendo conto dei "non indicati"*

Testo	delle domande	Non previste/ non utilizzate	Decisa-mente NO	Più NO che sì	Più Sì che no	Decisa-mente Sì	Non indicato	Totale giudizi
08	Le attività didattiche integrative (esercitazioni, tutorati, laboratori, seminari, ecc.) sono utili all'apprendimento della materia?	0,0	0,0	8,3	58,3	33,3	0,0	100
16	I locali e le attrezzature dedicate allo svolgimento di esercitazioni, di laboratori, di seminari, ecc. sono risultati adeguati?	33,3	8,3	0,0	41,7	16,7	0,0	100

Testo	delle domande	Scarso (%)	Ecces-sivo (%)	Totale
02/a	(Solo se hai risposto "decisamente no" o "più no che sì") Il carico di studio è scarso o eccessivo?	0,0	100,0	100

a) Anno di iscrizione

1°	2°	3°	4°	5°	6°	Fuori corso	Erasmus	Non accertabile	Totale
91,7	8,3	0,0	0,0	0,0	0,0	0,0	0,0	0,0	100

b) % di lezioni frequentate (in media) 90,0

c) Studenti presenti rispetto alla frequenza media

Molti di meno	Un po' di meno	Circa lo stesso numero	Un po' di più	Molti di più	Non accertabile	Totale giudizi
0,0	16,7	83,3	0,0	0,0	0,0	100

% Suggerimenti

Alleggerire il carico didattico complessivo	8,3	Eliminare dal programma argomenti già trattati in altri insegnamenti	8,3	Fornire in anticipo il materiale didattico	8,3
Aumentare l'attività di supporto didattico	8,3	Migliorare il coordinamento con altri insegnamenti	41,7	Inserire prove d'esame intermedie	0,0
Fornire più conoscenze di base	25,0	Migliorare la qualità del materiale didattico	0,0	Attivare insegnamenti serali	0,0

Codice CdS: **9245**

Nr. di schede compilate: **11**

Titolare dell'insegnamento: **FRANCHINI CESARE**

Insegnamento: **COMPUTATIONAL MATERIAL PHYSICS**

Modulo: -

Sdoppiamento: -

Testo	delle domande	Giudizi negativi (%)		Giudizi positivi (%)				% Giudizi positivi*		
		Decisa-mente NO	Più NO che sì	Più Sì che no	Decisa-mente Sì	Non indicato	Totale giudizi	Insegna-mento	Media CdS	Media Area VRA
01	Le conoscenze preliminari possedute sono risultate sufficienti per la comprensione degli argomenti previsti nel programma d'esame?	0,0	0,0	81,8	18,2	0,0	100	100,0	92,0	84,0
02	Il carico di studio dell'insegnamento è proporzionato ai crediti assegnati?	0,0	9,1	36,4	45,5	9,1	100	90,0	90,7	85,2
03	Il materiale didattico (indicato e disponibile) è adeguato per lo studio della materia?	0,0	18,2	45,5	36,4	0,0	100	81,8	88,4	87,9
04	Le modalità d'esame sono state definite in modo chiaro?	0,0	0,0	18,2	81,8	0,0	100	100,0	85,3	81,4
05	Gli orari di svolgimento di lezioni, esercitazioni e altre eventuali attività didattiche sono rispettati?	0,0	0,0	9,1	90,9	0,0	100	100,0	95,9	97,6
06	Il docente stimola / motiva l'interesse verso la disciplina?	0,0	0,0	9,1	90,9	0,0	100	100,0	88,9	85,4
07	Il docente espone gli argomenti in modo chiaro?	0,0	0,0	45,5	54,5	0,0	100	100,0	89,3	86,6
09	L'insegnamento è stato svolto in maniera coerente con quanto dichiarato sul sito Web del corso di studio?	0,0	0,0	18,2	81,8	0,0	100	100,0	96,7	98,4
10	Il docente è reperibile per chiarimenti e spiegazioni?	0,0	0,0	0,0	100,0	0,0	100	100,0	96,9	97,2
11	Sei interessato/a agli argomenti trattati nell'insegnamento?	0,0	0,0	18,2	81,8	0,0	100	100,0	94,9	83,9
12	Sei complessivamente soddisfatto/a di come è stato svolto questo insegnamento?	0,0	0,0	36,4	63,6	0,0	100	100,0	85,4	83,1
13	Tutte le lezioni che hai frequentato sono state svolte o comunque presiedute dal titolare dell'insegnamento?	0,0	0,0	0,0	100,0	0,0	100	100,0	99,1	99,2
14	Le aule virtuali in cui si sono svolte le lezioni sono risultate adeguate (si vede, si sente, ci si connette facilmente)?	0,0	0,0	45,5	54,5	0,0	100	100,0	95,9	90,4
15	L'orario delle lezioni degli insegnamenti previsti nel periodo di riferimento è stato congegnato in modo tale da consentire una frequenza e una attività di studio individuale adeguate?	0,0	9,1	27,3	63,6	0,0	100	90,9	93,0	87,2
17	Il docente ha attribuito sufficiente importanza al questionario (cioè ha fornito le istruzioni e il tempo necessario alla compilazione, ha spiegato lo scopo della rilevazione, ecc.)?	0,0	0,0	27,3	72,7	0,0	100	100,0	93,8	94,2

**Le percentuali sono calcolate sui soli casi validi non tenendo conto dei "non indicati"*

Testo	delle domande	Non previste/ non utilizzate	Decisa-mente NO	Più NO che sì	Più Sì che no	Decisa-mente Sì	Non indicato	Totale giudizi
08	Le attività didattiche integrative (esercitazioni, tutorati, laboratori, seminari, ecc.) sono utili all'apprendimento della materia?	0,0	0,0	0,0	0,0	100,0	0,0	100

Testo	delle domande	Scarso (%)	Ecces-sivo (%)	Totale
02/a	(Solo se hai risposto "decisamente no" o "più no che sì") Il carico di studio è scarso o eccessivo?	0,0	100,0	100

a) Anno di iscrizione

1°	2°	3°	4°	5°	6°	Fuori corso	Erasmus	Non accertabile	Totale
81,8	9,1	0,0	0,0	0,0	0,0	0,0	9,1	0,0	100

b) % di lezioni frequentate (in media) 89,1

c) Studenti presenti rispetto alla frequenza media

Molti di meno	Un po' di meno	Circa lo stesso numero	Un po' di più	Molti di più	Non accertabile	Totale giudizi
0,0	18,2	81,8	0,0	0,0	0,0	100

% Suggerimenti

Alleggerire il carico didattico complessivo	0,0
Aumentare l'attività di supporto didattico	0,0
Fornire più conoscenze di base	9,1
Eliminare dal programma argomenti già trattati in altri insegnamenti	0,0
Migliorare il coordinamento con altri insegnamenti	9,1
Migliorare la qualità del materiale didattico	18,2
Fornire in anticipo il materiale didattico	27,3
Inserire prove d'esame intermedie	0,0
Attivare insegnamenti serali	0,0

Codice CdS: **9245**
Insegnamento: **COMPUTATIONAL MATERIAL PHYSICS**

Nr. di schede compilate: **13**
Modulo: -

Titolare dell'insegnamento: **FRANCHINI CESARE**
Sdoppiamento: -

Testo	delle domande	Giudizi negativi (%)		Giudizi positivi (%)				% Giudizi positivi*		
		Decisamente NO	Più NO che sì	Più Sì che no	Decisamente Sì	Non indicato	Totale giudizi	Insegnamento	Media CdS	Media Area VRA
01	Le conoscenze preliminari possedute sono risultate sufficienti per la comprensione degli argomenti previsti nel programma d'esame?	0,0	30,8	15,4	53,8	0,0	100	69,2	89,0	83,2
02	Il carico di studio dell'insegnamento è proporzionato ai crediti assegnati?	0,0	23,1	46,2	30,8	0,0	100	76,9	88,2	85,3
03	Il materiale didattico (indicato e disponibile) è adeguato per lo studio della materia?	0,0	0,0	46,2	53,8	0,0	100	100,0	88,9	87,8
04	Le modalità d'esame sono state definite in modo chiaro?	0,0	7,7	30,8	61,5	0,0	100	92,3	89,8	89,5
05	Gli orari di svolgimento di lezioni, esercitazioni e altre eventuali attività didattiche sono rispettati?	0,0	0,0	15,4	84,6	0,0	100	100,0	96,4	97,1
06	Il docente stimola / motiva l'interesse verso la disciplina?	0,0	15,4	15,4	69,2	0,0	100	84,6	92,0	84,7
07	Il docente espone gli argomenti in modo chiaro?	0,0	0,0	46,2	53,8	0,0	100	100,0	89,6	85,4
09	L'insegnamento è stato svolto in maniera coerente con quanto dichiarato sul sito Web del corso di studio?	0,0	7,7	23,1	69,2	0,0	100	92,3	97,4	97,8
10	Il docente è reperibile per chiarimenti e spiegazioni?	0,0	0,0	30,8	69,2	0,0	100	100,0	98,2	96,5
11	Sei interessato/a agli argomenti trattati nell'insegnamento?	7,7	7,7	15,4	69,2	0,0	100	84,6	92,8	83,3
12	Sei complessivamente soddisfatto/a di come è stato svolto questo insegnamento?	0,0	7,7	46,2	46,2	0,0	100	92,3	86,7	83,5
13	Tutte le lezioni che hai frequentato sono state svolte o comunque presiedute dal titolare dell'insegnamento?	0,0	0,0	15,4	84,6	0,0	100	100,0	99,2	99,1
14	Le aule in cui si sono svolte le lezioni sono risultate adeguate (si vede, si sente, si trova posto)?	0,0	7,7	23,1	69,2	0,0	100	92,3	93,2	92,9
14/b	Le aule virtuali in cui si sono svolte le lezioni sono risultate adeguate (si vede, si sente, ci si connette facilmente)?	0,0	0,0	23,1	76,9	0,0	100	100,0	94,6	92,7
15	L'orario delle lezioni degli insegnamenti previsti nel periodo di riferimento è stato congegnato in modo tale da consentire una frequenza e una attività di studio individuale adeguate?	0,0	0,0	61,5	38,5	0,0	100	100,0	91,9	88,1
17	Il docente ha attribuito sufficiente importanza al questionario (cioè ha fornito le istruzioni e il tempo necessario alla compilazione, ha spiegato lo scopo della rilevazione, ecc.)?	0,0	7,7	38,5	46,2	7,7	100	91,7	93,5	93,1

**Le percentuali sono calcolate sui soli casi validi non tenendo conto dei "non indicati"*

Testo	delle domande	Non previste/ non utilizzate	Decisamente NO	Più NO che sì	Più Sì che no	Decisamente Sì	Non indicato	Totale giudizi
08	Le attività didattiche integrative (esercitazioni, tutorati, laboratori, seminari, ecc.) sono utili all'apprendimento della materia?	7,7	0,0	0,0	30,8	61,5	0,0	100
16	I locali e le attrezzature dedicate allo svolgimento di esercitazioni, di laboratori, di seminari, ecc. sono risultati adeguati?	7,7	0,0	7,7	61,5	23,1	0,0	100

Testo	delle domande	Scarso (%)	Eccessivo (%)	Totale
02/a	(Solo se hai risposto "decisamente no" o "più no che sì") Il carico di studio è scarso o eccessivo?	0,0	100,0	100

a) Anno di iscrizione

1°	2°	3°	4°	5°	6°	Fuori corso	Erasmus	Non accertabile	Totale
69,2	0,0	0,0	0,0	0,0	0,0	0,0	30,8	0,0	100

b) % di lezioni frequentate (in media) 95,4

c) % di lezioni frequentate online (in media) 63,1

d) Studenti presenti rispetto alla frequenza media

Molti di meno	Un po' di meno	Circa lo stesso numero	Un po' di più	Molti di più	Non accertabile	Totale giudizi
0,0	15,4	61,5	15,4	0,0	7,7	100

Codice CdS: **9244**
Nr. di schede compilate: **60**
Titolare dell'insegnamento: **FRANCHINI CESARE**

Insegnamento: **FISICA DELLA MATERIA**
Modulo: **modulo 2**
Sdoppiamento: **-**

Testo	delle domande	Giudizi negativi (%) Decisa-mente NO	Giudizi negativi (%) Più NO che sì	Giudizi positivi (%) Più Sì che no	Giudizi positivi (%) Decisa-mente Sì	Non indicato	Totale giudizi	% Giudizi positivi* Insegna-mento	% Giudizi positivi* Media CdS	% Giudizi positivi* Media Area VRA
01	Le conoscenze preliminari possedute sono risultate sufficienti per la comprensione degli argomenti previsti nel programma d'esame?	0,0	3,3	48,3	48,3	0,0	100	96,7	82,1	81,9
02	Il carico di studio dell'insegnamento è proporzionato ai crediti assegnati?	1,7	6,7	48,3	43,3	0,0	100	91,7	87,7	87,3
03	Il materiale didattico (indicato e disponibile) è adeguato per lo studio della materia?	1,7	13,3	48,3	36,7	0,0	100	85,0	84,8	86,9
04	Le modalità d'esame sono state definite in modo chiaro?	13,3	45,0	33,3	6,7	1,7	100	40,7	81,6	88,6
05	Gli orari di svolgimento di lezioni, esercitazioni e altre eventuali attività didattiche sono rispettati?	0,0	1,7	16,7	81,7	0,0	100	98,3	97,4	96,9
06	Il docente stimola / motiva l'interesse verso la disciplina?	0,0	18,3	60,0	21,7	0,0	100	81,7	81,2	85,2
07	Il docente espone gli argomenti in modo chiaro?	3,3	11,7	46,7	38,3	0,0	100	85,0	78,6	84,7
09	L'insegnamento è stato svolto in maniera coerente con quanto dichiarato sul sito Web del corso di studio?	0,0	1,7	38,3	58,3	1,7	100	98,3	96,8	98,0
10	Il docente è reperibile per chiarimenti e spiegazioni?	0,0	0,0	16,7	83,3	0,0	100	100,0	94,2	96,0
11	Sei interessato/a agli argomenti trattati nell'insegnamento?	1,7	18,3	41,7	36,7	1,7	100	79,7	88,3	84,5
12	Sei complessivamente soddisfatto/a di come è stato svolto questo insegnamento?	5,0	16,7	48,3	30,0	0,0	100	78,3	77,6	83,6
13	Tutte le lezioni che hai frequentato sono state svolte o comunque presiedute dal titolare dell'insegnamento?	0,0	0,0	5,0	95,0	0,0	100	100,0	97,4	98,5
14	Le aule in cui si sono svolte le lezioni sono risultate adeguate (si vede, si sente, si trova posto)?	0,0	0,0	35,0	25,0	40,0	100	100,0	95,7	92,6
15	L'orario delle lezioni degli insegnamenti previsti nel periodo di riferimento è stato congegnato in modo tale da consentire una frequenza e una attività di studio individuale adeguate?	5,0	1,7	41,7	51,7	0,0	100	93,3	90,0	87,2
17	Il docente ha attribuito sufficiente importanza al questionario (cioè ha fornito le istruzioni e il tempo necessario alla compilazione, ha spiegato lo scopo della rilevazione, ecc.)?	6,7	8,3	45,0	40,0	0,0	100	85,0	87,7	93,7

**Le percentuali sono calcolate sui soli casi validi non tenendo conto dei "non indicati"*

Testo	delle domande	Non previste/ non utilizzate	Decisa-mente NO	Più NO che sì	Più Sì che no	Decisa-mente Sì	Non indicato	Totale giudizi
08	Le attività didattiche integrative (esercitazioni, tutorati, laboratori, seminari, ecc.) sono utili all'apprendimento della materia?	93,3	0,0	1,7	3,3	1,7	0,0	100

Testo	delle domande	Scarso (%)	Ecces-sivo (%)	Totale
02/a	(Solo se hai risposto "decisamente no" o "più no che sì") Il carico di studio è scarso o eccessivo?	20,0	80,0	100

a) Anno di iscrizione

1°	2°	3°	4°	5°	6°	Fuori corso	Erasmus	Non accertabile	Totale
0,0	6,7	86,7	6,7	0,0	0,0	0,0	0,0	0,0	100

b) % di lezioni frequentate (in media) 91,2

c) Studenti presenti rispetto alla frequenza media

Molti di meno	Un po' di meno	Circa lo stesso numero	Un po' di più	Molti di più	Non accertabile	Totale giudizi
21,7	45,0	30,0	0,0	0,0	3,3	100

% Suggerimenti

Alleggerire il carico didattico complessivo	8,3
Aumentare l'attività di supporto didattico	16,7
Fornire più conoscenze di base	8,3
Eliminare dal programma argomenti già trattati in altri insegnamenti	8,3
Migliorare il coordinamento con altri insegnamenti	21,7
Migliorare la qualità del materiale didattico	28,3
Fornire in anticipo il materiale didattico	8,3
Inserire prove d'esame intermedie	3,3
Attivare insegnamenti serali	1,7

I hereby declare that the information provided is true and correct.

Cesare Franchini