VITTORIA URSO

https://www.linkedin.com/in/vittoria-urso-123615163/
https://github.com/vitturso https://scholar.google.com/citations?user=rtJLwIMAAAAJhl=it

EDUCATION

Fellow | ***Condensed Matter and Nanotechnology*** Sep. 2016 – Oct. 2021
University of Salento and IIT - Italian Institute of Technology Lecce, Italy

M.Sc. in Physics | ***Mathematics and Theoretical Physics*** Sep. 2012 – Oct. 2015
University of Pisa, prof. E. Guadagnini Pisa, Italy

B.Sc. in Physics | ***Mathematics and Theoretical Physics*** Sep. 2003 – Oct. 2007
University of Pisa, prof. P. Menotti Pisa, Italy

WORK EXPERIENCE

PhD Fellow of IIT - Italian Institute of Technology November 2016 – November 2019
CBN@UniLe Lecce, IT

- Analytical development of novel functional of DFT (Density Functional Theory)
- Development of the new functionals at the GGA/LMGGA level
- Study of Laplacian for the kinetic potential
- Jellium spheres
- Simple OF-DFT code
- Quasi-dimensional model

PROJECTS AND RESEARCH

Master High Performance Computing - MHPC - (Guest) Sep. 2020 – present
SISSA and ICTP Trieste, IT

Topological states of matter | ***Quasi-particles, states of matter*** 2015 – 2016
University of Pisa Pisa, IT

Renormalization in the coordinate space | ***Math. and Theoretical Physics*** 2014-2015
University of Pisa Pisa, IT

Advanced course in Quantum Field Theory | ***Mathematics and Theoretical Physics*** 2007 – 2011
University of Pisa Pisa, IT

Invarince O(4) in the Coulombic problem of the two bodies | ***Math. and Theoretical Physics*** 2006-2007
University of Pisa Pisa, IT

CONFERENCES AND PRESENTATIONS

Poster for Molecular and materials simulation...: Celebrating 50 years of CECAM Sep. 2019
https://cecam50.cecam.org/ Lausanne, CH

Poster for *Fundamental Challenges of Electron-Density-Based Approaches...* June 2019
https://eldebaap-workshop.ethz.ch/ Zurich, CH

Poster for *Current Problems in Theoretical Physics* April 2019
http://paft19.sa.infn.it/ Vietri sul mare,IT

Poster for *Improving the accuracy of ab-initio predictions for materials* Sep. 2018
http://cecam-fr-moser.org/index.php/workshops/ Paris, FR

Poster for *TNT18-Trends in Nanotechnology* Sep. 2018
http://tntconf.org/2018/index.php?conf=18 Lecce,IT

Poster for *SAMSET18-School on Advanced Materials for Sustainable Energy* June 2018
http://nanotec.cnr.it/it/samset18-2/ Lecce, IT

Poster for *Advances in Group Theory and applications 2017* Sep. 2017
http://www.advgrouptheory.com/agta2017/application.html Lecce, IT

Plasmonica July 2017
http://www.plasmonica.it/2017/ Lecce, IT

HONORS AND AWARDS

Peer review excellence: July 2021
IOP training and certification Online-London, GB

Premio "Miglior progetto di ricerca" June 2020
Contamination Lab, $C-lab$ Lecce, IT

COMMUNITY INVOLVEMENT

Rugby Team | ***Sport*** 2020 – present
Member Trieste, IT

KORU | ***Psychological center*** 2018 – 2020
Hearer Lecce, IT

Roller Derby Team| ***Sport*** 2017 – 2020
Member Lecce, IT

ADI (Associazione dottorandi italiani)| ***University*** 2017 – present
Member Lecce, IT

Post trauma functional rehabilitation | ***Healthy*** 2011 – 2012
Physiokinesitherapy and physiotherapy Ceglie M.ca (BR), IT

SKILLS

Languages: Italian (Native) , English (B2) , French (A1)
Programming: C, Fortran, C++, Python (NumPy, SciPy, Matplotlib)
Document Creation: Microsoft Office Suite (ECDL), LaTex

REFERENCES

Prof. Pietro Menotti: pietro.menotti@unipi.it
Prof. Enore Guadagnini: enore.guadagnini@unipi.it
Prof. Stefano Baroni: baroni@sissa.it
Prof. Stefano De Gironcoli: degironc@sissa.it

PUBLICATIONS

1. Invariance O(4) in the coulombic problem of the two bodies. V.Urso; DOI:
chapter of book "Quantum field theory", Intechopen, accepted (2022)

2. New 2D material: Two-dimensional black phosphorus (2D BP). DOI:
V.Urso; chapter of book "New Advances in Semiconductors", Intechopen, accepted (2022)

3. Development of novel kinetic energy functional for orbital-free DFT applications-II DOI:
V.Urso; Materials-MDPI, accepted (2022)

4. Novel KE functional for density functional theory DOI: 10.1142/S012918312250044
V.Urso; International Journal of Modern Physics C (2022) 2250044

5. Renormalized Schwinger–Dyson functional doi.org/10.1140/epjc/s10052-021-08868-5
E. Guadagnini, V. Urso; Eur. Phys. J. C (2021) 81:103