

SIMONE DI CATALDO - CURRICULUM VITAE

AI FINI DELLA PUBBLICAZIONE IN OTTEMPERANZA ALL'ART. 15 DEL D. LGS. 33/2013

OVERVIEW

Active in research in condensed matter physics since 2017 with a master thesis on Raman spectroscopy under high pressure, I switched to computational materials science with my PhD. I am currently researching superconductivity in hydrogen-rich system under high pressure using state-of-the-art computational methods.

EDUCATION AND CERTIFICATION

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| 2012 - 2015 | Bachelor's degree
<i>Università di Roma "La Sapienza" – Physics department with 110/110</i> |
| 2016 | IELTS 7.5 English certification |
| 2015 - 2018 | Master's degree
<i>Università di Roma "La Sapienza" – Physics Department with the thesis "High-pressure spectroscopy of the hybrid perovskite formamidinium lead iodide" with 110/110 cum laude</i>
Thesis advisors, Paolo Postorino and Lilia Boeri |
| 2018 – to date | Joint PhD in Technical Physics at the Institute of Theoretical and Computational Physics (TU Graz) and in Physics at the University of Rome "La Sapienza"
Thesis advisors, Wolfgang von der Linden, Lilia Boeri |

SCIENTIFIC WORK AND AWARDS

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| 2019 | <i>"Superconductivity from first-principles in sodalite-like yttrium hydrides"</i> contribution at DPG – Spring Meeting (University of Regensburg), (link) |
| 2019 | Published paper:
C. Heil, S. Di Cataldo, et al., Phys. Rev. B 99 , 220502(R) (2019), (link) |

2019 Special mention in “Best communications – Solid state physics” at the Italian Physical Society, ([link](#))

2020 Published papers:

S. Di Cataldo, et al., Phys. Rev. B **102**, 014516 (2020) ([link](#))

S. Saha, S. Di Cataldo, et al. Phys. Rev. B **102**, 024519 (2020) ([link](#))

COMPUTER SKILLS

Programming languages known: Python (incl. Keras and Tensorflow), Bash, C, LaTeX

Software: Office suite, Pixelmator pro

Other: knowledge of *ab-initio* simulation codes (QE, VASP), crystal structure prediction

LANGUAGES SPOKEN

Italian Native

English Fluent