PhD in Computer Science & Artificial Intelligence

PhD in Mathematical & Physical Sciences

PhD Students Welcome Day

November 8th, 2023 – v. 1.0
The CS&AI and MPS PhD programs

- Instituted in 2020 as successors to previous PhD program in Computer Science, Mathematics & Physics
- Three year duration
- PhD cycle XXXIX, starting November 1st, 2023
- PhD thesis to be submitted by October 31 of 3rd year
- Graduation in spring of the following year
- Not all students start on Nov 1st / end on Oct 31
Funding

• Standard scholarship: € 15,343.28 per year
• Supplements per month abroad: € 639 (6 months)
• € 4603 research funding across three years
• If needed, ask for a laptop (in due purchase)
• Thematic scholarships (Bruno Kessler, INFN, etc.)
• Other research funds can be provided by the Supervisor and his/her Lab/Institute
Important figures about learning activities

- **Learning activity ≥ 20 CFU** *(also “Transversal”)*
  - 5 CFU English, if needed *(CFU’s for Italian courses as well)*
  - 4 “Transversal” topics *(at least one course for each topic, to be attended downtown at the University)*
  - PhD thematic courses
    *(typically 2 or 4+ CFU each for CSAI; at least 12 CFU for MPS)*
  - Individual activities *(summer schools, external courses, etc.)*
- **Teaching activity** ~24 hrs *(≤ 40 hrs)* each year,
  *(MPS: from the second year)*
- **PhD project overall** = 1720 hrs each year

PhD in Computer Science & Artificial Intelligence
PhD in Mathematics & Physics
University of Udine – Italy
Annual reporting

- Learning activity (CFUs approved in the PhD Notebook)  
  (MPS: Detailed instructions on the allocation of credits will be available shortly)
- Teaching activity (24 hrs no CFUs, then permission needed)
- Dissemination (seminars, conferences)
- Publications (articles, papers upload in IRIS)
- Extra-project activities (paid or not, permission needed)
- Activities covered by PhD funds
- Internships
- Interruptions (max one year, personal or family issues, 4° year can be asked at no salary)
- Evaluation Day by Oct. 31, not necessarily matching with annual report.
### Intrnal courses – Organized by CS & AI

<table>
<thead>
<tr>
<th>Title</th>
<th>Dates</th>
<th>Organizers</th>
<th>CFU</th>
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</thead>
<tbody>
<tr>
<td>??</td>
<td>November 28 &amp; 29</td>
<td>Luca Di Gaspero</td>
<td>2 + 2 (8 hrs)</td>
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<tr>
<td>Automated software testing (2024 Obligatory course and assignment)</td>
<td>March</td>
<td>Vincenzo Riccio</td>
<td>1.5 + 2.5 (12 hrs)</td>
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<tr>
<td>Course on CS (no AI) - Title to be announced (Advanced course 2024 at DMIF)</td>
<td>Stay tuned!</td>
<td>To be announced</td>
<td>2 + 2 (8 hrs)</td>
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<tr>
<td>Course on AI - Title to be announced (Advanced course 2024 at DMIF)</td>
<td>Stay tuned!</td>
<td>To be announced</td>
<td>2 + 2 (8 hrs)</td>
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<tr>
<td>Course at FBK - Title to be announced (Advanced course 2024 at DMIF)</td>
<td>Stay tuned!</td>
<td>To be announced</td>
<td>2 + 2 (8 hrs)</td>
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<td>University of Udine – Italy</td>
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### Courses for 2023/24 – Organized by MPS

<table>
<thead>
<tr>
<th>Title</th>
<th>Date</th>
<th>Teacher(s)</th>
<th>CFU</th>
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<tbody>
<tr>
<td>Advanced Statistics</td>
<td>January 2024</td>
<td>Michela Battauz, Valentina Mameli</td>
<td>5+2</td>
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<td>(20 hours)</td>
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<tr>
<td>Exponential Runge-Kutta Methods</td>
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<td>Rossana Vermiglio</td>
<td>2+2</td>
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<td>(8 hours)</td>
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<tr>
<td>Introduction to mathematical modelling of infectious diseases</td>
<td><strong>Dec 23 2023</strong></td>
<td>Francesca Scarabel</td>
<td>2+2</td>
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<td></td>
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<td>(8 hours)</td>
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<tr>
<td>Lie Algebras</td>
<td>March 2024</td>
<td>Mario Mainardis</td>
<td>4 + 2</td>
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<td></td>
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<td>(16 hours)</td>
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<tr>
<td>Linear orderings</td>
<td>May/June 2024</td>
<td>Thilo Weinert</td>
<td>2+2</td>
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<td>(8 hours)</td>
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<tr>
<td>Introduction to the zoo of reverse mathematics</td>
<td>May/June 2024</td>
<td>Alberto Marcone</td>
<td>3+2</td>
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<td>(12 hours)</td>
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<tr>
<td>Determinacy and I0</td>
<td>Jan/Feb 2024</td>
<td>Vincenzo Dimonte</td>
<td>3+2</td>
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<td>(12 hours)</td>
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<tr>
<td>Numeri, numerosità ed Analisi Non-Standard</td>
<td>Spring 2024</td>
<td>Vieri Benci</td>
<td>2+2</td>
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<td>(8 hours)</td>
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<td>Title</td>
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<td>Teacher(s)</td>
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<td>Conceptual change and learning progression</td>
<td>Nov/Dec 2023</td>
<td>Marisa Michelini</td>
<td>2+2 (8 hours)</td>
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<tr>
<td>Classical and quantum simulations of nano and bio-systems</td>
<td>February 2024</td>
<td>M. Soler Bastida, Paolo Giannozzi</td>
<td>3+2 (14 hours)</td>
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<tr>
<td>Asymptotic symmetries in gravity</td>
<td>April 2024</td>
<td>Daniele Pranzetti</td>
<td>3+2 (12 hours)</td>
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<tr>
<td>Covariant phase space and Noether’s theorems</td>
<td>March 2024</td>
<td>Daniele Pranzetti</td>
<td>3+2 (12 hours)</td>
</tr>
<tr>
<td>Radiation-matter interaction and radiation damage</td>
<td>Jan/Feb 2024</td>
<td>Simone Monzani</td>
<td>3+2 (14 hours)</td>
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<tr>
<td>Advanced general relativity</td>
<td>March 2024</td>
<td>Stefano Ansoldi</td>
<td>3+2 (12 hours)</td>
</tr>
<tr>
<td>Title</td>
<td>Teacher(s)</td>
<td>CFU</td>
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<tr>
<td>Delays and structures in dynamical systems: modeling, analysis and numerical methods</td>
<td><strong>November 20-24, 2023</strong> <a href="https://www.cism.it/en/activities/courses/C2318">https://www.cism.it/en/activities/courses/C2318</a></td>
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<tr>
<td>Algebra commutativa</td>
<td>Mario Mainardis</td>
<td>2+2 (28 hours)</td>
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<tr>
<td>Matematica per il Machine learning</td>
<td>Dimitri Breda, Enrico Bozzo, Paolo Vidoni</td>
<td>2+2 (24 hours)</td>
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<tr>
<td>Wqo an bqo theory with applications</td>
<td>Alberto Marcone, Gabriele Puppis</td>
<td>2+2 (28 hours)</td>
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PhD Notebook app

• You must insert all you do about your PhD (learning activities, seminars you attend, teaching, etc) in the “PhD Notebook” app.
• You also insert there the yearly description of your research.
• It will eventually generate your annual and final reports.
• We recommend inserting the activities as they happen, to avoid an end-of-the-year rush.
• Everything needs to be approved by your supervisor and will be then reviewed by the board.
• Therefore, if you plan to attend learning activities outside those organized by the PhD board (good idea to follow e.g. the SMC courses), ask your supervisor beforehand: (s)he will need to approve any credits you claim for them.
Workplan (suggested)

1st year
- PhD Welcome Day at the University (in February 2024 at the Biblioteca nearby)
- Attend courses/schools, also organized by the University
- Begin research activity
- End-of-the-year reporting, evaluation (learning activity & research plan)

2nd year
- Conclude the learning activity
- Research activity full immersion
- Teaching
- End-of-the-year reporting, evaluation (learning activity & research activity)

3rd year
- Conclude research and write PhD thesis
- Teaching
- Exhibition at the University (PhD Expo)
- Admission to the final exam (external review of the PhD thesis)

Beginning of the new year: discussion of the thesis, graduation

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Students’ representatives in the board

• There are two students’ representatives in each PhD board
• CS & AI: Alessandro Privitera (UD) & Stefano Stefenon (FBK)
• MPS: Simone De Reggi & Sebastiano Thei
• For any issue, please report/refer to them prior to emailing the Coordinators
Meet the Department staff

- Silvia Zuccaro (Head of department staff)
- Marina Dorligh (Head of administrative staff)
- Francesca Baciga (Head of research staff)
- Antonella Burci (Travels, reimbursement)
- Alessandra Galvani (Room keys: do ask for your keys)
- Chiara Maltese (System administrator, technical issues)
- Eleonora Miotti (Local representer of PhD central office)
- Roberta Maluta (Front desk: lost? start from here!)
- Cristina Melilla (Buying equipment, Events organization)
Populate the Department web site ASAP

Please
• enter into contact with niki.martinel@uniud.it (CS & AI) or gianluca.franco@uniud.it (MPS)
• send: photo & bio & short research project &
• personal web page address (if any)

Inclusion in our web site:
https://www.dmif.uniud.it/dottorato/dottorandi/

Ex. (typical bio):
https://www.dmif.uniud.it/dottorato/imf/dottorandi/axel.denardin/
Additional info

General information, call for PhD:
• www.uniud.it/en/research/research-doctorate/phdstudies
• https://www.dmif.uniud.it/dottorato/

Information about Fondazione Bruno Kessler:
• www.fbk.eu/en/

Contacting a supervisor from the PhD Board:
• www.dmif.uniud.it/dottorato/iai/collegio-docenti/
• www.dmif.uniud.it/dottorato/smf/collegio-docenti/

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Questions

Our questions
• Supervisors’ list check
• Room check
• Laptop check

Your questions
• ?

Future administrative questions: talk with Eleonora
• eleonora.miotti@uniud.it

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