CALL N. 003/2019
public selection, by qualifications and interview, to award
n. 1 research fellowship "professionalising" category A – level 1
in the Department Control and Computer Engineering.

The Politecnico di Torino intends to assign n. 1 research fellowship to conduct research activity in accordance within the research program : "**Energy Efficient Electronic Design Automation (acronym E3DA)**"

Research field	Engineering
Academic Discipline	ING-INF/05 Information processing systems
Content and finality of the research program	The research program envisions the execution of research and development activities in the field of design of energy efficient systems in the following projects: HBP-SGA1, HBP-SGA2, LAB4MEMS2, ARROWHEAD, SM2ART, ITS, EEB, R2POWER300, DISLOMAN, STAMP, CANP, R3POWER-UP, SERENA, AMABLE, SENSEI, APPROXIM@CTION. The program will deal with topics concerning the development of design methodologies, software tools, platforms, and sensors networks.The activities will be disseminated and made available to the scientific community through appropriate channel of communications, publication of scientific papers in conferences or international journals, academic courses, research events and meetings and ad-hoc websites.
Required performances	C/C++/Python coding; development of TCL scripts for the automation of low-power design flows; description of digital hardware specifications using HDLs (VHDL/Verilog); Writing of technical reports and deliverables; Writing of scientific papers and preparation of technical presentations/demos for the dissemination of the achieved results.
Research fellowship duration	1 year
Research fellowship gross amount	Euro 19.367,00 gross/per year.

Degree required for participating in the selection	"Diploma di laurea dell'ordinamento previsto dal D.M. 270/2004 nelle seguenti classi: LM-32 (Ingegneria informatica)"
	or "Diploma di laurea dell'ordinamento previsto dal D.M. 509/1999 nelle seguenti classi: 35/S (Ingegneria informatica)"
	or "Laurea in Ingegneria informatica, conseguita ai sensi degli ordinamenti didattici antecedenti il D.M. 509/1999"
	or equivalent university qualification from abroad

The applications must be submitted by 23.01.2019, 3.00 p.m. (Italian time) by <u>only</u> using the online procedure available through the following website **http://careers.polito.it/**, **otherwise candidates will be excluded from the selection**. The online procedure is available starting from 17.01.2019.

<u>Submission of the application</u>

The participation application must be completed by sending the admission application and the *dichiarazione sostitutiva di atto di notorietà* **created in "pdf" format by the online procedure**, according to one of the following procedures:

• Through digital signature of the candidate, by using a specific software; in this specific case the application and the dichiarazione sostitutiva di atto di notorietà **must be signed and uploaded to be sent electronically though the ".p7m" format available in the specific section through the online procedure, together with the format ".p7m" copy of a valid identity document**;

• By printing the application and the *dichiarazione sostitutiva di atto di notorietà*. **The signed documents must be scanned and converted in "pdf" format, uploaded and sent through the special section available through the online procedure together with the pdf copy of a valid identity document**.

The participation application must include:

▪ **The admission application** which has to be filled in all its parts, according to the details included in the online procedure. In particular it must include:
  • Complete personal data of the candidate;
  • The Department, the Academic Discipline, the research program, the number of the call in which the candidate intends to participate;
  • The domicile post address and the e-mail address of the candidate.

▪ **The Curriculum Vitae**, which must include the list of all the publications (the uploaded publications and the overall scientific production), which will be filled in all parts, according to the word form accessible through the online procedure, uploaded and sent in "pdf" format only through the special section.

▪ **Any other document different from the publications** must be submitted through the form of the *dichiarazione sostitutiva di atto di notorietà* (document in which candidates declare that all what they stated is true) and uploaded and sent in "pdf" format only through the special section.
These elements must be duly illustrated in the cv (period of time of reference, institution where the activity has been developed, description of the activity, etc..).

▪ **The publications**, which must be uploaded and sent in "pdf" format <u>only</u> through the special section.
Candidates are allowed to submit a maximum number of 12 publications otherwise they will be excluded from the selection. Among these 12 publications no more than 4 publications per year can be submitted and no more than 3 publications must be prior to January 1st 2014 (hereinafter called "time limit"). The retroactivity of this period is allowed in the case of documented leaves as indicated below:
  a) maternity leaves: the time limit is advanced by of 18 months for each child;
  b) paternity leaves: the time limit is anticipated of the actual amount of paternity leave used for each child;
  c) long-term illnesses (over 90 days): the time limit is anticipated by the actual amount of leaves for each event that occurred after January 1st 2014.

Each candidate involved in procedures with an Academic Discipline included in an Academic Recruitment Field defined "bibliometrico" as indicated in the Ministerial Decree n. 589/2018 must declare the following indicators by specifying the origin database:

- Overall scientific production (indicators must be declared in the CV)
    a) Total citations;
    b) Total impact factor;
    c) H-index or similar;
- For each of the 12 publications submitted in the on-line procedure (indicators must be declared in the on-line procedure)
    a) Citations;
    b) Impact factor.

Among the 12 uploaded publications the candidate must choose the 3 most significant ones. These 3 publications must be indicated in the CV and in the specific on-line procedure section.

- ***La dichiarazione sostitutiva di atto di notorietà,*** available through the online system which certifies:
    ➢ The veracity of what the candidate has declared in his/her CV;
    ➢ Declaration of conformity of elements included in the specific sections of the CV, of the publications and veracity of the inserted data.

- **The € 10,00 payment invoice which** must be uploaded and sent by the candidate through the special section accessible through the online procedure, otherwise he/she will be excluded from the selection.

    - Candidates are required to pay and deposit a Euro 10,00 fee on the Politecnico bank account **IBAN IT51N0200801160000002551101** – *Agenzia Politecnico della Banca UNICREDIT S.p.A. Via D'Ovidio, n. 6 - 10129 TORINO - intestato al Politecnico di Torino – Amministrazione Centrale, Corso Duca degli Abruzzi, n. 24 – 10129 TORINO -* and to specify in the "causale" (reason for payment): "Fees for the participation in the selection procedure for Research fellowship, Academic Discipline ING-INF/05, call 003/2019".

The selection will be done, by qualifications and interview, by following the examination program below:

Qualifications topics	- Information system architectures; - Real-time embedded systems; - Techniques and tools for power/energy management on digital embedded systems; - Circuit-level techniques for ultra-low power devices, - Algorithms and CAD flows for low-power synthesis of digital circuits.
Interview topics	- C/Python programming; TCL scripting; - CAD tools for synthesis, modeling and optimization of digital embedded systems; - low-power design flows; - low-power optimization techniques; - design of parallel architectures and arithmetic accelerators; - models and algorithms for data-analytics

SCHEDULE

Publication of the qualifications evaluation	29.01.2019 at 9,50 on the notice board of the Department Control and Computer Engineering of the Politecnico di Torino – Torino - Corso Duca degli Abruzzi, 24.
Interview	29.01.2019 at 10,00 at the "Sala Riunioni 3" of the Department Control and Computer Engineering of the Politecnico di Torino – Torino - Corso Duca degli Abruzzi, 24.

Qualifications, publications and interview – evaluation criteria
(Art. 5 "Selection procedure" of the General call for the awarding of research fellowship to conduct research activity)

Definition of evaluation criteria referred to any other document different from the publications

The Commission can ascribe a maximum score equal to 30 to the elements included in the specific sections of the cv of each candidate admitted in the discussion.

The maximum score ascribable to each typology of qualification is defined by the table below.

The evaluation of any other document different from the publications, must be done taking into consideration the activity carried out by each candidate, the coherence with the topics related to the specific Academic Discipline indicated in the call and by specifically considering the importance that they take on, on the basis of the quality and the quantity of the research activity developed by each candidate.

Qualifications	Maximum ascribable score
PhD or equivalent qualification/degree	Max 10 points
Graduation grade	Max 5 points
Certificates of specialization and certificates of attendance of post-graduate courses, obtained in Italy or abroad	Max 5 points
Research activities (included research activities carried out as part of the degree or PhD thesis) carried out in public or private organizations with contracts, scholarships or assignments, in Italy or abroad	Max 10 points

The Commission ascribes a specific score to each element included in the sections of the cv in application of the defined criteria. The overall score ascribed to each candidate is determined by the sum of partial scores.

Definition of evaluation criteria referred to submitted publications

Each submitted publication must be evaluate with reference to one of the typology indicated in the table below. The Commission defines the maximum score ascribable to each of the following typology of publication:

Typology of publication	Maximum ascribable score
Book	Max 5 points
Book chapter	Max 5 points
Article published on national or international journal	Max 5 points
Curatorship	Max 5 points
Exhibition catalogue and any published project (with different author critical essay)	Max 5 points
National or international proceedings	Max 2 points
Any other publication	Max 5 points

On the bases of the defined criteria and the typologies of publications described above, the Commission ascribes a score to each publication.

A maximum score equal to 30 can be ascribed to the publications submitted by the candidates, including 15 points reserved to the three most significant publications.

Finally, the Commission, with reference exclusively to the score ascribed to the remaining publications, identifies the candidate to whom is ascribed the highest score. If that score is higher that the maximum ascribable score (15 points), the Commission ascribe to the candidate 15 points and adjusts proportionally the scores ascribed to the other candidates.

The Commission can ascribe a maximum score equal to 40. The selection shall be considered passed if the candidate scores 28 points in the assessment of the oral examination.

Candidate must be present the day of the interview in the above indicated place and time and show a valid identity document.

The General call for the awarding of research fellowship and the "Regulation for the awarding of research fellowships to conduct research activity" are available at the following university website: http://www.swas.polito.it/services/concorsi/.