**RESEARCH PROPOSAL**

**for admission to XXXVIII Cycle of Politecnico di Bari**

**PhD Programme in**

**ELECTRICAL AND INFORMATION TECHNOLOGY ENGINEERING**

**(ATTACHMENT B)**

**ATTENTION:** Candidates who intend to propose a research project based on the topics set out in Ministerial Decrees 351/2022 and 352/2022 **must prepare a proposal in line with one or more of the topics listed below.**

**ONLY FOR CANDIDATES WHO INTEND TO PROPOSE A RESEARCH PROJECT BASED ON THE TOPICS SET OUT IN MINISTERIAL DECREES 351/2022 AND 352/2022 🡪** *The list below contains the details of each grant financed according to Ministerial Decrees 351/2022 and 352/2022, its area and its topic for the PhD Programme.*

**Grants funded according to M.D. 351/2022**:

**GRANT N.1** - **Area:** NRRP; **Topic:** “*Advanced systems for precision diagnosis and treatment of visual apparatus pathologies”;*

**GRANT N. 2** - **Area:** PNRR; **Topic:** “*Planning and implementation of an optical interferometer integrated within SOI technology”;*

**GRANT N.3** - **Area:** Public Administration; **Topic:** “*Smart and innovative solutions for sustainable mobility in self-driving vehicles”;*

**GRANT N. 4** - **Area:** Public Administration; **Topic:** “*Design and evaluation of novel Lawful Interception architecture and tools for Beyond 5G networks”;*

**GRANT N. 5** - **Area:** Digital and Environmental Transition; **Topic:** “*Development of a technological platform of microwave and optical devices for the telecommunication of the future”.*

**Grants funded according to M.D. 352/2022**:

**GRANT N. 6** - **Co-funded by**: Applica s.r.l..; **Topic: “***Development of advanced monitoring strategies based on AI for collaborative robotics”;*

**GRANT N. 7** - **Co-funded by**: Martur Italy s.r.l.; **Topic: “***Development of AI applied to computer-aided engineering, the metaverse for car industry production processes and machine learning”;*

**GRANT N.8** - **Co-funded by**: Esaote s.p.a.; **Topic: “***New generation digital gradient amplifiers for MRI”;*

**GRANT N.9** - **Co-funded by**: Metasensing s.r.l.; **Topic: “***Real-Time Ship Detection on satellite SAR data”;*

**GRANT N.10** - **Co-funded by**: Northrop Grumman Italia s.p.a.; **Topic: “***An interferometric optic fibre gyroscope for cost-sensitive applications”;*

**GRANT N.11** - **Co-funded by**: N.P.C. New Production Concept s.r.l.; **Topic: “***Development of a high-performance On-Board Computer for nanosatellite platforms”;*

**GRANT N.12** - **Co-funded by**: Tesmec Rail s.r.l..; **Topic: “***Reliable, smart and green propulsion control of construction and maintenance railway vehicles”;*

**GRANT N.13** – **Co-funded by:** Arol s.p.a.**; Topic:** *“AI and intelligent control for innovative closure and capping systems in the food and beverage industry”.*

Inizio modulo

**PhD Programme**

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| **PhD Programme in ELECTRICAL AND INFORMATION TECHNOLOGY ENGINEERING ENGINEERING (XXXVIII Cycle) – Politecnico di Bari** |

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| 1. **PHD RESEARCH PROPOSAL** (TITLE): | |
| 1. **PhD Research Proposal Description:**   **Provide a description of the phd research proposal, its subject and its topic. Please, specify the goal(s) to be developed during the PhD programme and indicate the scientific basis of the proposal, its research objective, and methodologies to adopt.**  **ATTENTION:** Candidates who intend to propose a research project based on the topics set out in Ministerial Decrees 351/2022 and 352/2022 must prepare a proposal in line with one or more of the topics listed below. | (MAX 9.000 characters): |
| **B. BIBLIOGRAPHY** |  |
| **C. SURNAME and NAME** |  |