

RESEARCH OPPORTUNITIES

PUCRS / 2021

	Research Group or Laboratory Line of Research	Coordinator	Eligibility Criteria	Activities do be developed (subject to alteration)	Duration
1	NanoPUCRS (Interdisciplinary Center of Nanoscience and Micro-Nanotechnology) Line of Research: Nanostructured Materials	Ricardo Papaléo	Conversational English; Educational Background: Physics, Chemistry, Engineering, Pharmacy or Biology	Varies according to specific project: laboratory practices; synthesis and characterization of nanomaterials; biological experiments (nanotoxicity), data analysis	No maximum duration; minimum duration is conditioned to students' goals (short periods may not be very useful for applicants)
2	Medical Imaging Computing Laboratory (MEDICOM) Line of Research: Development of Medical Imaging Analysis Algorithms	Ana Maria Marques da Silva	English and Python or MATLAB programming languages;	Development of machine learning software for medical imaging analysis	Minimum: 6 months; no maximum duration
3	Laboratory of Environmental Analytical Chemistry Line of Research: Optimization of zeolite synthesis processes from waste and their use in: a) environmental decontamination; b) controlled release of nutrients in the soil; c)	Marçal José Rodrigues Pires	Languages: English, Spanish or French; Chemistry and Chemical Engineering graduates or students with good academic record.	To be defined	1-6 months



	formulation of new doped bioplastic nanocomposites for odor control; d) absorption of greenhouse effect gases.				
4	Olympic Studies Research Group Line of Research 1: E-Sports in Olympic Games: A Perspective Based on Athletes and Specialists in Olympic Games	Nelson Schneider Todt	Language: English or Spanish Availability in the afternoons	Bibliographic research and review, collaboration in conducting interviews and data management	A minimum of one semester
5	Olympic Studies Research Group Line of Research 2: Social Media and the Creation of the Image of Paralympic Athletes: From Rio 2016 to Tokyo 2020	Nelson Schneider Todt	Language: English or Spanish Availability in the afternoons	Bibliographic research and review, collaboration in conducting interviews and data management	A minimum of one semester
6	Group for Studies on Career Development Line of Research: Career Development Studies	Manoela Ziebell de Oliveira	Enthusiasm for careers, organizations and labor	To be defined	A minimum of 2 months
7	Ubilab / Famecos Line of Research: New medias, mobile devices and the future of journalism.	Eduardo Campos Pellanda	Undergraduate students who have completed at least half of their degree in Communications or Computer Science	To be defined	6 months – 1 year
8	Group for Research on Cinema and Audiovisual: Communications, Aesthetics and Politics – Kinopoliticom Line of Research: The Reconfiguration of the Images of Authoritarian Regimes in Brazil	Cristiane Freitas Gutfreind	Languages: Portuguese, English, French or Spanish	Bibliographic research and review as well as group discussions	A minimum of one semester



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9	<p>Research Group for Education, Gender and Handcraft</p> <p>Line of Research: Theories and Cultures in Education</p>	Edla Eggert	Intermediate-level Portuguese	To be defined	04 months or 01 academic semester
10	<p>Research Group in Education: Skills, Craftsmanship and Illusio</p> <p>Line of Research: Ethics in research as an issue associated with researcher's training</p>	Mónica de la Fare	Enthusiasm for the project; Elementary-level Portuguese	To be defined	04 months or 01 academic semester
11	<p>Interdisciplinary Research Group on Theory of Justice and Political Culture</p> <p>Line of Research: Thematic Group "Theories of Justice" (Anpof); Political Culture, Human Rights, Theory of Justice / Bibliographical Research; organization of events; writing publications</p>	Nythamar de Oliveira (Graduate Program in Philosophy); Thadeu Weber (Graduate Program in Philosophy)	Fluency in English, German or Portuguese; familiarity with the topics or authors under study	To be defined	No maximum duration
12	<p>LTIG - Imaging and Geoprocessing Laboratory</p> <p>Line of Research: Social vulnerability map</p>	Regis Alexandre Lahm	Portuguese and / or Spanish; A degree from a higher education institution; Two afternoons per week; Experience with GIS, QGIS, GVSIG, IDRISI, IARC and GIS	To be defined	Aprox. 2 months



13	<p>Research Group on Neurophilosophy</p> <p>Line of Research: "Social Medias and Decision-Making: Reason and Emotion in Social Relations", MCTI/CNPq/ MEC/CAPES No. 18/2012 / Neurophilosophy, Neuroethics, Neuroscience</p>	<p>Nythamar de Oliveira; Jaderson da Costa</p>	<p>Languages: English or Portuguese; familiarity with e-prime</p>	<p>To be defined</p>	<p>No maximum duration</p>
14	<p>Integrative Research Group on Economics (NEPE)</p> <p>Line of Research: There are several ongoing projects in the areas of Economic and Regional Development</p>	<p>Adelar Fochezatto</p>	<p>Education: Economic Sciences, Statistics or Agribusiness</p>	<p>Bibliographic research, data analysis and compilation</p>	<p>To be defined</p>
15	<p>Decision-Making Research Group</p> <p>Line of Research: Resilient Systems, Human Factors, System Safety, Aviation, Oil & Gas</p>	<p>Éder Henriqson</p>	<p>Language requirements: English, Portuguese or Spanish</p>	<p>Literature review, data collection and analysis, project development, filed work (depending on the interest and aptitude of the applicant/student)</p>	<p>To be defined</p>
16	<p>GDEHMA – Research Group: Human and Economic Development and Environment</p> <p>Line of Research: Poverty and Human Development</p>	<p>Izete Pengo Bagolin</p>	<p>Willingness to learn and cooperate with other members of the group</p>	<p>Participation in study groups, data collection, analysis of results, Bibliographical review.</p>	<p>3 months</p>
17	<p>Governance and Digital Society Research Group</p> <p>Line of Research: Digital Government; Smart Cities; Governance</p>	<p>Edimara Mezzomo Luciano</p>	<p>Experience with data analysis software; Languages: English or Spanish</p>	<p>To be defined according to students' profile and experience. However, in general terms, selected applicants will collect and analyze qualitative or</p>	<p>From 6-12 months</p>



				quantitative data	
18	<p>Multiagent Systems, Robotics and Semantic Technologies (SMART)</p> <p>Line of Research: Developing Intelligent Autonomous Systems for Law and Healthcare</p>	Rafael Bordini	Elementary level of English and elementary level of computer programming	Support in research and development activities	5-12 months
19	<p>Laboratory of Engines and Alternative Fuels</p> <p>Line of Research: Biodiesel Production and Use and their Mixtures in Conventional Diesel Engines</p>	Carlos Alexandre dos Santos	Conversant with mechanics and / or engines and /or automobile systems; Language requirements: English, Spanish or French	To be defined	Minimum of 2 months – Preferably within the academic semesters (Mar to Jun – Aug to Nov)
20	<p>GEE (Energy Efficiency Group)</p> <p>Line of Research: Sustainable Use of Natural Resources</p>	Odilon Francisco Pavón Duarte	Successful applicants will be proactive, committed, respectful and passionate;	Laboratory and / or field work to implement projects associated with the sustainability of natural resources.	To be defined
21	<p>Virtual Reality Group</p> <p>Line of Research: Virtual and Augmented Reality Techniques</p>	Márcio Sarroglia Pinho	C/C++/C# Programming; Language requirements: English or Spanish (intermediate);	Virtual Reality development; Augmented Reality development; Research on 3D Interaction	4 - 12 months



22	<p>Integrative Research Group on Metallic Materials Engineering (NUCLEMAT)</p> <p>Line of Research: Corrosion of Metallic Materials</p>	Eleani Maria da Costa	Language requirements: English or Portuguese; Availability of at least 8 hours a week; Successful applicants must be enrolled in an undergraduate or graduate program in Engineering or related areas	To be defined	1-6 months
23	<p>Simulation of Turbulent Flows (LaSET)</p>	Jorge Hugo Silvestrini	Language requirements: Portuguese, Spanish, French or English; GPA: 3 or higher. Research interests include: Fluid Mechanics and Turbulence; Numerical Simulation	To be defined	From 6 months to 1 year
24	<p>Autonomous Systems</p> <p>Line of Research: Goal Recognition in Interesting Settings / Artificial Intelligence</p>	Felipe Meneguzzi	Languages: English, familiarity with any modern programming language	Study of automatic planning techniques and prototype development.	Minimum: 6 months
25	<p>Unit Operations Laboratory</p> <p>Line of Research: Processes Applied to Natural Products</p>	Eduardo Cassel	Successful applicants will be undergraduate students enrolled in Chemical Engineering, Mechanical Engineering, Chemistry, Pharmacy, Biology programs and / or related areas.	To be defined	2-6 months
26	<p>NUCLEMAT (Development of Metallic Materials)</p> <p>Line of Research: comparison and assessment of the microstructural and mechanical</p>	Berenice Anina Dedavid	Outstanding GPA and experience with metallic materials	To be defined	3 – 24 months



	properties of alloys used in the car and aerospace industries; Solidification, thermal analysis and thermal treatments / in alloys.				
27	<p>Embedded System Group</p> <p>Line of Research: Internet of Things/Smart Cities/Cybersecurity</p>	Fabiano Hessel	Languages: English or French; Programming languages: C and Java.	The student will work at the core of IoT technology. The activities involve the study of the state of the art, proposition / expansion of IoT security methods developed by the research group and laboratory experiments in IoT security.	6 months – 1 year
28	Interdisciplinary Studies in Civil Engineering	Jairo José de Oliveira Andrade	English (reading / writing) Graduates or students of Civil Engineering with a good academic record.	To be defined	Minimum: 6 months; Maximum: None
29	<p>High Performance Laboratory / Research Group in infrastructure, Networks and Cloud Computing</p> <p>Line of Research: High performance computing, cloud computing and virtualization</p>	Tiago Ferreto	Elementary level Linux and programming languages; Elementary understanding of IT infrastructure and networks;	Experiments, installation and configuration of equipment and apps; Successful applicants will also write research articles	To be defined
30	<p>CPVA – Advanced Visualization Research Center</p> <p>Line of Research: Project under Development: Application of Visual Data Mining in Social Networks</p>	Soraia R. Musse	Applicants must be regularly enrolled in a Computer Science (or similar) program and have completed the algorithm, programming, and data structure courses.	To be defined	Minimum: About 3 months



31	<p>Virtual Human Simulation Laboratory</p> <p>Line of Research: Development of interactive tools to control animation of virtual humans</p>	Soraia R. Musse	Elementary English; OpenGL and / or OpenCV	Algorithms, method development, participation in laboratory meetings and article study.	1 or 2 semesters
32	<p>Materials and Clean Technology Development Group</p> <p>Line of Research: Polymers, polymer nanocomposites, materials for CO₂ capture and transformation</p>	Sandra Einloft	Successful applicants will be working on their undergraduate degrees in Chemistry, Engineering or similar fields.	To be defined	A minimum of 1 month
33	<p>Laboratory for Evaluation and Research in Physical Activity</p> <p>Line of Research: Biomechanics</p>	Rafael Reimann Baptista	Languages: English (advanced) or Portuguese (intermediate)	Laboratory practice; experiments; literature review and research; data management; etc.	To be defined
34	<p>Laboratory of Cellular and Molecular Biology - Brains</p> <p>Line of Research: Signaling mechanisms that occur during neural differentiation and neurogenesis of induced pluripotent stem-cells (iPS) derived from human fibroblasts</p>	Denise Cantarelli Machado	Languages: English or Portuguese Conversant with biochemistry, chemistry, molecular biology, immunology and pathology.	Laboratory Security Training Program; cultivation and maintenance of human cells, molecular analysis, preparation of reagents and literature review.	A minimum of 1 month



35	<p>DaVint Laboratory (Data Visualization and Interaction Lab)</p> <p>Line of Research: Use of data visualization techniques in the support of initial exploration and pre-processing in Data Science</p>	Isabel Harb Manssour	<p>Language: English; Completion of a course on programming.</p> <p>Desirable: familiarity with JavaScript or Python programming.</p>	Bibliographic research and software development	1 - 6 months
36	<p>GEE (Energy Efficiency Group)</p> <p>Line of Research: Energy Efficiency and Generation of Renewable Energy</p>	Odilon Francisco Pavón Duarte	Proactivity	Successful applicants will conduct field work, assist in the design of analysis and reports, do bibliographic research, etc.	No maximum duration - dependent upon availability of student
37	<p>Artificial Intelligence in Health</p> <p>Line of Research: Interactive Agents for Decision Support in the Area of Health</p>	Rafael Bordini	Languages: English (elementary) and elementary programming	Support to research and development of autonomous systems	1 - 2 semesters
38	<p>Research Group</p> <p>Line of Research: (1) Fault-tolerance techniques, Energy Management and Security for MPSoCs Projects (2) Architectures and Asynchronous Circuits: Communication, Infrastructure and Applications</p>	Fernando Moraes; Ney Calazans	<p>Language requirements: English or French; Successful applicants must be enrolled in an undergraduate or graduate program in Computer Science, Computer Engineering or Electrical Engineering. Conversant with computer architecture and hardware description language (VHDL or Verilog). Familiarity with computer networks, operating systems and security is</p>	Development and validation of hardware modules in multiprocessed systems (MPSoCs); development of basic software (at the level of operating systems); simulation and prototyping of hardware; integrated circuit project.	Minimum: 1 semester

			desirable.		
39	<p>Group of Research on Eating Behavior</p> <p>Line of Research: Intuitive eating habits of Brazilian college students</p>	Ana Maria Pandolfo Feoli	10 hours per week	Database management, seminars, data analysis, production of scientific articles	6 months
40	<p>Psychology, Health and Communities</p> <p>Line of Research: Inequalities in health and social markers</p>	Katia Bones Rocha	All applications will be considered;	Bibliographic research and review; data management	6 months – 2 years
41	<p>Group for Research on Information Technology and Business Strategy</p> <p>Line of Research: SMARTER: Knowledge Sharing and Social Media Affordances in Intra-organizational Information Technology Projects</p>	Marcirio Silveira Chaves	Language requirements: English (reading and writing)	Bibliographic research and review; article production; participation in research group meetings; presentation of papers	No maximum duration
42	<p>Center of Studies and Research in Traumatic Stress</p> <p>Line of Research: Stressing Events, Acute Stress Disorders and Post-Traumatic Stress Disorders: Evaluation and Intervention</p>	Christian Haag Kristensen	Activities will be developed in Portuguese	Successful applicants will be working on the clinical and neuropsychological evaluation of individuals exposed to traumatic disorders. They will also be joining clinical meetings at the NEPTE Station; Bibliographical review on trauma and post-traumatic stress disorder; participation in theory seminars	No maximum duration - for 1 or 2 semesters



43	<p>Integrative Research Group on Education, Environment, Culture and Society</p> <p>Line of Research: Ethics in Research</p>	Mónica de la Fare	Spanish and Portuguese (for reading and comprehension)	Literature review and research, data collection and analysis.	3 months
44	<p>GruPEV - Research Group in Education and Violence</p> <p>Line of Research: Inclusion of Immigrants in the Brazilian Educational System</p>	Alexandre Anselmo Guilherme	Language requirements: English (intermediate for reading)	Bibliographic research and review of articles and books in English.	6 months (or 1 year)
45	<p>Interdisciplinary Group on Evidence-Based Research, Teaching and Promotion of Health</p> <p>Line of Research: Epidemiology</p>	Rita Mattiello	Basic experience in developing research	Data collection and analysis, production of articles	6 months
46	<p>LABIO - Laboratory of Bioinformatics, Modeling, and Simulation of Biosystems</p> <p>Line of Research: Structural Bioinformatics and Computational Molecular Biophysics: Prediction of Proteins' 3D Structure.</p>	Osmar Norberto de Souza	Language requirements: English (advanced); Biochemistry, computing (desirable) and willingness to learn (essential)	Laboratory practices for planning, execution, analysis and reporting of modeling and simulations of biological and molecular processes	A minimum of 2 months
47	<p>Laboratory of Research in History of Image and Sound</p> <p>Line of Research: The New Landscape of Photography in Rio Grande Do Sul and in Brazil in the 1970s and 80s: From Newspaper Pages to Museums.</p>	Charles Monteiro and Carolina Etcheverry	Language requirements: Portuguese (Elementary); Reading and comprehension in students' L1	Bibliographic research and review; interpretation of photographic images	A minimum of 1 semester, no maximum duration



48	GERMA – Rural Economy and Environment Research Group Line of Research: The Paris Agreement and the Brazilian Agribusiness	Augusto Mussi Alvim	Languages: English or Spanish	Bibliographic research and review, participation in seminars, data management, participation in class and meetings in research groups.	Minimum: 3 weeks; Maximum: 2 semesters
49	LAPHO - Laboratory of Research in Oral History Line of Research: Society, Immigration and Development	Claudia Musa Fay	No pre-requisites	Interviews and transcription of interviews	TBD
50	Center for European and German Studies	Draiton Gonzaga de Souza	Languages: Portuguese and German; familiarity with computer tools	Assist in the planning and conduction of CDEA events; assist in updating the website and Facebook page; other CDEA activities	Minimum duration: 2 months
51	NUPECC - Integrative Research Group on Communication Sciences Line of Research: Possibilities of a Joint History of Journalism in Latin America	Antonio Carlos Hohlfeldt	Familiarity with internet tools and typesetting; attitude for research and proactivity	Assist professors in developing and organizing bibliographic research through the internet	6 months to 1 year
52	GENIM - Group for Research on Epidemiology, Neurology and Immunology	Douglas Kazutoshi Sato	Languages: Portuguese (elementary); Availability for 20 hours a week; Interest in ageing studies, epidemiology, neurology and immunology	Monitoring research activities in the Institute of Geriatrics and Gerontology's research laboratory and in Brains' Laboratory of Neuroinflammation and Neuroimmunology: hands-on activities in the laboratory; application of instruments; data	Minimum of a month and maximum of three months



				collection; scientific discussion; database design; data analysis; Participation in classes, seminars or scientific meetings.	
53	<p>NEPES - Integrative Research Group on Social Economics and Policies / GTEMPP - Group for Studies on Marxist Theory, Teaching and Public Policies</p> <p>Line of Research: Contemporary Political and Economic Changes in Latin America and Impacts on Social Assistance, Health, Social Security, Unemployment Insurance and Educational Policies: The Cases of Brazil, Cuba and Chile</p>	Jane Cruz Prates	Languages: Spanish (proficiency)	Bibliographic research, data analysis, participation in work missions and meetings of the research groups, systematization, database feeding and other similar tasks	1 semester

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