Call for a PhD position in drought modelling

The Institute of Environmental Engineering of the Warsaw University of Life Sciences is searching for a doctoral student for employment at the Department of Hydrology, Meteorology, and Water Management. The person employed at the position will implement research tasks in the scope of the project PRELUDIUM BIS 1 financed by the National Science Centre (NCN) entitled "Integrated modelling of hydrological and agricultural aspects of droughts in the Odra river basin under a changing climate" (No. 2019/35/O/ST10/04392). The primary project objective is expanding knowledge regarding the **current and future variability of agricultural and hydrological droughts** and effect of droughts on crop yields in rain-fed agriculture in the Odra River basin located in Central-Eastern Europe. Research tools will include two different **mathematical models**: (1) agro-hydrological model simulating water balance and crop growth, and (2) statistical model stimulating inter-annual crop yield changes as a function of weather variables. Another study objective will be the determination to what extent soil moisture deficit indices calculated by means of the agro-hydrological model can explain the variability of wheat and maize yields. The third research question concerns the possibility of mitigation of drought effects in future climate through the application of supplementary irrigation, and estimation of hydrological effects of increased water withdrawals.

Scientific interests in applied mathematics and a background in geographical sciences with knowledge and interest in hydrology, meteorology and plant science will be strongly preferred. Other desirable features include: strong motivation for scientific work, ability to work in a team, and being open-minded to inter-disciplinarity. The work will be performed in a dynamic and inter-disciplinary team, allowing for implementation of own research ideas, scientific development, and publication of articles in renowned scientific journals. The final focus of the PhD will be defined depending on interests of the candidate, proven skills and requests of the research project. The project stipulates a **half-year research stay** at the Potsdam Institute for Climate Impact Research (PIK) in Germany financed in the scope of a scholarship of the National Agency for Academic Exchange (NAWA), as well as ongoing scientific collaboration with foreign and Polish partners. Moreover, the project budget provides resources for participation in conferences, training, etc.

Required qualifications:

- MSc title (environmental engineering, Earth sciences, agricultural sciences, environmental protection, applied mathematics, or related disciplines);
- Fluent knowledge of the English language, permitting writing scientific papers, presentations at international conferences, and fluent communication with foreign partners;
- The following skills will be preferred:
  - Knowledge of GIS software (e.g. QGIS, ArcGIS);
  - Basic programming skills (e.g. R, Matlab, Python, Fortran);
  - Experience in work with hydrological and/or crop yield models;
  - Experience in analysis of large environmental data sets.

The competition is open for persons that do not have a doctoral degree and are not participants of Polish doctoral schools. In accordance with the guidelines of NCN, the scholarship commission will take into consideration **two criteria**: (1) competences for implementation of particular tasks in the research project (70%); (2) scientific output of the candidate, including publications in renowned scientific journals (30%). The competition winner will be obliged to submit recruitment documents to the WULS Doctoral School (https://www.sggw.pl/en/science/szkola-doktorska) for the purpose of obtaining the status of a PhD student.

Employment conditions:

Doctoral scholarship for a period of **48 months** to the amount of **5,000 PLN** per month until the mid-term evaluation (24th month), and **6,000 PLN** after the mid-term evaluation, received based on rules stipulated in the provisions of the act of 20 July 2018 of the law on higher education and science.

Pursuant to the binding provisions, the scholarship will be reduced by social security contributions (on the side of employee and payer), but not by income tax. Planned start date: 1 October 2020.

Additional information:

Planned term of conclusion of the competition: by 1 September 2020. The candidates may be requested additional information or invited to an interview with representatives of the scholarship commission on 24-31 August 2020. We reserve the right to respond only to selected offers. In the case of lack of satisfactory offers, the competition may be prolonged.

Please send your application exclusively by email until **21 August 2020** to the following address: mikolaj_piniewski@sggw.edu.pl with message title "Preludium Bis PhD".

Required documents:

1) Cover letter in English;
2) CV with information on scientific output;
3) Copy of the Master's diploma;
4) Master thesis or selected scientific article with the candidate as the first author (pdf);
5) Opinion of the scientific supervisor (preferred) or relevant contact information.

Information clause for recruitment purposes of the Warsaw University of Life Sciences

By responding to the announcement through sending your application documents (CV) to the aforementioned email address, or delivering your application documents another way, you agree to processing of your personal data included in the sent documents by the Warsaw University of Life Sciences with its seat in Warsaw (Personal Data Administrator) for the purpose of participation in the recruitment process for the position specified in the announcement.

We hereby inform you that the Personal Data Administrator is the Warsaw University of Life Sciences with its seat in Warsaw (00-787) at ul. Nowoursynowska 166 (hereinafter "SGGW" or "Administrator"). Contact with Administrator is possible to the correspondence address specified in the previous sentence. We also inform you that SGGW has appointed a Personal Data Inspector, available for contact regarding any issues related to personal data protection under email address: iod@sggw.pl.

Personal data provided by you in your application documents are processed based on the following:

1. In the scope of data specified in labour law provisions, i.e. art. 22^1 and art. 22^{1a} of the act of 26 June 1974 Labour Code with further amendments – based on art. 6 par. 1 letter c) Regulation of the European Parliament and of the Council (EU) 2016/679 of 27 April 2016 regarding protection of natural persons in terms of personal data processing and regarding free flow of such data, and revoking directive 95/46/EC (GDPR), i.e. for the purpose of implementation of the legal obligation imposed on the Administrator.
2. In a scope other than specified in point 1 – based on art. 6 par. 1 letter a) GDPR, i.e. based on your consent. Lack of consent specified in this point or its revoking cannot constitute the basis for unfavourable treatment of a person applying for employment, and cannot cause any negative consequences. It particularly cannot constitute a cause justifying refusal of employment.

Personal data are disclosed to employees or partners of SGGW, as well as to entities providing SGGW with support in terms of commissioned services and in accordance with concluded entrustment agreements.

Your personal data obtained from you in the application documents will be processed over a period not longer than the duration of the current recruitment process.

You have the right of access to your data, and to their correction, deletion, limiting their processing, transfer of data, submitting a protest towards their processing, and revoking consent at any moment with no effect on the legality of the processing right.

The candidate also has the right to submit a complaint to the President of the Office of Personal Data Protection when they recognise that processing of their personal data infringes RGDP provisions. The provision of data in the employment application is voluntary, but necessary for participation in the current recruitment process and potential future recruitment processes.