2016-IPR-A5-FGIV-7966	**Big Data collection and processing in analysing and forecasting economic developments**

Position for:

FG IV Project Manager - Technical Project Leader (Scientific)

As the science and knowledge service of the Commission, the mission of DG Joint Research Centre is to support EU policies with independent evidence throughout the whole policy cycle.

The JRC is located in 5 Member States (Belgium, Germany, Italy, the Netherlands and Spain). Further information is available at: http://www.jrc.ec.europa.eu

In its recently established Centre for Advanced Studies (CAS), the JRC is deepening its knowledge base and explores new research areas of relevance for European policy. The CAS provides an interdisciplinary and stimulating 'space' where JRC scientists can engage in research in policy-relevant thematic areas and connect with leading institutions in the field worldwide.

The JRC is looking for a Lead Scientist to develop a novel CAS project on "Big Data collection and processing in analysing and forecasting of economic developments". The aim of the project is to advance the way economic activity is measured, tracked and described. The project should investigate new techniques for a faster and more accurate measure of the current state of the economy and at the same time, evaluate to what extent the use of 'big data' in such techniques can contribute to reliable, medium-term forecasting.

Within the CAS, the successful candidate will establish a team of up to five scientists, design the concept, methodology and implementation plan of the project, coordinate the project execution, contribute to the excellence of the output and international outreach, establish cooperation with leading European and international experts in the field and conclude the project with key scientific findings and recommendations for policy makers. The project has a maximum duration of three years and is well provided with financial resources for execution.

Qualifications:

Candidates must have:
- A PhD (doctoral degree) in a relevant field or a minimum of five years professional experience after university studies;
- Demonstrated experience in macro-econometrics, statistical forecasting and modelling or another relevant field for the project;
- Professional experience in leading research projects, teams and/or international networks.

Furthermore, documented skills in developing and implementing new research directions, in particular in multi-disciplinary fields, are an advantage

Excellent written and spoken English (C1) is essential.

	Interested candidates should provide in addition to the application form, a curriculum vitae indicating a list of publications with the 10 most relevant publications highlighted. **As part of the application form, applicants should provide a short research proposal on the topic (see annexed briefing) specifying the objectives, concept and methodology (2 pages max).** Upon request a contact point for references may be requested.
Directorate **Unit**	Strategy and Work Programme Coordination Scientific Development JRC Centre for Advanced Studies The digital transformation - machine intelligence and human behaviour Further information: https://ec.europa.eu/jrc/en
Indicative duration	12 months initial contract with possible renewals up to maximum 6 years
JRC Site **Country**	Ispra Italy
Rules and eligibility	**The candidate must be on a valid EPSO reserve list for Function Group IV contract staff or have applied to the permanent open call for researchers FG IV:** https://ec.europa.eu/jrc/en/working-with-us/jobs/vacancies/function-group-iv-researchers Auxiliary contract staff: https://ec.europa.eu/jrc/en/working-with-us/jobs/temporary-positions/contract-staff-members *Please note that due to the high number of applications received only shortlisted candidates will be contacted.*

Background
Big Data Collection and Processing in Analysing and Forecasting Economic Developments

In the aftermath of the financial crisis and during the ongoing great recession, economic and financial policies often needed to be implemented without satisfactory *ex-ante* research-based analyses. Hence, with the objective of providing better support to policy making, a great deal of effort is nowadays taking place to both overcome the substantial research lacunae of the current analytical/quantitative methods - from structural models, to signal-extraction techniques and datasets -, and to identify the most suitable modelling approach to address the challenges posed by recent economic developments.

The analysis of large, ecosystems of data sets can help improve the way we measure, track and describe economic activity. State of the art methods and models for signal extraction can be employed in the analysis of large data sets, including nowcasted data, to extract relevant information about the current state of the economy and the near future (short-term forecasting) and can therefore help to reach more effective policy assessments and valuations. Moreover, a more accurate measure of the current state of the economy can also provide more reliable medium term forecasts, which ultimately determine most of the policy recommendations and decisions.

To this end, the development and testing of new techniques that use big data to gain new insights into the link between micro- and macro policy analysis is needed. From this, useful input will be derived for improving structural models that are used in policy institutions. In the spirit of "data-driven structural modelling", 'big-data' and new signal extraction techniques can help to identify possibly non-linear structural relationships between macro-economic variables or between micro and macro-data. It would be particularly important in this context to explore new evidence and insights into key issues like macro-financial linkages or productivity and drivers of growth.