BRCA Data Analysis Award
Data Analysis in Inherited BRCA Cancer Research

Under the auspices of: Gesellschaft für Klassifikation e.V. – Data Science Society (GfKl)
International Federation of Classification Societies (IFCS)
International Biometric Society – Deutsche Region (IBS-DR)
Deutsches Konsortium Familiärer Brust- und Eierstockkrebs
HeritX - Sparking Solutions for Inherited Cancer

Call for Submissions

The *BRCA Data Analysis Award* will be conferred for original and innovative work that uses data-analytic and statistical methods in order to support the development of strategies for the prevention of inherited cancer caused by mutations in the BRCA (Breast Cancer) gene.

• Data analysis techniques, combined with computational algorithms, are broadly and routinely applied in many fields like medicine, bioinformatics, economics, marketing, pattern recognition, sociology, etc. Typical approaches include statistical modeling, classification and clustering, factorial analysis, exploratory tools, and visualization. Representative scientific societies are, e.g., the *International Federation of Classification Societies*, the *German Classification Society*, the *Biometric Society*
, and others.

• This award concentrates on the domain of inherited cancer research. Inherited cancer is affecting millions of people worldwide. Its physical, emotional and often financial burden devastates entire families across genders and generations. The most prominent type of inherited cancer is caused by a genetic defect (mutation) in the BRCA gene. A carrier of this gene defect will, with large probability, develop one or more cancers including breast cancer, ovarian cancer, pancreatic cancer, prostate or skin cancer. Fifty persent of the children will inherit the mutated gene and the same staggering cancer risk as well.

Inherited cancer can and must be prevented before it starts rather than treated after it has occurred. This appears achievable because – unlike in other cancers - we already know the first step in the development of inherited BRCA cancer: the inherited gene defect. However, there is a lack of research and innovation in transforming this knowledge into an available preventive therapy. To change this situation, novel approaches are needed and might be supported by data-analytic methods. The *BRCA Data Analysis Award* pursues this important goal, supported by the *Deutsches Konsortium Familiärer Brust- und Eierstockkrebs* and a global research initiative for preventing inherited BRCA cancer led by *HeritX*, a patient-driven, nonprofit research and development organization in the USA.

• *The BRCA Data Analysis Award* has been introduced to recognize a compelling investigation that is related to inherited BRCA genes and may benefit the early diagnosis and/or medical prevention of BRCA-related cancer by using data-analytic methods. The award includes a honorarium of 1000 € (for personal use) and the presentation (in person) of the author's work at one of the major conferences on data analysis and its applications.

• The award not only honors relevant research in the BRCA field, but also is intended to motivate researchers across the data analysis community in the early stage of their careers to focus on solutions on this field. Qualified research needs to be completed in 2014-2016, and its author must be ≤ 40 years. The award winner will be selected through an expert committee including experts in BRCA research and data analysis, orchestrated by Hans-Hermann Bock.

• Interested researchers are invited to submit a nomination package including:

1. a brief summary (two pages or less) of the work or investigation on which the candidacy is based, which explains a) its relevance to the field of BRCA, b) the proposed data analytic approach, and c) its potential benefit for the early diagnosis and/or medical prevention of BRCA-related cancer
2. up to three published papers, an accepted thesis, or an accepted manuscript
3. a curriculum vitae, and
4. the names and addresses of two possible referees

to BRCA-Award@gfkl.de, until September 30, 2016. Candidates will be notified by the end of 2016. For further information see the website www.isw.rwth-aachen.de/BRCA-Award.php

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