

- What are your major challenges with respect to data management and analysis?
  1. General software for scalable query and analysis inside very big data repositories
    - E.g. selecting those experiments whose measured data (matrices) match some mathematical model
  2. General software for scalable query and analysis inside big data streams
    - E.g. selecting those stream segments that seem interesting according to some mathematical model
  3. Very high-level query specification so that non-programming experts can specify search
    - Use of query languages (rather than programming languages) enables non-programmers to specify searches
  4. Open and extensible big data processing so that standard algorithms can be used in scalable big data processing
    - Should be possible to call user code in regular programming languages from queries

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- What are your plans to meet these challenges?
  1. We are building *extensible* general data processing systems (e.g. SSDM, SARD, and SVALI) and apply them in different application areas
  2. User defined indexing improves resource utilization substantially
  3. User defined and automatic parallelism improves response time (but usually not resource utilization)

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- What kind of collaborations would be fruitful (offering solutions to others or receiving assistance)?
  1. We would like to get in contact with non-traditional database users in science and engineering who has need for general software to enable scalable big-data processing on non-traditional data
  2. Would like to test our approaches on new kinds of applications
  3. Involvement of collaborators is important since the intent is that the high-level queries should be expressed by non-programmers.