National Workshop on Research Frontiers in Medical Cyber-Physical Systems

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WELCOME !

NSF News

- Thematic program alignment
- Human Centered Computing (HCC) evolves to Cyber-Human Systems (CHS)
  - Cyber-physical systems centered on advancing human capability
  - Broad goal of advancing human capabilities:
    - perceptual and cognitive,
    - physical and virtual,
    - social and societal.

NSF Investment in Health-Related Research CY 2011

- Direct application in patient care/clinical trials: **64**

- Direct health-related research: **279**

- Implications related to health/biomedicine: **143**

- Collaborative workshops, interdisciplinary centers, or educational programming: **116**
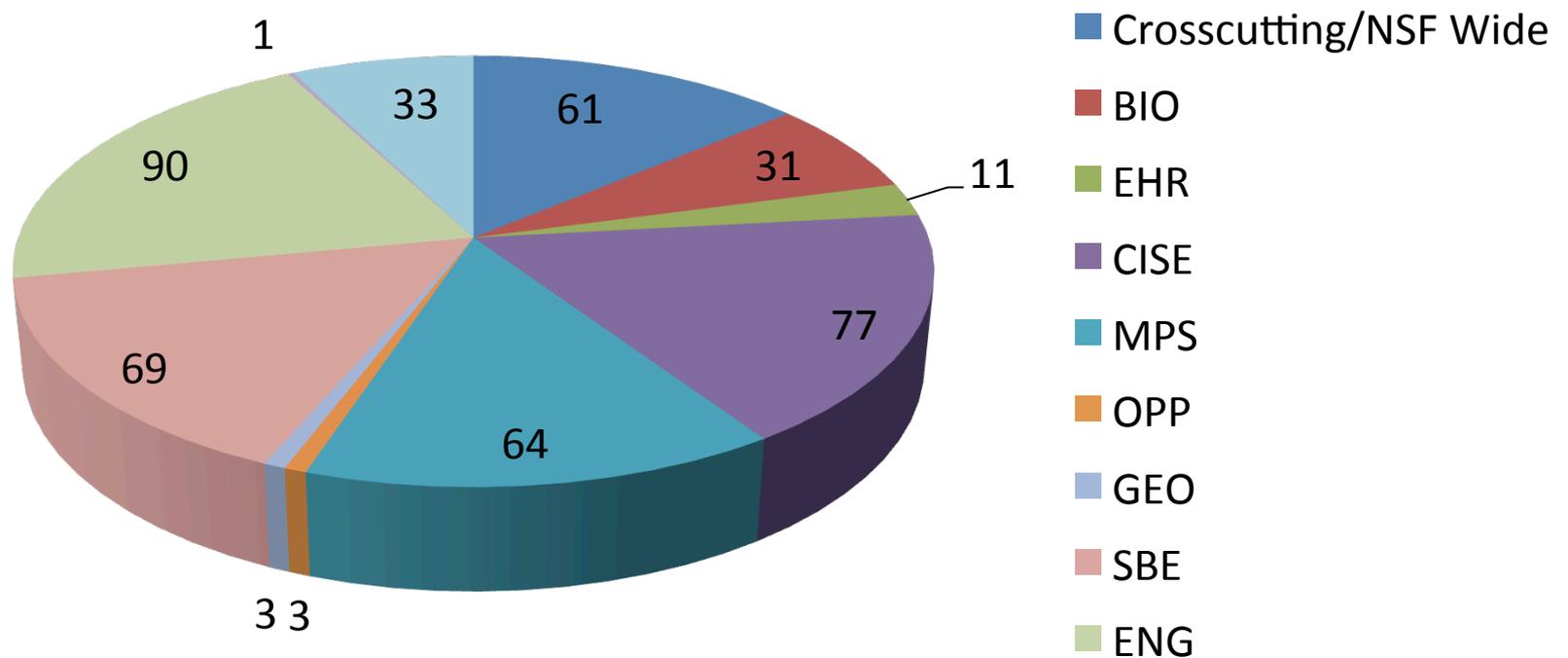
Health-Related NSF Grants By Topic CY 2011

# of projects	Category
115	Biomedical/ Nanotechnology
96	Public Health (Environmental, Occupational and Injury Prevention)
81	Health Information Technology, Informatics, Systems and Modeling
43	Behavior, Psychology and Cognition
37	Robotics and Sensors
30	Interventional (Surgical, Medical Device, Therapeutic)
25	Pharmacology
23	Infectious (Microbial, Viral, Fungal, Immunological)
15	Imaging

Health-related Grants By Directorate

Number of Health-related Grants

Crosscutting/NSF Wide — 61
BIO — 31
EHR — 11
CISE — 77
MPS — 64
OPP — 3
GEO — 3
SBE — 69
ENG — 90
(unlabeled) — 33, 1

Outcomes of Workshop

- Provably safe, secure and effective medical devices

- A Research and Engineering:

  - Roadmap

    - Parallel and alternative paths

  - Gap analysis

  - Investment portfolio strategy

Thanks!