

PROPOSED: CENTER FOR THE STUDY OF SCIENTIFIC IMAGES

OUTLINE: ST&C

- “innovative, potentially transformative, complex research and education projects that require large-scale, long-term awards”
- “partnerships among academic institutions, national laboratories, industrial organizations, and/or other public/private entities, and via international collaborations”
- five year initial reward, possible one time renewal
- \$5 five million annual budget
- up to 3 UCLA submissions

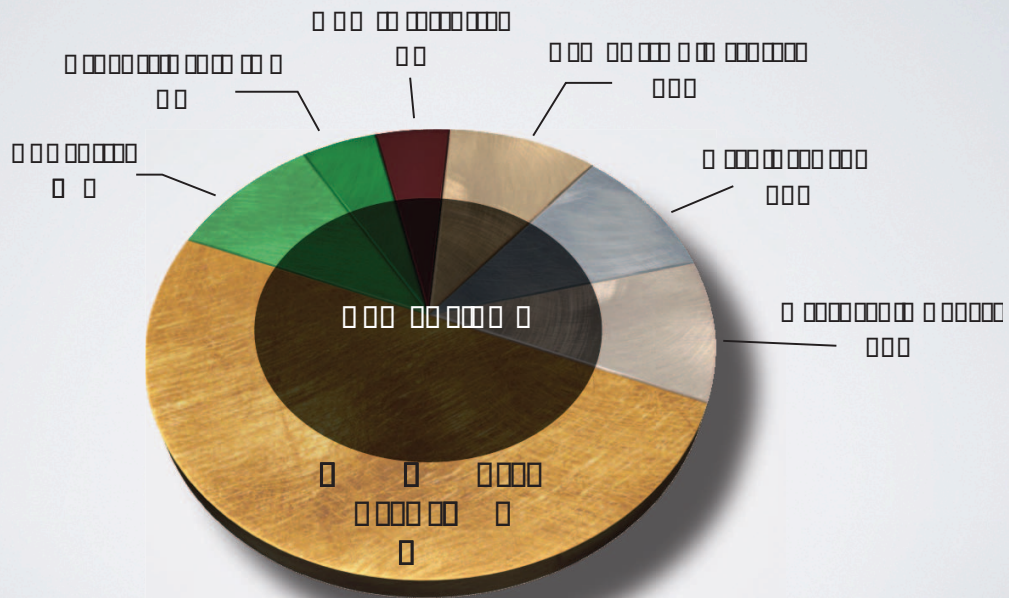
MISSION

- develop and study a general science of imaging
 - images are *data*
 - *commonalities*: quantization, resolution, dimension reduction, feature detection, distortion, semiotics, analysis, perception, noise, compression, presentation, repeated measures, sensitivity uniformity, etc...
 - *stakeholders*: physics, chemistry, medical imaging, astrophysics, nanoscience, mathematics, statistics

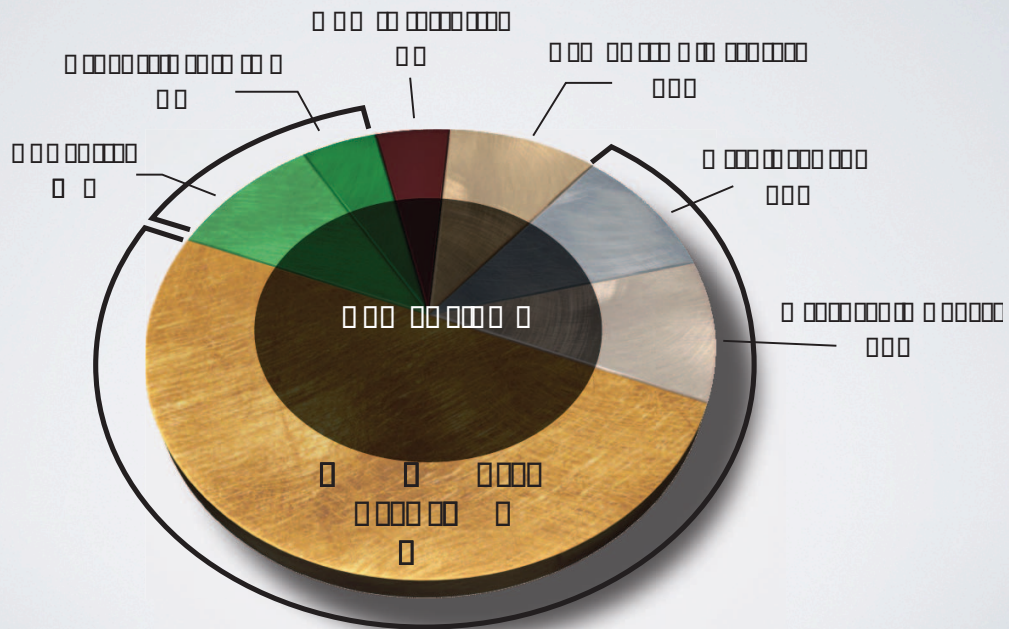
COMPONENTS

- collaborative research teams (CRTs)
 - multi and interdisciplinary projects
 - seed program
- education/outreach/diversity
 - museums, partner institutions, seminars, in-residence scholars
- research support core
 - computing, grants management, proposal development
- administrative core

PROPOSED STRUCTURE



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ACTUAL FUNDING

- four to seven CRTs
- seeds
- fixed duration (1 year) renewable awards
- ~30 graduate fellows + ~10 post-doctoral scholars

CRT EVALUATION

- unified conceptual and analytic approach to imaging
- multidisciplinary contribution and interaction
- advancing the state-of-the-art of imaging
- advancing communication of, and through, scientific images
- detection of information containing features in high density and multidimensional data arrays: *computational, physiological, etc...*
- projection of higher dimensional and multispectral spaces onto visualizable images
- strong educational opportunities
- enhancing the diversity of the research teams

CO-PIs (provisional)

- Anne Andrews
- Katsushi Arisaka
- Andrea Bertozzi
- Mark Cohen
- Giovanni Coppola
- Felice Frankel
- Jim Gimzewski
- Warren Grundfest
- Bahram Jalali
- James Larkin
- Jin Hyung Lee
- Mayank Mehta
- Marcos Novak
- Dario Ringach
- Ladan Shams
- Stefano Soatto
- Joey Teran
- Demitri Terzolopoulos
- Paul Thompson
- Victoria Vesna
- Paul Weiss
- Alan Yuille
- Hong Zhou

EXTERNAL + INTERNATIONAL

- ...paul

EDUCATION + OUTREACH

- ...paul

TIMELINE

- march 14: internal proposal to vice-chancellor
- april 30: initial CRT decisions
- may 30: NSF pre-proposal
- october 30: invited/declined list published
- february 3, 2012: full proposals
- september/october 2012: site visits
- june 1, 2013: earliest start date

INPUTS + DISCUSSION

- concept & mission
- structure & budget
- co-PIs
- grantsmanship
- external advisory board
- go / nogo for center proposal

INPUTS + DISCUSSION

- concept & mission

INPUTS + DISCUSSION

- structure & budget
 - *other budgetary priorities*
 - *other general allocation recipes*
 - *CRT ideas*

INPUTS + DISCUSSION

- membership
 - *who are we missing?*
 - *too large/small?*

INPUTS + DISCUSSION

- grantsmanship
 - *NSF directorates?*
 - *center name / logo(?)*
 - *competing centers?*
 - *known preferences or conflicts?*

INPUTS + DISCUSSION

- external advisory board
 - *sci/tech*
 - *hollywood*
 - *computing industry*
 - *????*

INPUTS + DISCUSSION

- go / nogo for center proposal