

THE UNIVERSITY OF CHICAGO

KNOWLEDGE
LAB

OUR RESEARCHERS ARE DEVELOPING NEW:

BIG DATA MACHINE LEARNING CROWD-SOURCING APPROACHES

TO EFFICIENTLY HARVEST AND SHARE KNOWLEDGE AND
JUDGMENT FROM:

EXPERTS | PEOPLE | ARTICLES | PREPRINTS | SOFTWARE | PATIENT
RECORDS | ARTIFACTS | VIDEOS | SENSORS

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OUR RESEARCHERS ARE DEVELOPING NEW:

BIG DATA MACHINE LEARNING CROWD-SOURCING APPROACHES

- TO LEARN HOW KNOWLEDGE IS MADE, USED, CERTIFIED, AND FORGOTTEN
- REPRESENT, RECOMBINE, AND GENERATE KNOWLEDGE IN POWERFUL WAYS

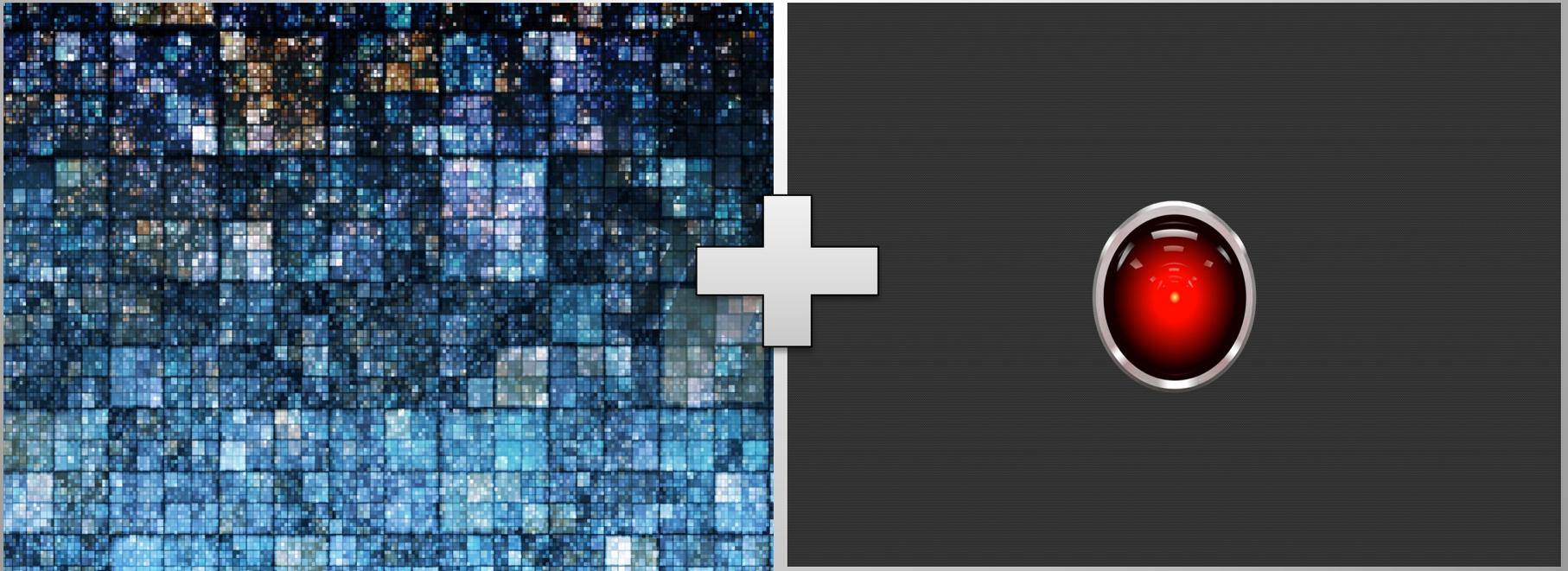
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RESEARCH IS BEING DEPLOYED TO:

RESEARCH IS BEING DEPLOYED TO:

REVOLUTIONIZE CANCER RESEARCH WITH BIG DATA AND INTELLIGENT
MACHINES



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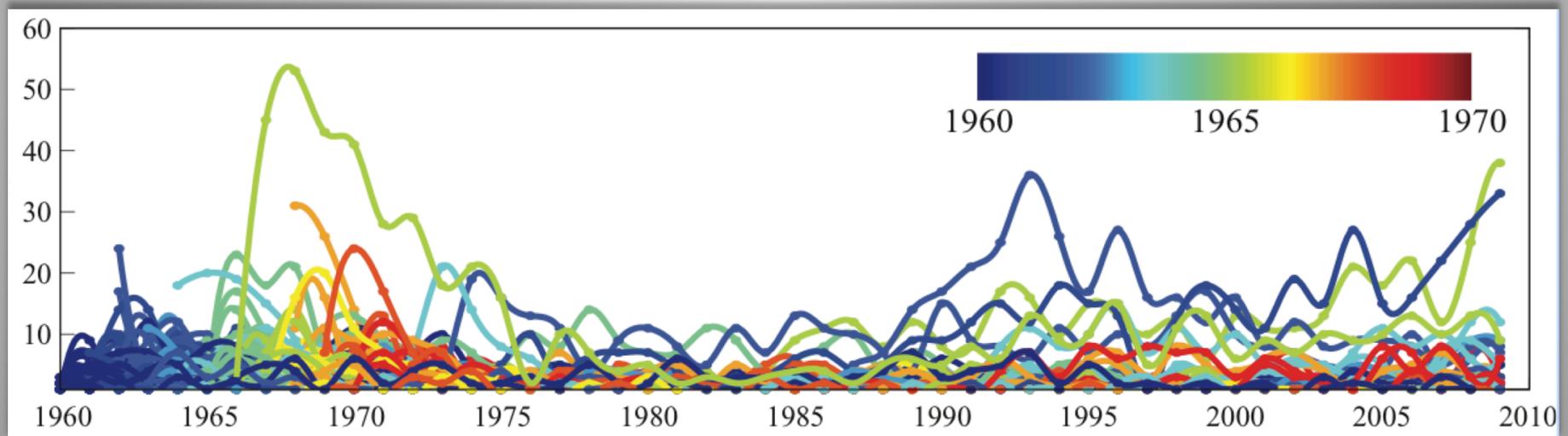
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RESEARCH IS BEING DEPLOYED TO:

RESEARCH IS BEING DEPLOYED TO:

HELP FUNDING AGENCIES UNDERSTAND AND PREDICT LONG-TERM IMPACT,
IDENTIFY AND IMAGINE RESEARCH AREAS
THAT ARE MOST PROMISING



WANG ET AL. "QUANTIFYING LONG-TERM SCIENTIFIC IMPACT". *SCIENCE*

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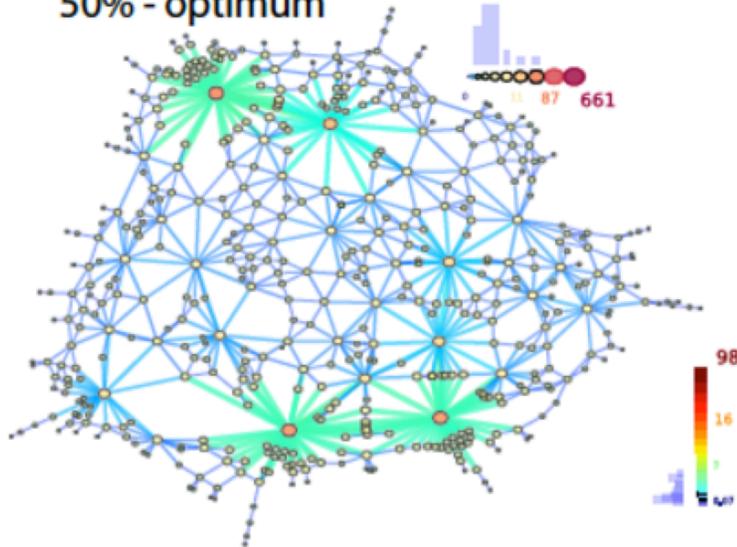
RESEARCH IS BEING DEPLOYED TO:

UNDERSTAND AND AUGMENT THE COMPLEX DYNAMICS THAT UNDERLIE THE

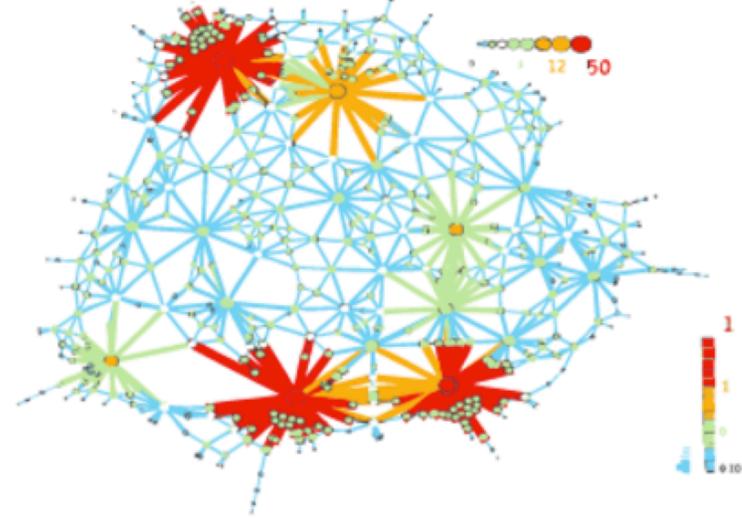
PROCESSES OF DISCOVERY

Discovery processes on a planar network

50% - optimum



MEDLINE / US Patents



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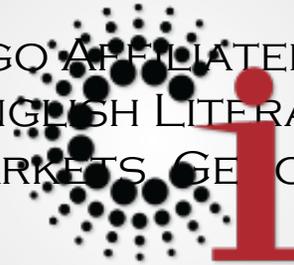
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RESEARCH CENTER AT THE HEART OF THE UNIVERSITY OF CHICAGO'S
COMPUTATION INSTITUTE

COMPUTATION INSTITUTE

7 UNIVERSITY OF CHICAGO AFFILIATED FACULTY: COMPUTER
SCIENCE, SOCIOLOGY, ENGLISH LITERATURE, ORGANIZATIONS
AND MARKETS, GENOMICS



6 POSTDOCTORAL SCHOLARS

3 DEVELOPERS AND DATA SCIENTISTS

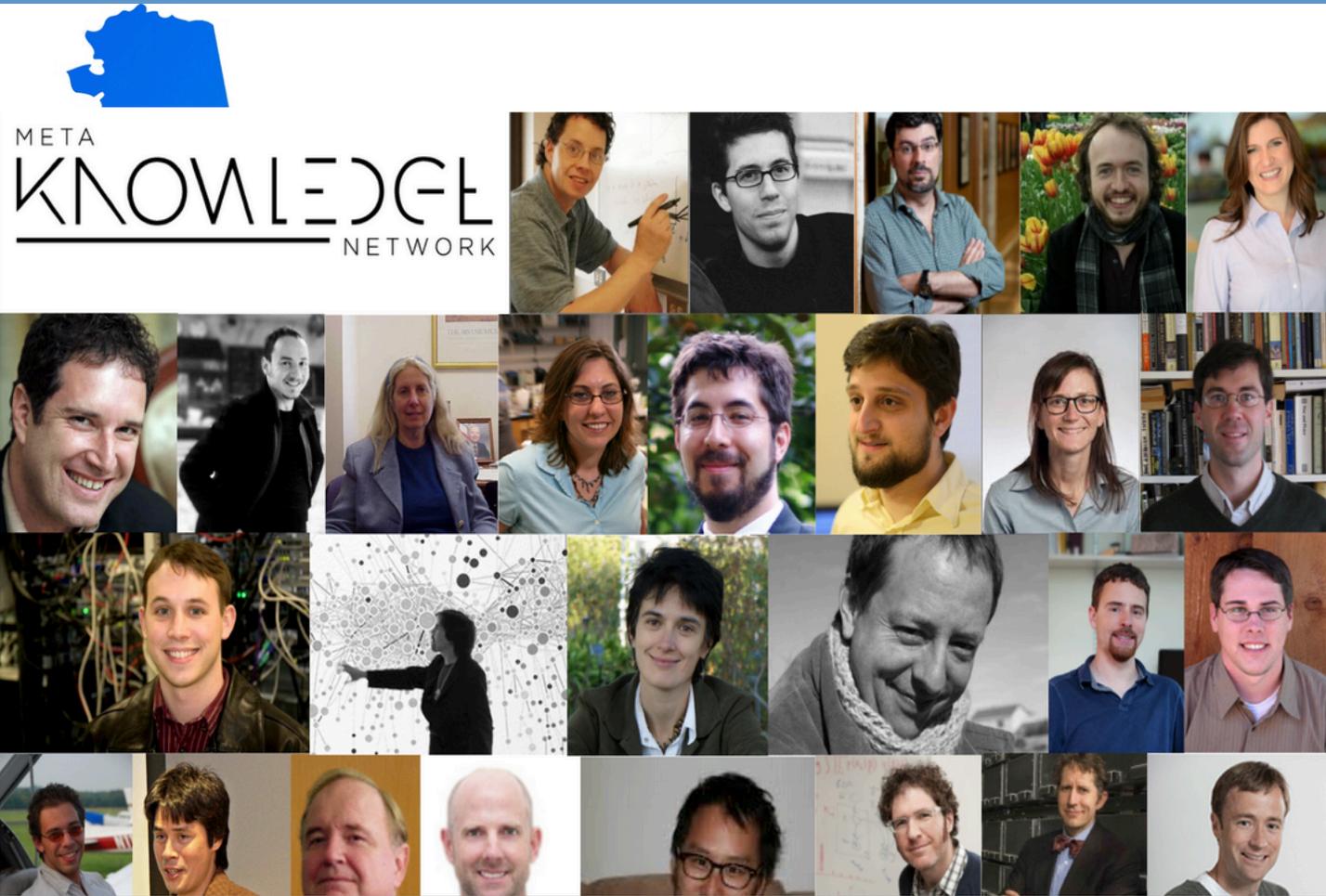
10+ GRADUATE AND UNDERGRADUATE RESEARCH ASSISTANTS

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RESE

OF



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MULTIPLIED

THIS RAISES CHALLENGES WHEN IT COMES TO COLLABORATIVE PROJECTS THAT ARE:

MULTIPLIED

DATA HEAVY

MULTIPLIED

COMPUTATIONALLY INTENSIVE

MULTIPLIED

MULTIPLIED

WHEN IT COMES TO BIG DATA, THE CHALLENGES ARE MULTIPLIED

MULTIPLIED

MULTIPLIED

MULTIPLIED

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CASE IN POINT FOR GLOBUS S3 SUPPORT

TRANSFER OF THE COMPLETE IEEE, FULL-TEXT AND METADATA CORPUS



~6.1 MILLION FILES
EACH A FEW HUNDRED KB
TRANSFER? SHIP?



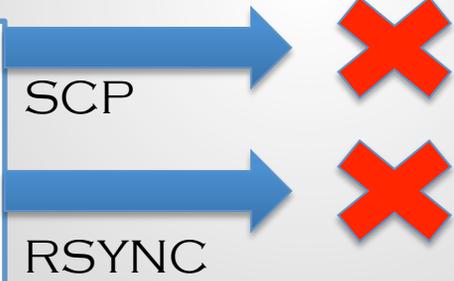
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CASE FOR GLOBUS S3 SUPPORT IN POINT

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TRANSFER OF THE COMPLETE IEEE, FULL-TEXT AND METADATA CORPUS



MONTHS...



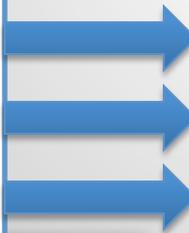
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