Indsigt og udsyn
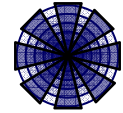
med Informationsteknologi

Michael E. Caspersen

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AARHUS
UNIVERSITET
SCIENCE AND TECHNOLOGY

Center for
Scienceuddannelse

40 år

Datalære, Edb,
Datalogi, It,
Service og kommunikation,
Programmering
Kommunikation/it, Multimedier,
Informationsteknologi

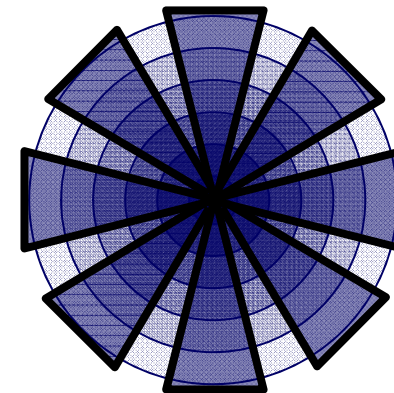# Nyt it-fag for alle (2011-)

- **It, et alment fag**
  - kreativt
  - revolutionerende
  - grænseoverskridende
  - meningsfuldt udbud for alle
  - inspiration til videregående studie

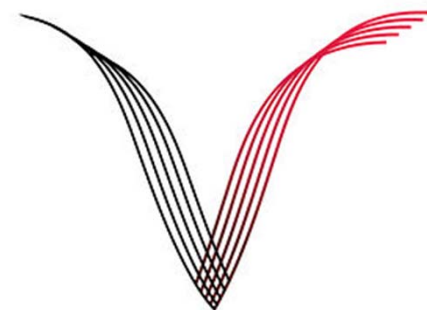- **Kernestof: syv emner som definerer it-faget**
  - it-systemer og menneskelig aktivitet
  - interaktionsdesign af it-systemer
  - modellering og strukturering
  - it-systemers arkitektur
  - programmering
  - digitalisering
  - innovation

Et "elastisk" fag

Tak!

VIDERE

Informatics at School – Worldwide, Hasler Foundation Report, 2012

Informatik
Nyt dannelsesområde
Nye basiskompetencer for alle

Tysk Musik ... Naturgeografi

Idéhistorie Samfundsfag Programmering Engelsk

Teknologifag Afsætning Spansk Biologi Virksomhedsøkonomi

Historie Fysik Oldtidskundskab Kinesisk Kemi Bioteknologi

Læsning Skrivning Informatik Matematik

"Given how pervasive computers and the Internet is now,
and how integral it is into our economy,
and how fascinated kids are with it,
**I want to make sure that they know
how to actually produce stuff using computers**,
and not simple to consume stuff!"

Barack Obama, 14. februar 2013
(se video på konferencehjemmesiden)

Informatik

Informationsteknologi
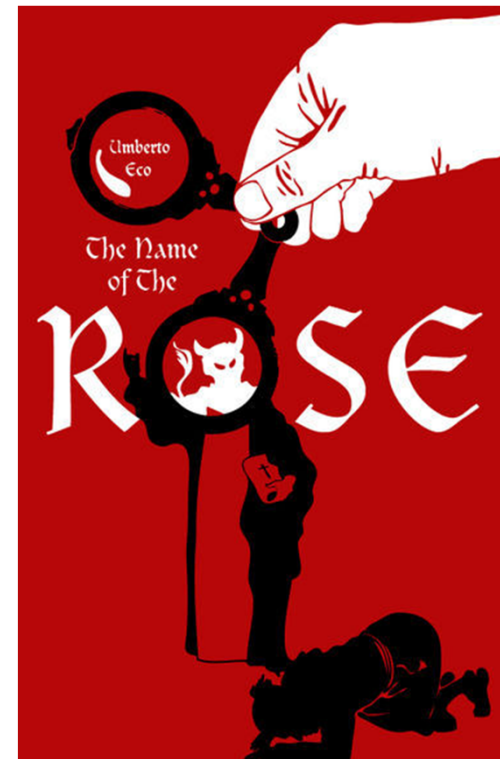
Radikalt nye muligheder

Erkendelsesmæssigt

Udtryksmæssigt

Socialt/fællesskabsmæssigt

Indsigt og udsyn med Informationsteknologi

Den mørke Middelalder

Kontrolpanel til civilisationen

PROGRAM

OR BE

PROGRAMMED

TEN COMMANDS
FOR A DIGITAL AGE

DOUGLAS RUSHKOFF

In a digital age
whoever holds the keys
to programming
ends up building the reality
in which the rest of us live

Radikalt nye muligheder

Erkendelsesmæssigt

Udtryksmæssigt

Socialt/fællesskabsmæssigt

To eksempler

Luis von Ahn: Human Computing

Program der afgør om en bruger er en computer eller et menneske

ESP Game
Fornøjeligt spil
Markering af billeder på www

reCAPTCHA
Kontrol: computer eller menneske?
Digitalisering af NY Times (1851-1980)

400 mio. implicerede, 6% af Jordens befolkning

Duolingo
Lær et fremmedsprog
Oversættelse af WWW

En moderne biologiopgave

Ken Friis Larsen, DIKU

Vi er foran

Nyt it-fag

Ikke endelig formel,
men pokkers godt og nuanceret bud

Vi er bagud

National strategi

Planer

Ressourcer

Informatik for alle

Dannelsesmæssigt

It-skaberkompetencer til alle

Rekruttering af flere dygtige unge

Informatics education:
Europe cannot afford to miss the boat

Informatics is a major enabler of **technology invention**, the principal resource for Europe's drive to become an **information society**, and the key to **the future of Europe's economy**.

Informatics education is **sorely lacking** in most European countries.

Not offering appropriate informatics education means that **Europe is harming its new generation of citizens**, educationally and economically.

Unless Europe takes resolute steps to change that situation, it will turn into a **mere consumer of information technology** and **miss its goal of being a major player**.
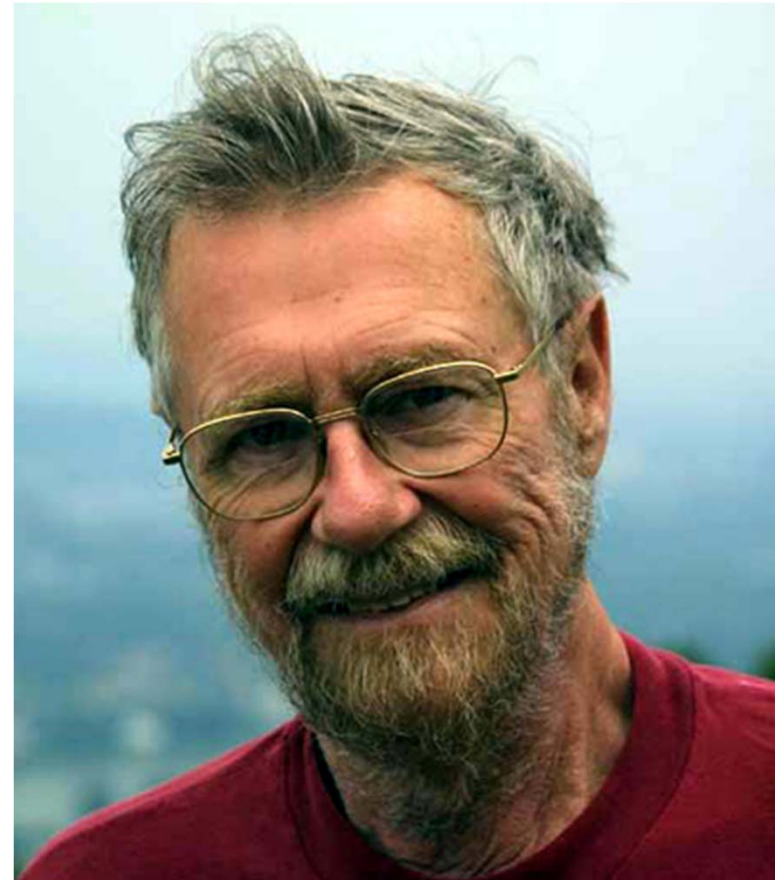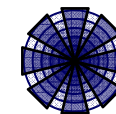
Edsger W. Dijkstra

Automatic computers have now been with us for a quarter of a century [nu mere end 65 år].

They have had a great impact on our society in their capacity of tools, but in that capacity their influence will be but a ripple on the surface of our culture, compared with the much more profound influence they will have in their capacity of intellectual challenge without precedent in the cultural history of Mankind. [...]

This challenge, viz. the confrontation with the programming task, is so unique that this novel experience can teach us a lot about ourselves. It should deepen our understanding of the process of design and creation, it should give us better control over the task of organizing our thoughts. If it did not do so, to my taste we should not deserve the computer at all!

Dijkstra's Turing Award Lecture, 1972

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