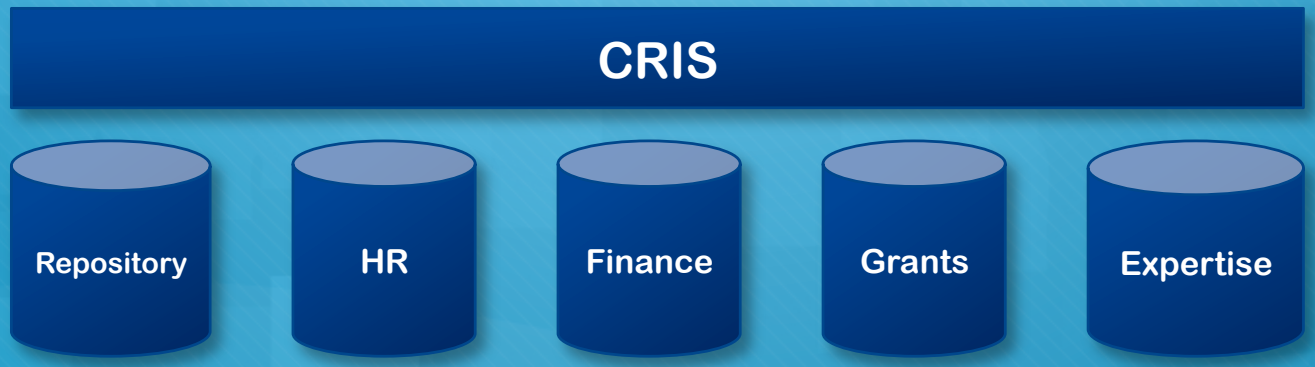
EPrints: a Hybrid CRIS/Repository

Leslie Carr, University of Southampton

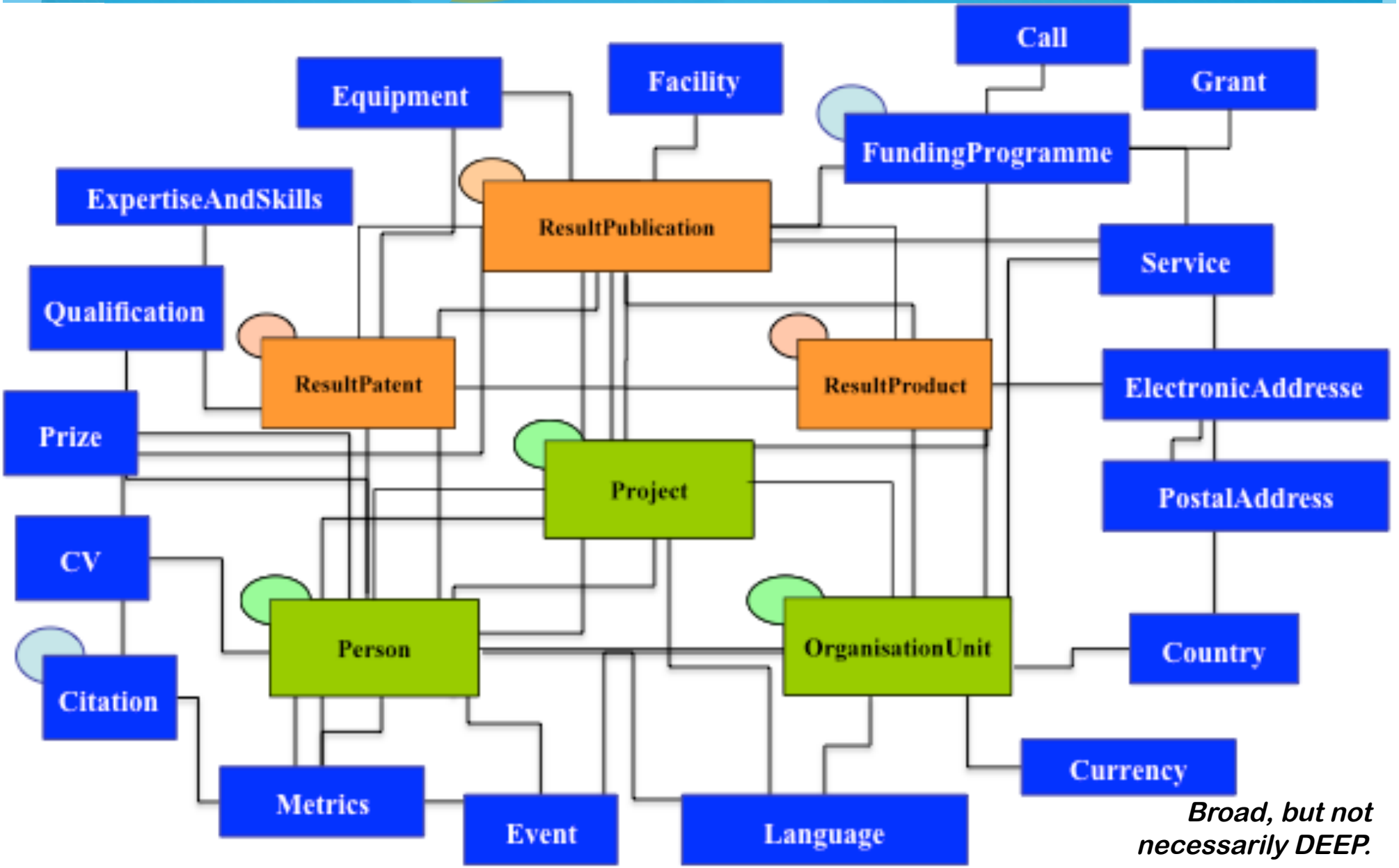
Funding Acknowledgements:
JISC Readiness for REF
JISC Open Impact

Current Research Information Systems

- A CRIS pulls together information from all the research-relevant databases
- Repositories should support the CERIF standard to co-operate as components of a CRIS environment

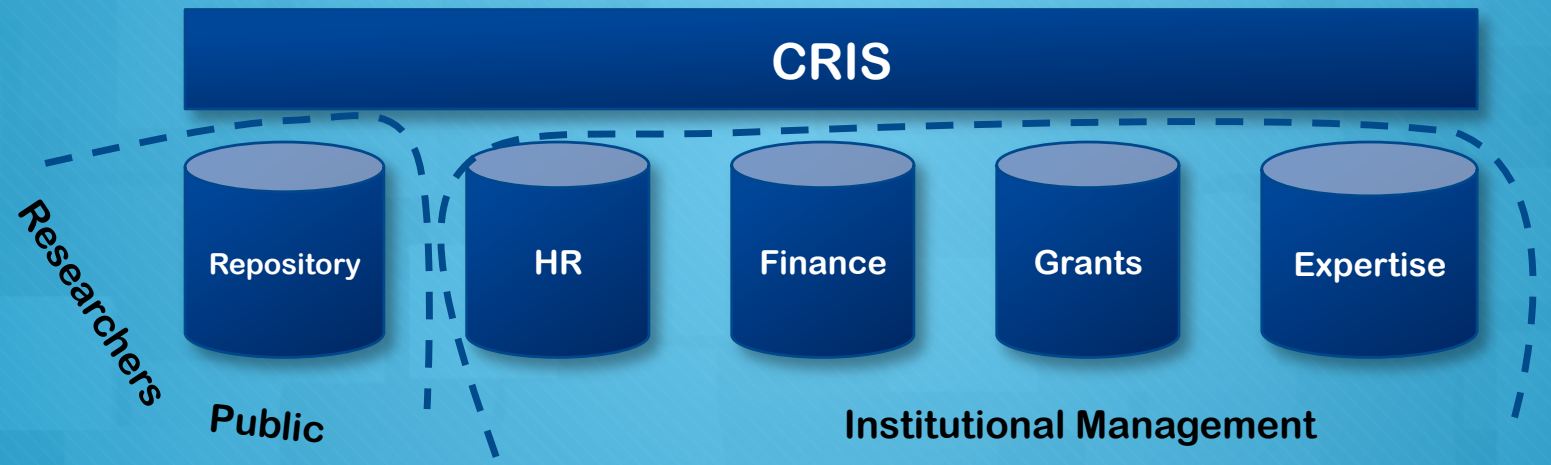


CERIF Information



Broad, but not necessarily DEEP.

CRIS Revisited

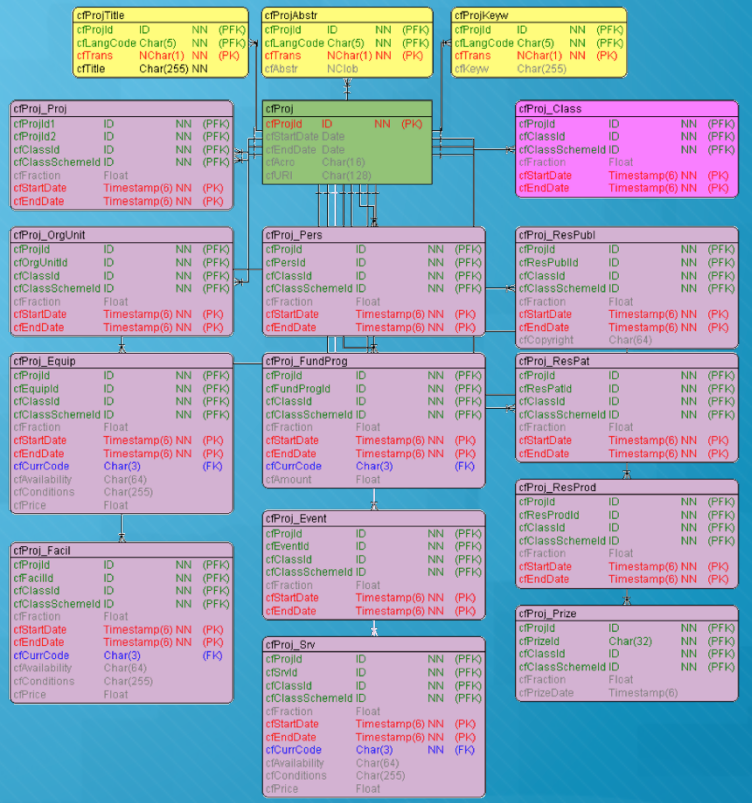


CRIS components attempt to provide service to management and researchers

Repository attempts to reach researchers and public, and provide a service to management

Admin View of A Project

- Grant ID / Funder / Amount
- Start date, End Date
- Investigators
- Budget breakdown



"To support Business Analytics"
K Jeffry, Workshop on CRIS, CERIF & Institutional Repositories, June 2010

Researchers' View of A Project

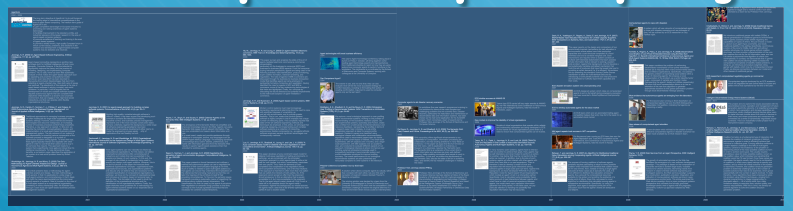
- Project name
- Project aims / objectives
- Project Logo / Website / Blog
- Press releases, news clippings
- Funder

Repository / CRIS combo

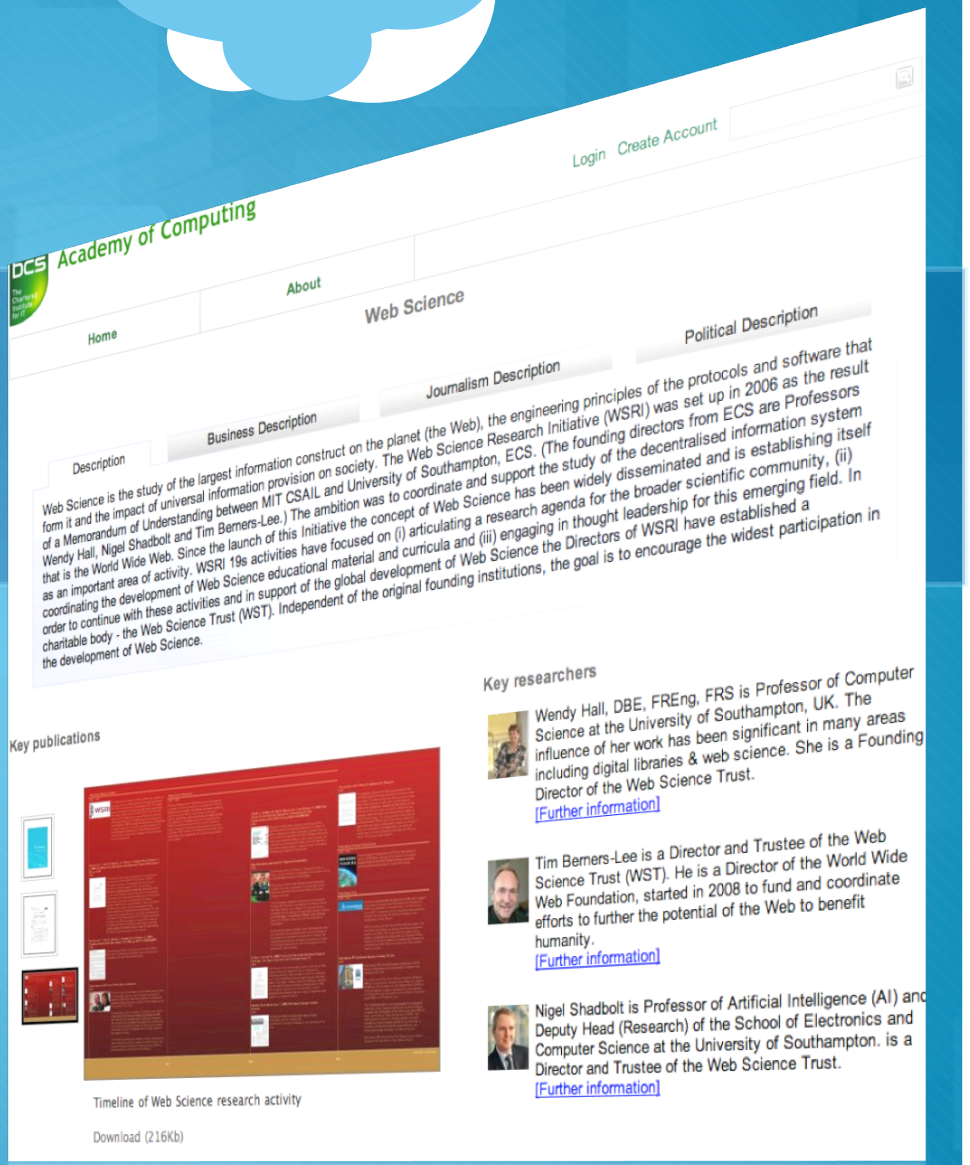
- Bring new perspective to CRIS
  - Researcher-oriented
  - Publicity-oriented
  - Marketing-oriented
- Descriptive, narrative
- Complementary to administrative perspective

Example

- Repository of High Impact Research
- Brings together staff, outputs, projects
- JISC Open Impact project



Timeline of a group's key publications, projects and press releases, taken from three RSS feeds.

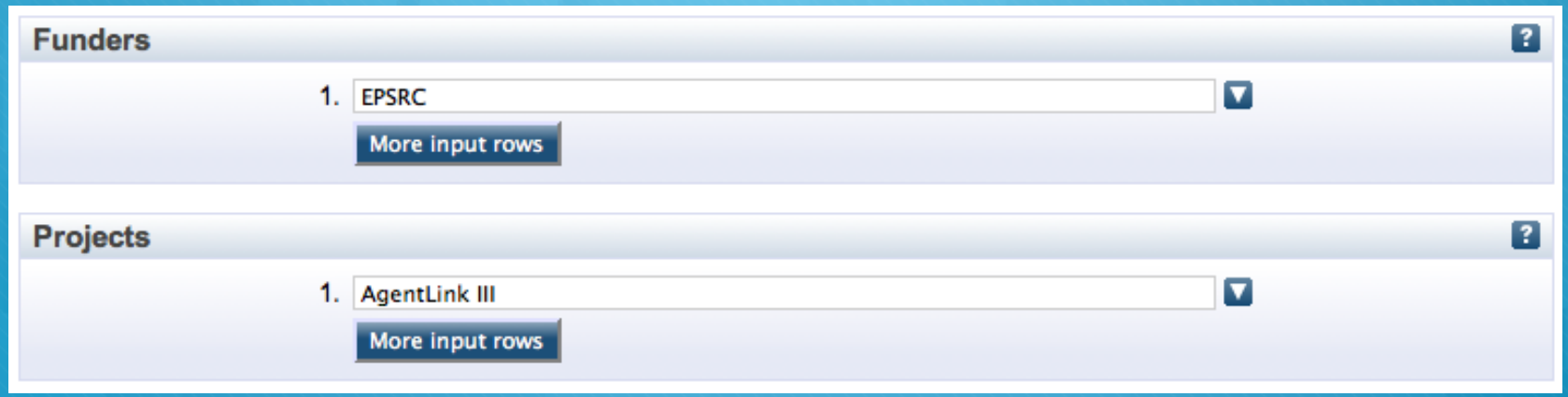


EPrints / CRIS

- EPrints has attempted to internally accommodate the CERIF data scheme
  - CERIF data interchange
  - Not just *publications* but *projects* and *organisations*
- CERIFed repositories have many separate datasets, all linked together via explicit relationships
  - a paper doesn't have a *project property*, it is related to *project objects*

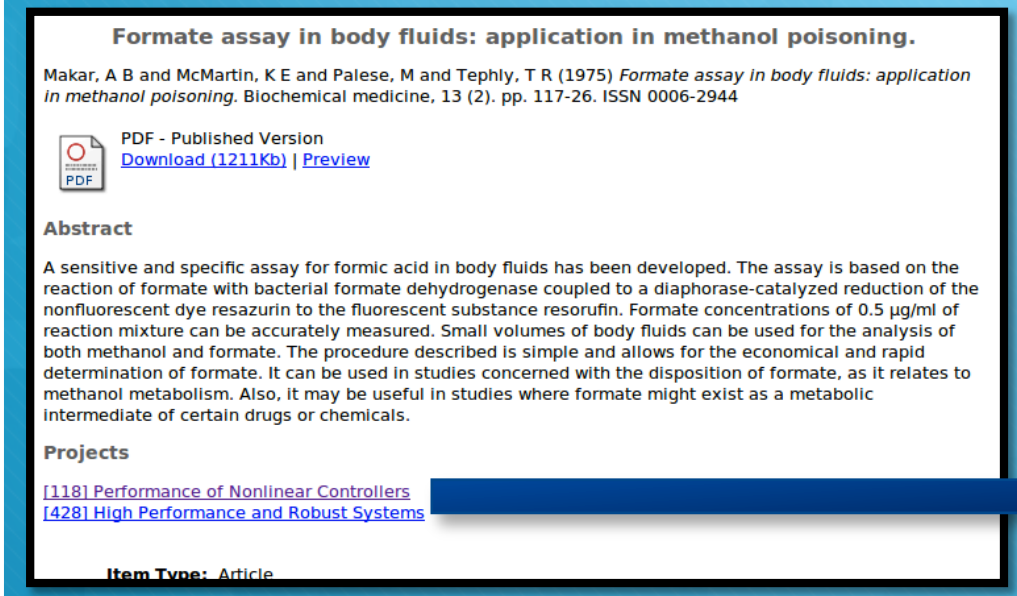
EPrints Before (sans CERIF)

- Projects and funding organisations were just names typed into the paper's metadata record



EPrints After

- Now they are objects in their own right



Formate assay in body fluids: application in methanol poisoning.

Makar, A B and McMartin, K E and Palese, M and Tephly, T R (1975) *Formate assay in body fluids: application in methanol poisoning.* Biochemical medicine, 13 (2). pp. 117-26. ISSN 0006-2944

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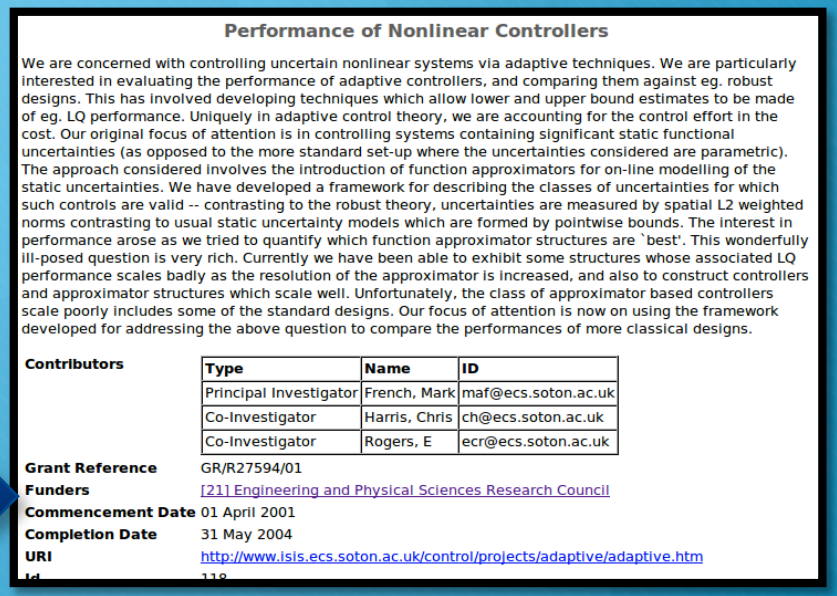
Abstract

A sensitive and specific assay for formic acid in body fluids has been developed. The assay is based on the reaction of formate with bacterial formate dehydrogenase coupled to a diaphorase-catalyzed reduction of the nonfluorescent dye resazurin to the fluorescent substance resorufin. Formate concentrations of 0.5 µg/ml of reaction mixture can be accurately measured. Small volumes of body fluids can be used for the analysis of both methanol and formate. The procedure described is simple and allows for the economical and rapid determination of formate. It can be used in studies concerned with the disposition of formate, as it relates to methanol metabolism. Also, it may be useful in studies where formate might exist as a metabolic intermediate of certain drugs or chemicals.

Projects

[118] Performance of Nonlinear Controllers
[428] High Performance and Robust Systems

Item Type: Article



Performance of Nonlinear Controllers

We are concerned with controlling uncertain nonlinear systems via adaptive techniques. We are particularly interested in evaluating the performance of adaptive controllers, and comparing them against eg. robust designs. This has involved developing techniques which allow lower and upper bound estimates to be made of eg. LQ performance. Uniquely in adaptive control theory, we are accounting for the control effort in the cost. Our original focus of attention is in controlling systems containing significant static functional uncertainties (as opposed to the more standard set-up where the uncertainties considered are parametric). The approach considered involves the introduction of function approximators for on-line modelling of the static uncertainties. We have developed a framework for describing the classes of uncertainties for which such controls are valid -- contrasting to the robust theory, uncertainties are measured by spatial L2 weighted norms contrasting to usual static uncertainty models which are formed by pointwise bounds. The interest in performance arose as we tried to quantify which function approximator structures are `best'. This wonderfully ill-posed question is very rich. Currently we have been able to exhibit some structures whose associated LQ performance scales badly as the resolution of the approximator is increased, and also to construct controllers and approximator structures which scale well. Unfortunately, the class of approximator based controllers scale poorly includes some of the standard designs. Our focus of attention is now on using the framework developed for addressing the above question to compare the performances of more classical designs.

Contributors

Type	Name	ID
Principal Investigator	French, Mark	maf@ecs.soton.ac.uk
Co-Investigator	Harris, Chris	ch@ecs.soton.ac.uk
Co-Investigator	Rogers, E	ecr@ecs.soton.ac.uk

Grant Reference GR/R27594/01
Funders [21] Engineering and Physical Sciences Research Council
Commencement Date 01 April 2001
Completion Date 31 May 2004
URI http://www.isis.ecs.soton.ac.uk/control/projects/adaptive/adaptive.htm
Id 118

- A paper *links to* its affiliated projects, instead of just mentioning them

Concluding Remarks

- Social, political & funding pressures are changing the roles of Research Information Systems
- Repositories have a history of engagement with grassroots / public
  - providing services (portfolios, collections, reports)
  - collecting/managing/preserving information and knowledge products
- These engagements can enrich CRIS products
- CRIS ontological breadth can enrich repositories
- Distinction between CRIS / repository starts to blur.

PS What is a Repository?

- A repository is not just a piece of information management software
- It is a socially embedded technological phenomenon that promotes new relationship to research information
  - International programs of ‘advocacy’
  - Institutionally embedded, with teams of librarians trained to use, and to train researchers to use, repositories
  - Personal engagement with end-users