

The logo for the University of Kent, featuring the text "University of Kent" in a blue serif font. The word "University of" is in a smaller size and positioned above the word "Kent". The logo is centered within a white rectangular area that has a subtle, light gray background pattern.

University of
Kent

The Erlang tool ecosystem

Tools in the Erlang release, and freestanding tools.

Open source, and commercial.

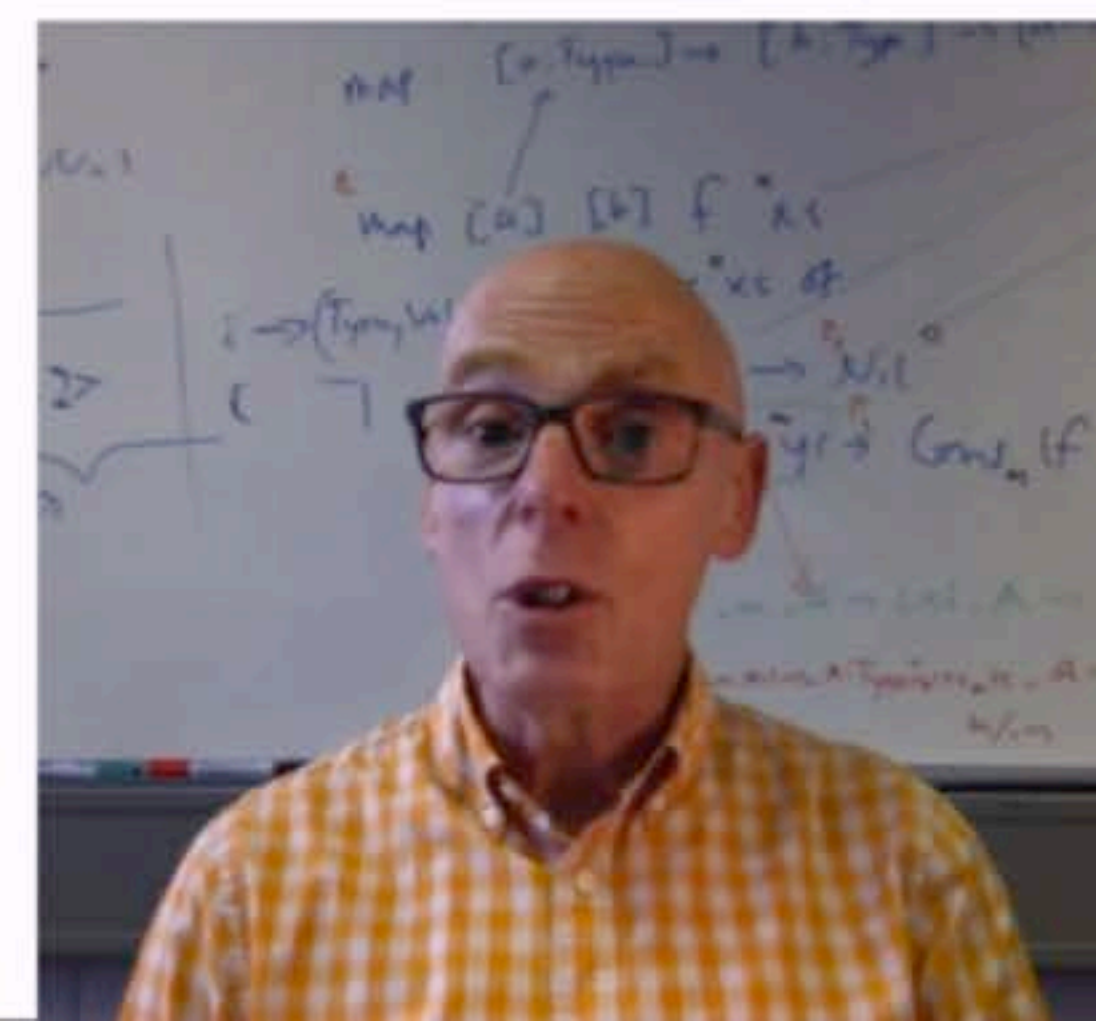
"Helicopter" overview ...

... more information in online documentation,
books, articles and web resources.



Lego image from www.bricksinmotion.com

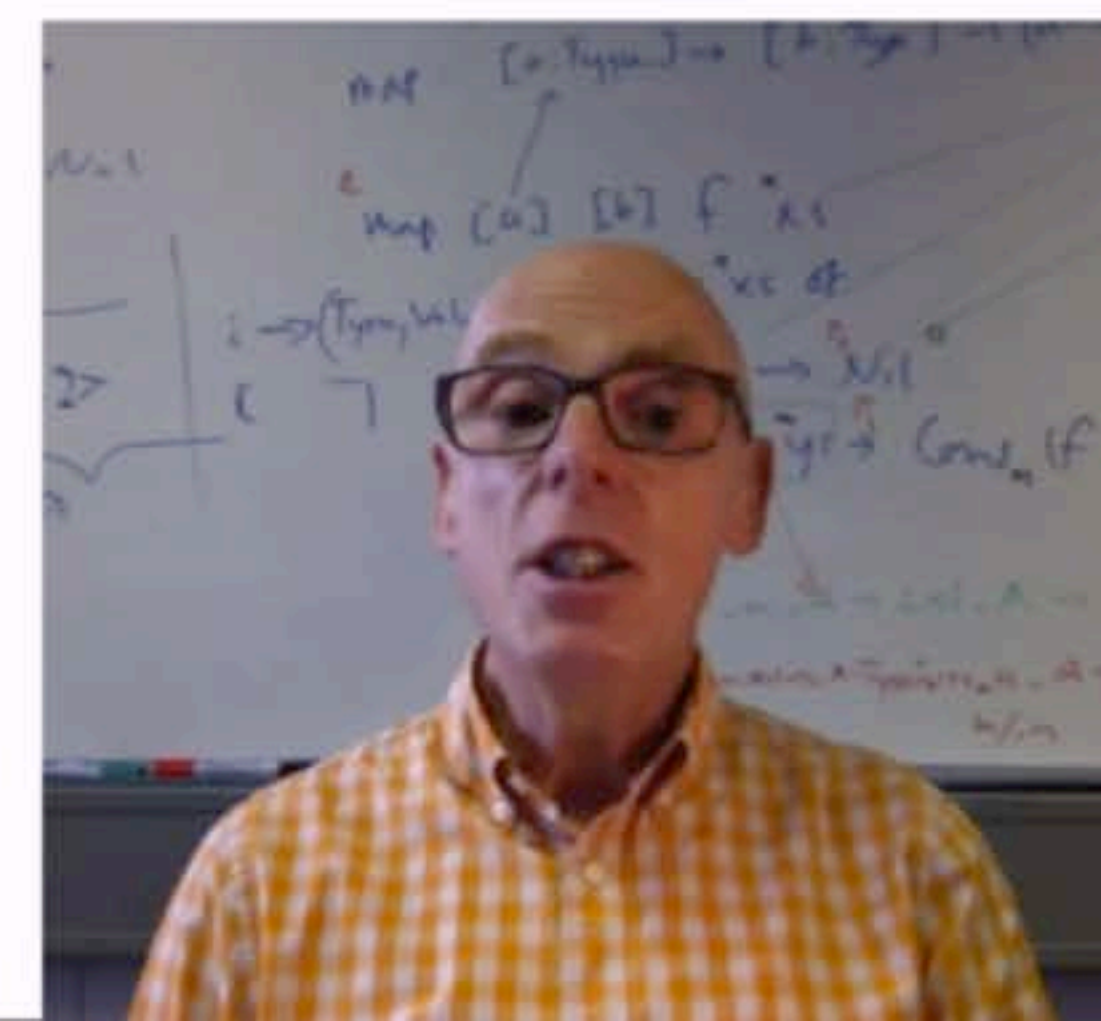
"In the box"



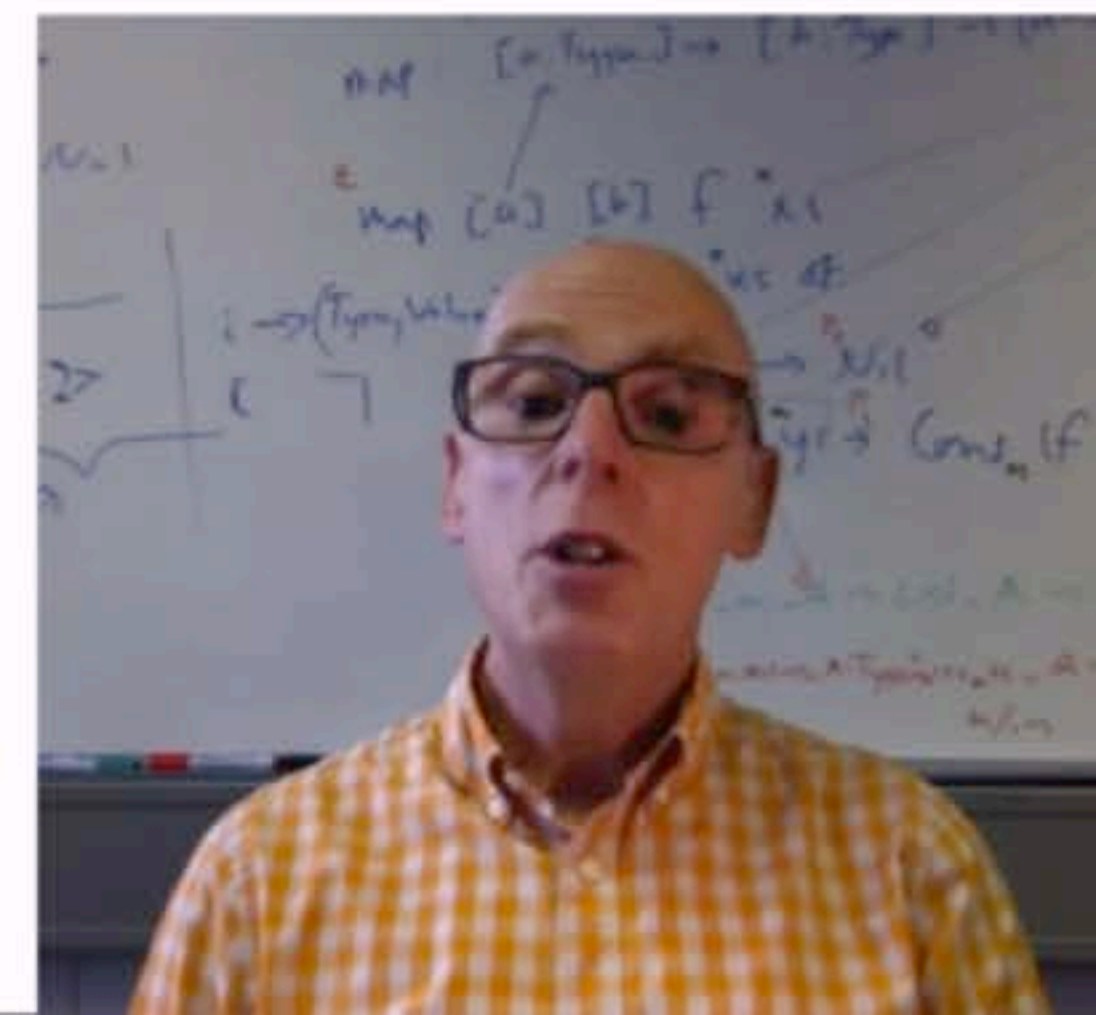
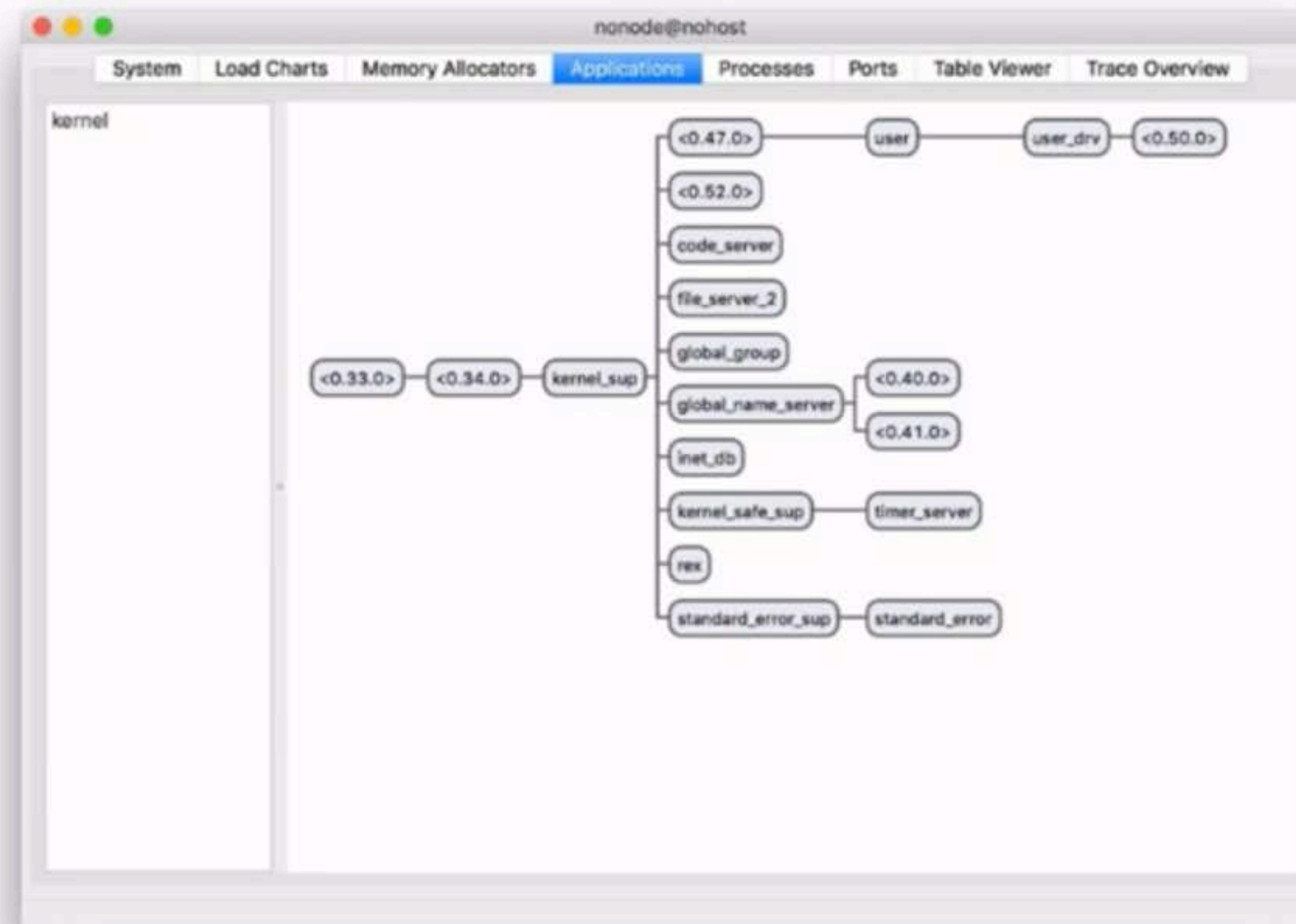
observer:start() ... processes

nonode@nohost

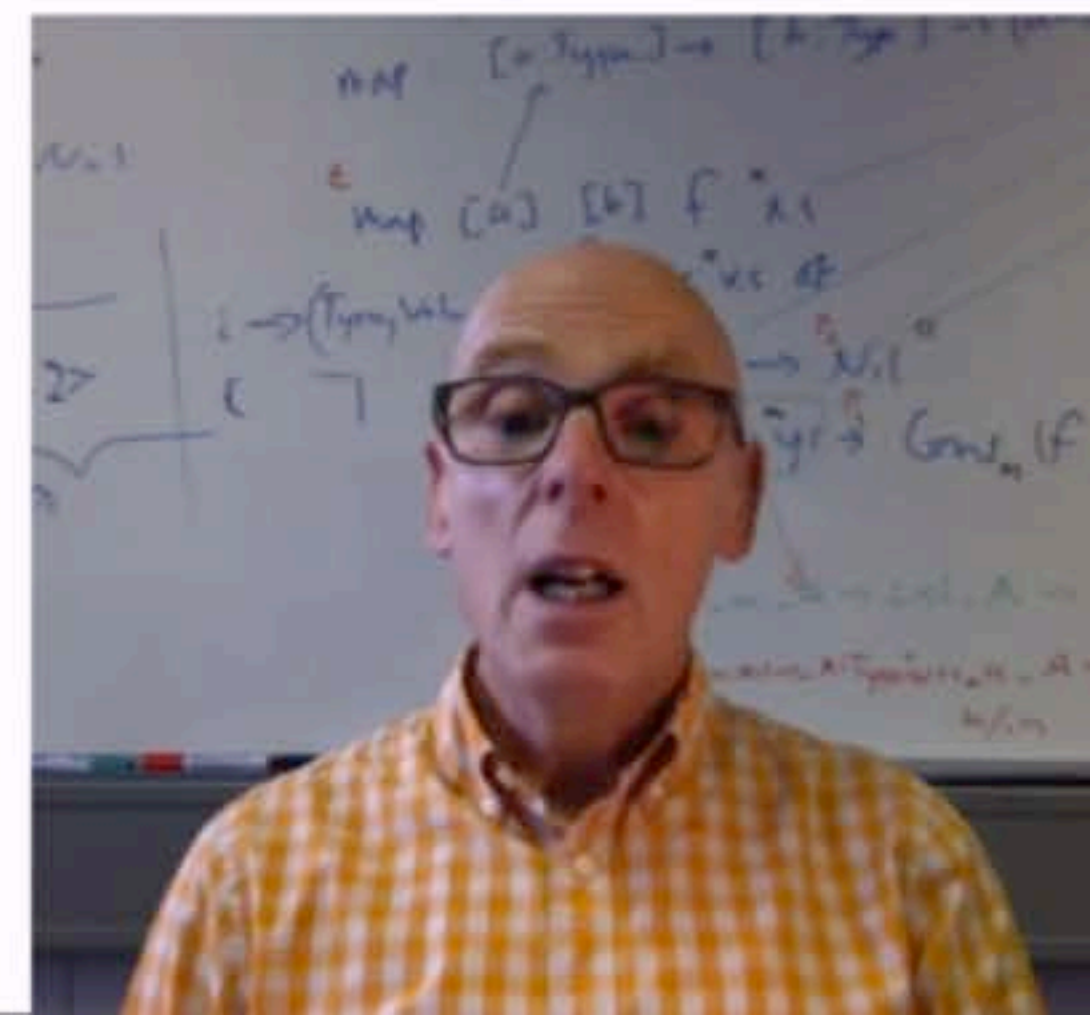
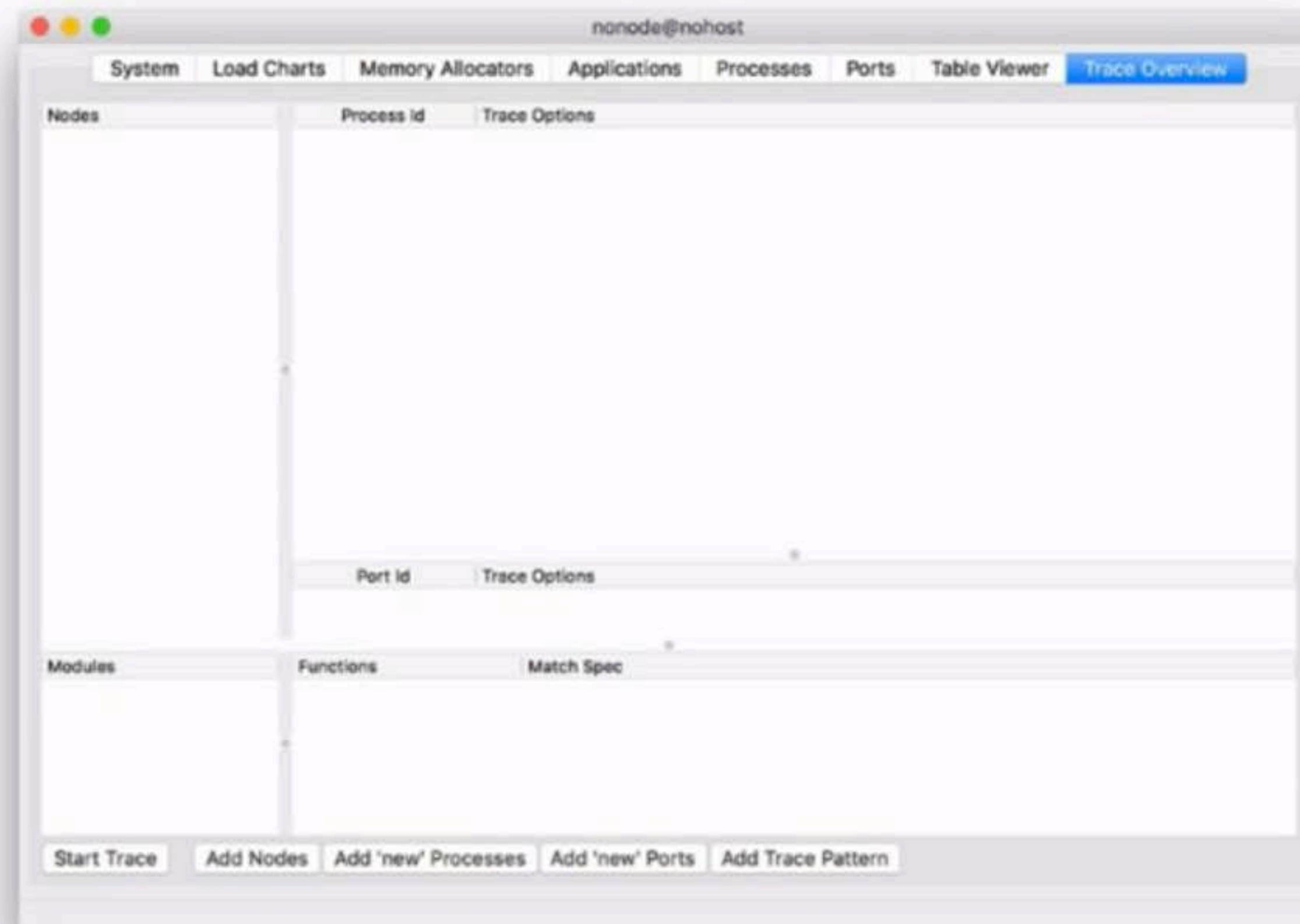
System	Load Charts	Memory Allocators	Applications	Processes	Ports	Table Viewer	Trace Overview
Pid	Name or Initial Func	Reds	Memory	MsgQ	Current Function		
<0.106.0>	observer_backend:fetch_stats/2	441299	122096	0	observer_backend:fetch_stats_loop/2		
<0.83.0>	appmon_info	202425	142808	0	gen_server:loop/6		
<0.65.0>	observer_alloc_wx:init/1	111302	285048	0	wx_object:loop/6		
<0.59.0>	wxs_server:init/1	46913	27760	0	gen_server:loop/6		
<0.4.0>	erl_prim_loader	44584	196944	0	erl_prim_loader:loop/3		
<0.64.0>	observer_perf_wx:init/1	37115	197104	0	wx_object:loop/6		
<0.61.0>	erlang:apply/2	18703	8768	0	timer:sleep/1		
<0.58.0>	observer	14286	42696	0	wx_object:loop/6		
<0.68.0>	erlang:apply/2	11753	26560	0	observer_pro_wxtable_holder/1		
<0.62.0>	observer_sys_wx:init/1	7392	230592	0	wx_object:loop/6		
<0.78.0>	observer_port_wx:init/1	7222	34552	0	wx_object:loop/6		
<0.80.0>	observer_trace_wx:init/1	7194	26608	0	wx_object:loop/6		
<0.66.0>	observer_app_wx:init/1	6651	75944	0	wx_object:loop/6		
<0.63.0>	timer_server	4073	6000	0	gen_server:loop/6		
<0.67.0>	observer_pro_wx:init/1	3354	12024	0	wx_object:loop/6		
<0.79.0>	observer_tv_wx:init/1	3185	16872	0	wx_object:loop/6		
<0.36.0>	code_server	2587	1115016	0	code_server:loop/1		
<0.31.0>	application_controller	1688	34480	0	gen_server:loop/6		
<0.48.0>	user_drv	149	10808	0	user_drv:server_loop/6		
<0.56.0>	erlang:apply/2	102	6752	0	shell:eval_loop/3		
<0.50.0>	group_server/3	100	7096	0	group:more_data/5		
<0.51.0>	erlang:apply/2	82	426600	0	shell:get_command/1/5		
<0.81.0>	erlang:apply/2	12	2816	0	io:execute_request/2		
<0.70.0>	erlang:apply/2	4	2776	0	observer_backend:flag_holder_proc/1		
<0.0.0>	init	0	6976	0	init:loop/1		
<0.1.0>	erts_code_purger	0	2704	0	erts_code_purger:loop/0		



observer:start() ... applications



observer:start() ... **tracing**



Erlang tracing

Built into the Erlang virtual machine ...no "compile flag".

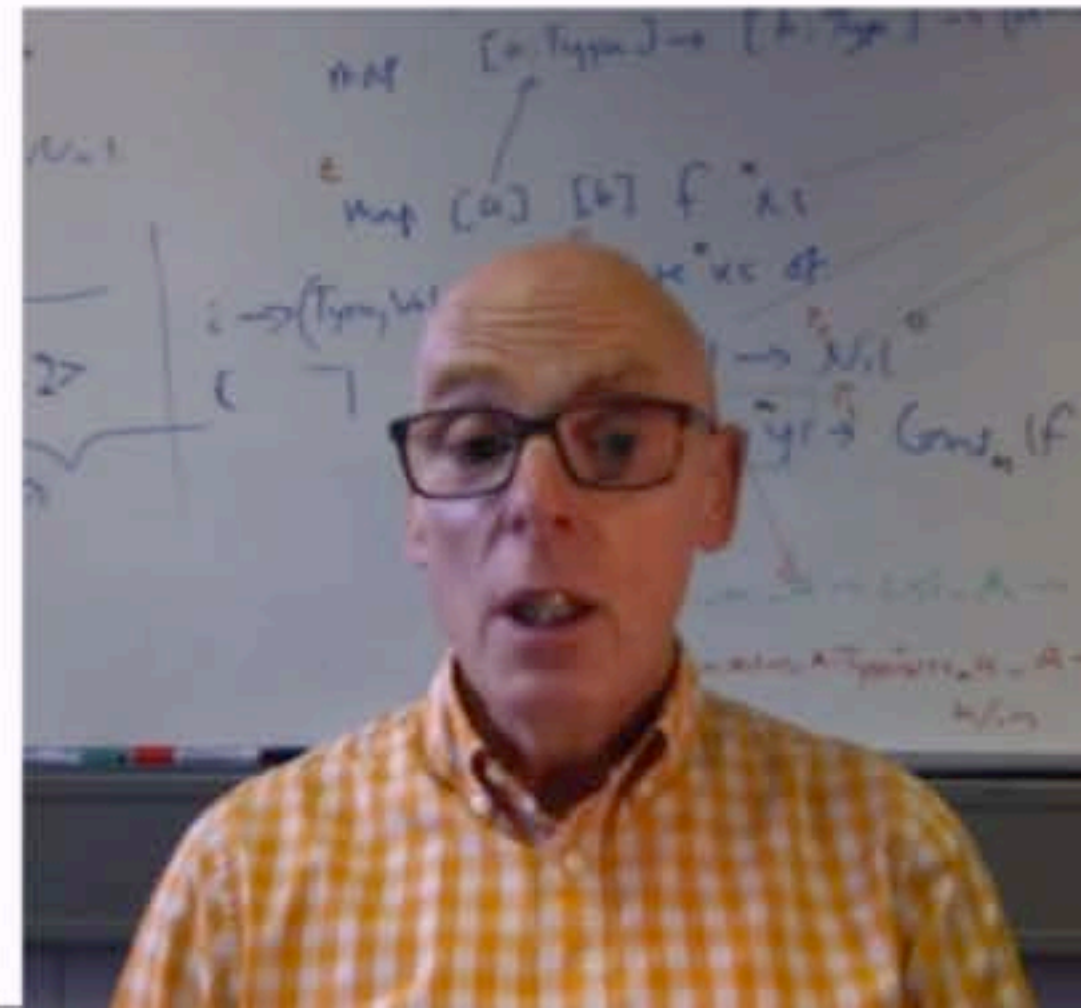
Can enable and disable programmatically ...

... as well as from the observer.

Function based, concurrency, machine events, ...

Tracing to file or port.

The basis of various more specialised tools.



Typer and dialyzer

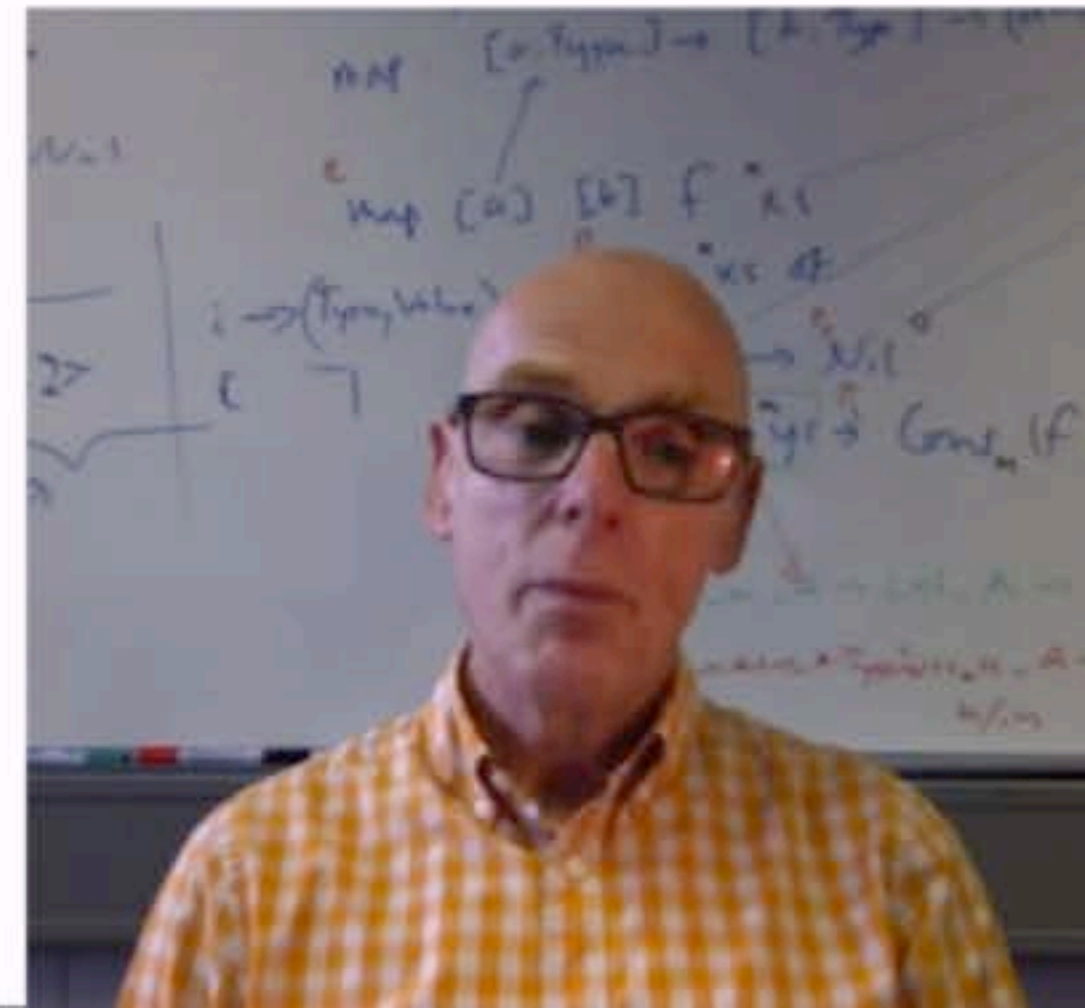
Discrepancy analyzer: statically detectable errors / warnings.

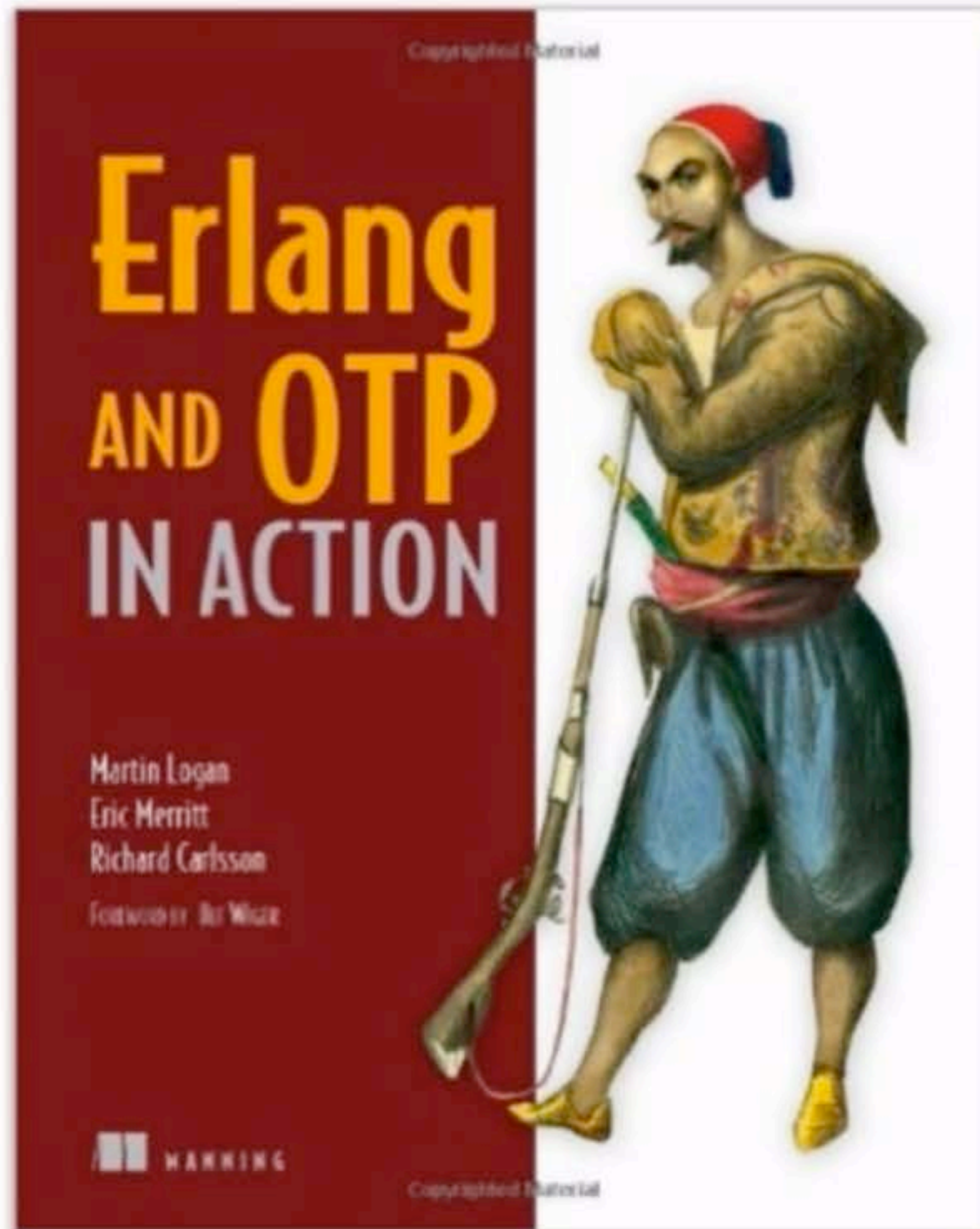
Some discussion in week 3.

Caches information.

Run on (every) build.

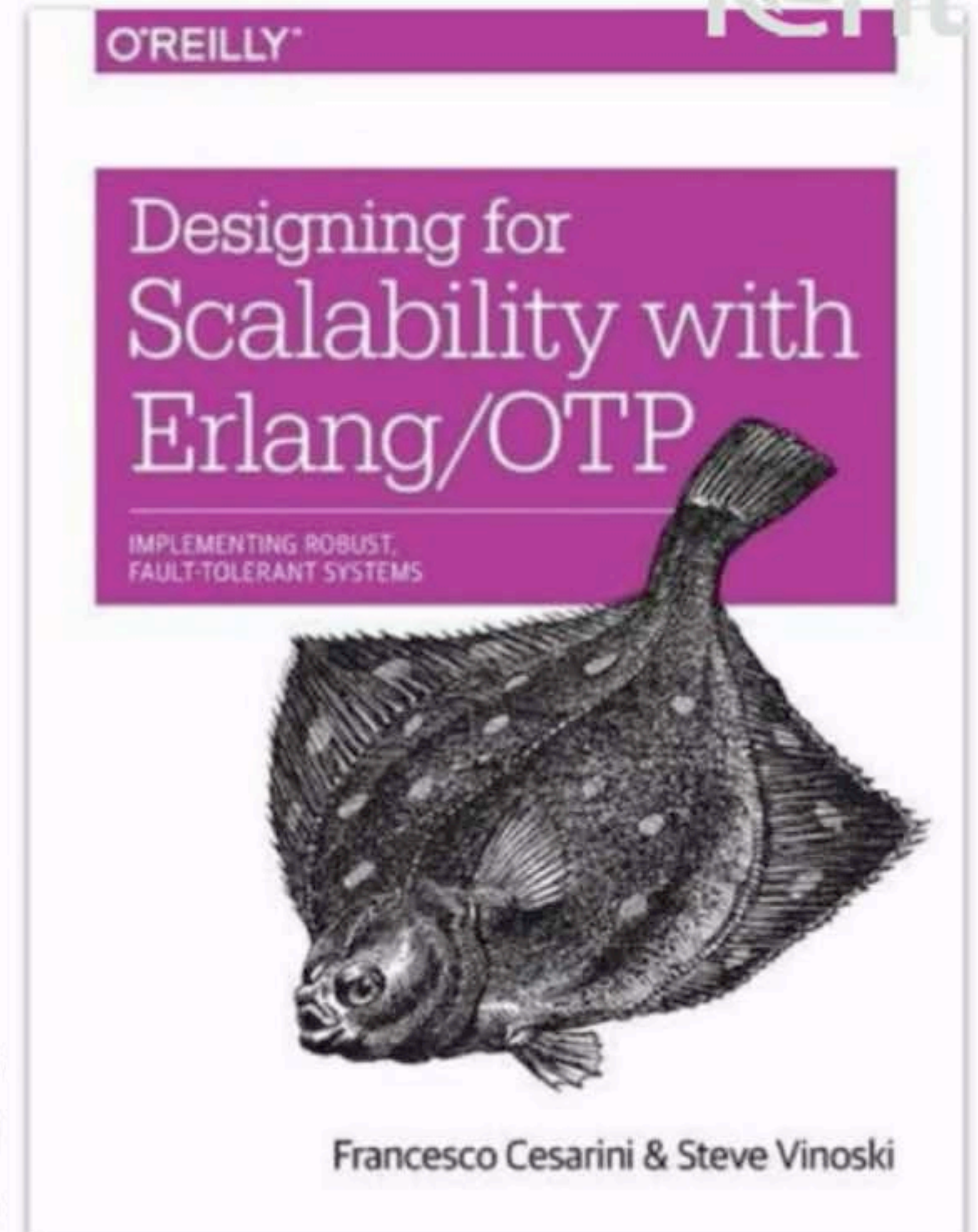
Erlang documentation and learnyousomeerlang.com/dialyzer





Erlang and OTP in Action,
Logan, Merritt and
Carlsson, Manning, 2010

*Designing for Scalability with
Erlang/OTP in Action,* Cesarini
and Vinoski, O'Reilly, 2016



And the rest ...

Wrangler: refactoring Erlang

A refactoring *tool*

A refactoring *toolkit*

- API, DSL, API migration, ...

A refactoring *toolset*

- clone detection, slicing, ...

www.cs.kent.ac.uk/projects/wrangler



Concurrency errors

QuickCheck and PropEr
Concuerror

McErlang
Cuter

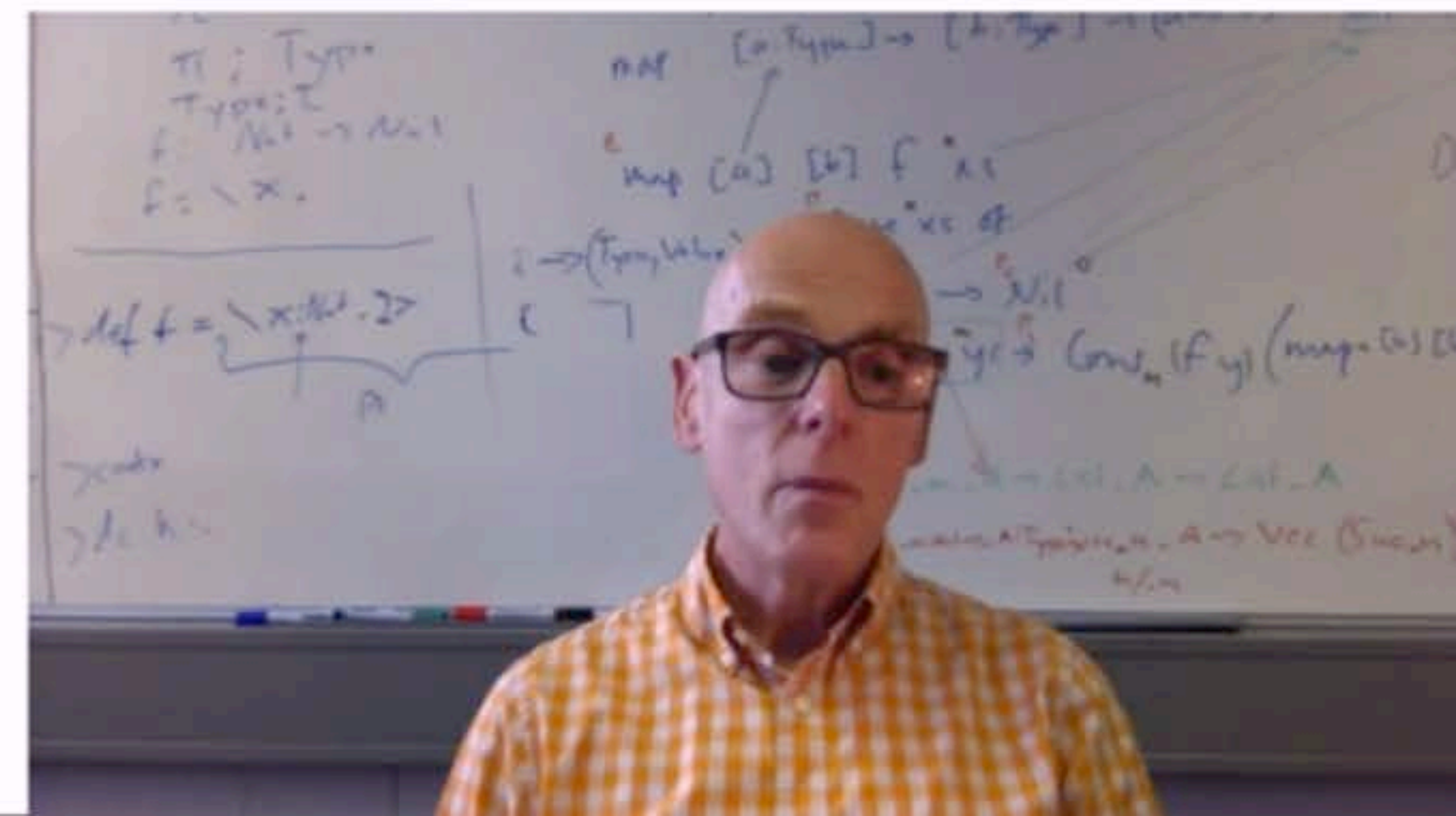


IDEs and editors

Support for emacs, vim, atom, sublime, ...

Erlide for Eclipse <http://erlide.org/index.html>

IntelliJ plugin <https://github.com/ignatov/intellij-erlang>



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