

Programming Methodology and Type Theory  
How 40 years of uncompromising research  
made concrete the Chalmers futuristic vision  
into the Software Engineering paradigm of  
Programs correct by construction

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## Futuristic

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and they always will be.

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Note that our tools are now able to prove the correctness of the first program in Knuth’s Art of Computer Programming, and that’s not small achievement.



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Nowadays, the banking business is taking seriously functional programming.

The software engineering scene in the 80's



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- Long term goals are solved by "doing things right", a commitment to quality

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Blacklisted for 20 years, and still number one on the hit list

# Swedish bashing



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hard-working

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Where once the Indian to the death  
Chased pioneer and scout,  
The Swede, with alcoholic breath,  
Sets rows of cabbage out.

# The art of the research team leader

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The research team leader is a facilitator and he makes administration transparent

For efficiency, he must learn the rules, and apply his scientific skills to remove obstacles in a legal way

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This is a dangerous path, sometimes it is better to keep your mouth shut

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But be persistent, and get your ways by hook or by crook

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Now act as if the bureaucrat had the idea in the first place, compliment him/her for it, and state your obedience to the process: Yes, we can!

## Mandatory readings

- Joseph Heller. *Catch 22*
- Robert Pirsig. *Zen and the Art of Motorcycle Maintenance*
- Eugen Herrigel. *Zen and the Art of Archery*
- Jerry Rubin. *Do it!*
- Edward Conze. *The Memoirs of a Modern Gnostic*