

Steve Dodier-Lazaro

Security Engineer - User Experience Designer

Work philosophy

My passion is to build technologies that are useful to people, that change and simplify how they interact with the things that actually matter to them. My main drives are work ethics, attention to detail and empathy.

current employment status

PhD student in HCI for Security and Teaching Assistant
University College London, UK

available starting mar-jun 2017

speaks French, English, Spanish
can move to EU, Canada, Asia

Recent and current projects

Modelling the usability of sandbox access control policies - ongoing

Collected logs of Linux Desktop app behaviours including accesses to files, and build a tool that simulates how various access control policies related to Desktop sandboxes would impact those usage logs. Built metrics to evaluate the usability impact of a policy and its proximity to an ideal security state (using graph theory). Mined frequent patterns of file usage to discover potential alternative policies. Currently analysing this data.

field study | modelling | data mining | usable security | graph theory

Paper to be written

Code: <https://code.launchpad.net/activityfinder>, <https://github.com/Sidnioulz/ActivityFinderAnalysis>

email

steve.dodier@gmail.com

skype

s.dodier-lazaro

website

mupuf.org

main code repositories

github.com/Sidnioulz
launchpad.net/~sidi
launchpad.net/~ucl-cs-study-devs

Theory of Security Technology Design - ongoing

Developing a theory based on situated action and the third HCI paradigm, showing why usable security must focus on building sensitive, user-centered and sustainable technologies rather than merely usable ones, and deriving methodological implications.

research methods | usable security theory

Early result: 'Appropriation and Principled Security', *ECSCW 2015 workshop on appropriation*

skills - computer science

software development
information security | Linux
OS security | usable security
language-based security
confinement technologies

Value-Sensitive Analysis of Desktop App Appropriation - 2016

Interviews Linux desktop users about how they appropriate their apps, and performed a value-sensitive analysis of how they adopt and abandon apps and modify apps with plugins. Queried participants' attitudes to feature loss and projected this value analysis and participants attitudes onto desktop sandboxes to identify value conflicts and potential hinders to sandbox adoption in current sandbox designs.

field study | value-sensitive design | technology appropriation

Pending review: 'No Good Reason to Remove Features: Expert Users Value Useful Apps over Secure Ones', submitted to USEC 2017

skills - HCI and design

human-computer interaction
user-centred evaluation
user experience | design thinking
user interface design
in-the-wild research
participatory design
value-sensitive design

Participatory Design of Sandbox Services for a Desktop OS - 2015/16

Performed participatory design with a group of Xubuntu users to identify desktop services that would be useful to them (sandboxing specific apps; limiting the bandwidth used by an app; creating sandboxed workspaces with a private filesystem; etc.) and which can be provided using sandboxing technologies. Implemented prototypes for three such services for Xubuntu and evaluated them in-the-wild.

field study | participatory design | technology appropriation

Paper to be written

Code: <https://code.launchpad.net/activityfinder>, <https://github.com/Sidnioulz/repositories>

skills - academia

university teaching
supervisory skills
research process

Password Strength and Reuse Service - 2013/14

Done with 3 students I supervised. This project is the first to look at password advice from the perspective of user experiences rather than technical characteristics of passwords. Developed password collection tool for Chromium, and analysed password strength and reuse strategies. Prototyped an architecture to feed passwords into probabilistic models based designed to inform users of risks customised to their own reuse patterns. A cross-cultural evaluation between Chinese and British users was abandoned owing to mistakes by one of our experimenters during data collection.

field study passwords user-centered design cross-cultural study usable security

Code: <https://launchpad.net/study.cs.ucl-password-collection-clients>

Privilege Handling on a Desktop Graphic Stack - 2013

Identified privileged operations and potential attacks on Wayland, a graphic stack for Linux; proposed an architecture for privilege handling that allows all involved stakeholders to express their preferences in order of relevance, and that can integrate with interaction-based permission granting methods (e.g. UDAC).

Linux Wayland permission handling security architecture security architecture

Talk: 'Security in Wayland-Based DEs: Privileged Clients, LibWSM and Security UIs', XDC 2014

Code: <https://github.com/mupuf/libwsm>

Limits of Type Enforcement MAC Systems for Desktop Apps - 2011

End-of-studies project for my Dipl.Eng. Performed a comparative study of SELinux and PIGA OS for the protection of a PDF reader on Linux against XXE exploits. Showed that SELinux only offers limited protection as it grants indiscriminate access to file types, and cannot reason about appropriate contexts for accessing specific files. Showed value of access control models that can reason about contexts in which data is to be accessed.

OS security SELinux process confinement activity confinement mandatory access control

Report in French, available on demand

Education

University College London

2012-now

References: Dr. Jens Krinke

PhD Student in HCI for Security

Audited: Ergonomics for Design, User-Centred Evaluation Methods, People and Security

Teaching Assistant in: Language-Based Security, Computer Security 1, Robotics Programming, Privacy-Enhancing Technologies, Distributed Systems and Security

Funding: Computer Science Department Excellence Studentship

INSA of Rennes / Inria

2011-2012

References: Dr. Valérie Gouranton

MRes in Computer Science

Major: Networks and Distributed Systems

Minor: Data mining

Internships: in Inria Rennes (distributed systems and VR research)

Ranking: 14th out of 45

ENSI of Bourges

2009-2012

References: Prof. Pascal Berthomé

Diplôme d'Ingénieur in Computer Security

Major: Systems and Networks Security

Minor: Embedded Systems

Internships: in University of Orléans (OS security research) and in FBK, Trento (NLP research)

no ranking issued for dual degree students (1st/39 in first year, 3rd/43 in second year)

University of Montpellier II

2006-2009

BSc and DUT in Computer Science

Minor: Peer-to-peer Networks

Ranking (BSc): 1st out of 41

Ranking (DUT): 10th out of 100