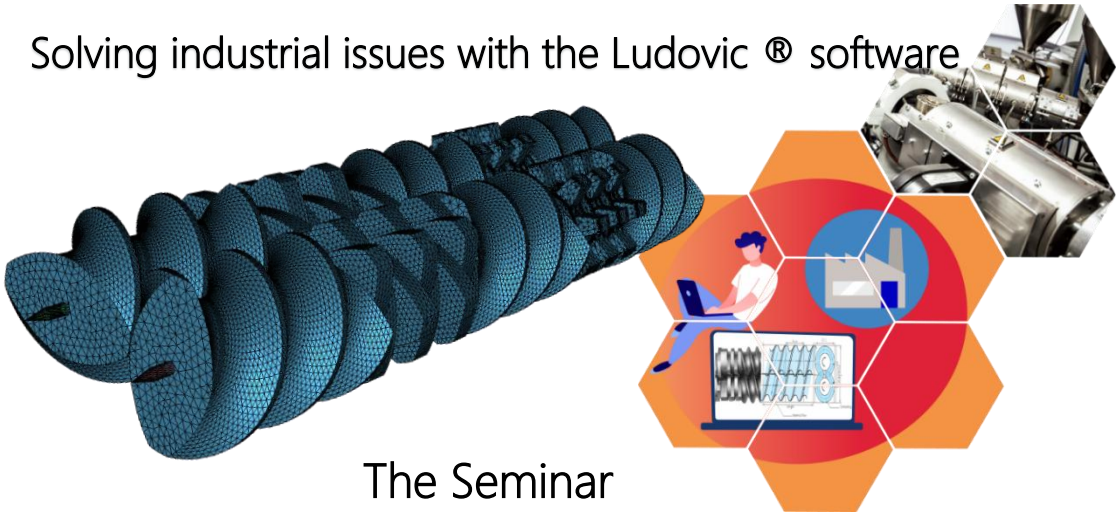
Organized by SCIENCES COMPUTERS CONSULTANTS *In partnership* Cemef CENTRE DE MISE EN FORME DES MATERIAUX *With the support of* S.B.S. SBS Plastics Trainings & Consultancy

Ludovic® TSC

Brussels – March 18-19, 2026

Twin Screw Course Europe

Solving industrial issues with the Ludovic ® software

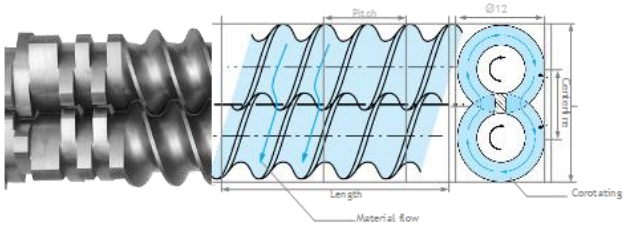


The Seminar

The **twin screw course** consists in a 2-day seminar aimed at a first approach of numerical simulation of twin screw extrusion. The real mechanical principles of extrusion and their translation in the numerical simulation model are explored for two days. As a last step, the **Ludovic® simulation software is provided for a 2-month period.**

Reminder about the mechanisms and principles of extrusion

Practicing with the Ludovic® software



The audience

The **twin screw course** is aimed at process, R&D, R&T engineer, technically oriented engineers working in both research and manufacturing environment. For the industries of Plastics, Compounding, Masterbatch, Recycling, Hot Melt Extrusion in Pharma.

This extrusion course does establish a concrete link between mechanical principles of extrusion process and their translation into simulations languages. Industrial issues are also tackled with **process optimization, screw design and scale up.**

Sciences Computers Consultants
Le Polygone – 46 Rue de la Télématique – 42000 Saint Etienne
Tél. 33(0)4-77 49 75 80
E Mail: scc@scconsultants.com Internet: www.scconsultants.com
SARL au capital de 49200 Euros RC Saint-Etienne B 390 220 119

Day 1

This first stage of the course is dedicated to the **mechanical process of extrusion**. It is indeed essential to know about the theoretical background used as basis of simulation. This day 1 is aimed at describing the main mechanical phenomena occurring in the extruder and how to undertake them.

Program – Day 1*

9h00-9h15	Welcome speech by Laurent Ratte	
9h15-9h45	Why using numerical simulation? Some industrial applications by Sabine Schneider	
9h45-11h15	Reminders: about the continuum mechanics, rheology, and thermal behavior by Bruno Vergnes Let's go back to the basis and main mechanics rules	Unit 1
11h15-11h45	Coffee break	
11h45-13h00	Introduction to the twin screw extrusion process Material flow in the screw elements and the kneading blocks by Bruno Vergnes A useful reminder about the twin screw extrusion principles and flow calculations	Unit 2
13h00-14h00	Lunch break	
14h00-14h30	Ludovic® software presentation – global functioning of a twin screw extruder by Bruno Vergnes Why using the Ludovic software for twin screw?	Unit 3
14h30-15h45	How to define a complete simulation by Corentin Rivaux	
15h45-16h15	Coffee Break	
16h15-17h15	Analyzing the simulation main results by Corentin Rivaux	

Operational

Bruno VERGNES oversees this course.

Bruno VERGNES is an engineer, who got a PhD from Ecole des Mines de Paris. He has been working from 1981 in polymer processing at CEMEF. He was a senior scientist at Ecole des Mines de Paris and general manager of the "Polymer and composites" research unit at CEMEF for many years. His main topics deal with extrusion processes and rheology of complex fluids. He is now scientific advisor of the SC-Consultants company for all the extrusion and mixing applications.

Bruno VERGNES has developed the Ludovic® mathematical model, together with the INRAE

Cemef
CENTRE DE MISE EN FORME DES MATERIAUX

INRAE

Day 2

This second stage consists in a training based on real industrial issues. The goal of this practical is to solve industrial issues with the support of the Ludovic simulations results.

The proposed industrial issues for the practical are:

- a **scale up**: how to go from a lab scale (D24mm) to an industrial scale (D56mm)
- a **screw design optimization**: how to increase the mixing efficiency by the screw design

During the training, the attendees handle the Ludovic® software and are teached about how to define, compute and interpret a simulation and its results.

Program – Day 2*

09h00 – 10h30	Main applications (Dispersive-distributive mixing, Reactive Extrusion, Recycling, fiber reinforced composites…) by Bruno Vergnes	Unit 4
10h30 – 11h00	Coffee break	
11h00 – 12h00	Ludovic applications: • Scale up • Screw Profile Optimization + process conditions • Dispersive distributive analysis By Corentin Rivaux	
12h00-12h30	The Optimizer module – demo by Laurent Ratte	
12h30 – 13h30	Lunch Break	
13h30 – 15h00	Ludovic Applications Recycling - optimizing the recycled material ratio in a formulation By Corentin Rivaux	
15h00 – 15h30	Coffee break	
15h30 – 17h00	Ludovic applications - scale up by Corentin Rivaux	
17h00 – 17h30	Conclusion by Laurent Ratte and Sabine Schneider	

**Provisional agenda: to be confirmed*

Two month-Ludovic® license

After this course, the attendee is self-reliant in the use of the Ludovic® software for analysing and optimizing his own cases/applications. For the Gold package, he will be provided with a **2 month-temporary license of the Ludovic® software (gold package registration)**. The 2-month temporary license has to be activated at least on September 15.

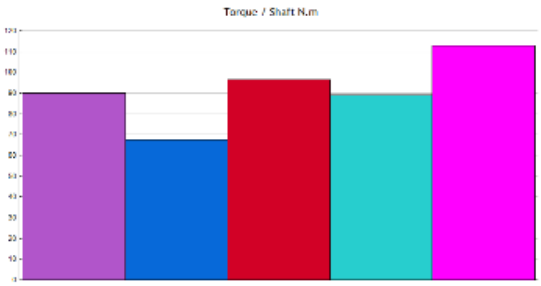
During the two months, the attendees benefit from:

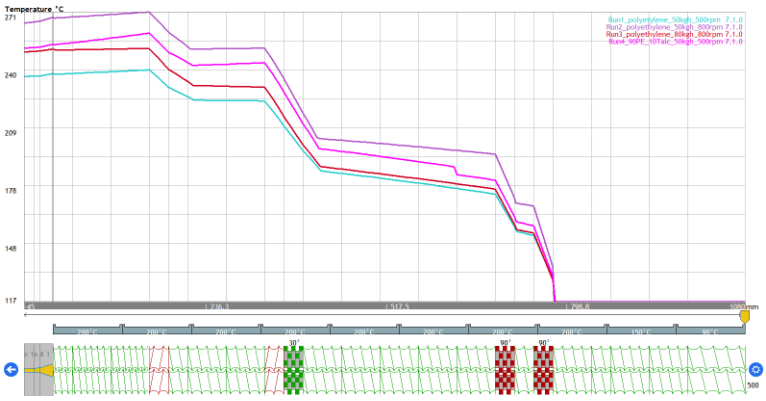
- Ludovic® v8.0 version
- access to the eSupport site
- access to the Technical Support (via hot line)

Presentation

Ludovic® is a virtual extrusion lab designed for optimizing the **corotating twin screw extrusion** process. Within a mathematical model, resolving the physics equations, Ludovic® performs a thermo mechanical analysis of the process and **predicts the material behaviour**.

The **V8.0 new release** proposes new evolutions and improvements. This version will be aimed at integrating a new screw design optimization module.**AI-Gen TSE** is the definitive solution to **move from guesswork to guaranteed performance**. Leverage the power of Artificial Intelligence to unlock the full potential of your twin screw extruder and drastically **reduce development time and material waste**.





Ludovic® is used for product formulation; process set up and scale up issues. Proposing a **fast-learning curve**, Ludovic® is easily integrated as complementary tool for saving time to market (50% of trials saved).

Prerequired equipment.

To attend the Twin Screw Course, some pre-required equipment is necessary. Indeed, attendees are provided with a temporary license of the Ludovic® software during this training.

Laptop

In this way, the attendee will come to the training with:

- a **laptop** (Windows 10 or 11 environment)
- the administrative **rights to install** a new program (Ludovic® v8.0)

The Ludovic® software will be installed on the attendee's laptop for performing the training (Day 2). After the training, the attendee keeps on his own laptop the performed work and the Ludovic® temporary license for Gold package.

Twin screw course: registrations & information

Registrations:

The registrations are open until March 1st, 2026

Online registration at:

https://www.scconsultants.com/panier.html

1. Select the Twin Screw Course Event
2. Select the number of attendees (Silver or Gold)
3. Validate

OR

Contact SCC

scc@scconsultants.com

Tel: 04 77 49 75 83

Early registration discount:

For all registration before January 31st, 2026, **get 200 euros discount** on the hereafter packages.

SCC keeps the right to cancel this course if a minimum registration has not been reached

Packages:

Silver package – 1100€

Fitted for a **refresh on extrusion** topics.

Are included:

- Two-day seminar
- Lunches and breaks
- Networking and dinner on March 18th in Brussels downtown

Gold package - 2100€

Designed for **industrial applications.**

Are included:

- Silver package
- + Ludovic® 2-month license

1000€ will be deduced on the Ludovic® permanent license price in case of purchase within the next 6 months (after the end of the temporary license)

Place:

As a central and easy access-place, our TSC takes place in the Brussels airport area, in:

NH Brussels Airport
De Kleetlaan 14
B-1831 Diegem Brussels
+32 2 203 9252
nhbrusselsairport@nh-hotels.com

Contact

For any questions or requests, please contact our SC-Consultants team.

SCIENCES COMPUTERS CONSULTANTS
Le Polygone
46 Rue de la Télématique
F-42000 Saint Etienne (France)
https://www.scconsultants.com
scc@scconsultants.com