

# About the course F2

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To the participants of the Sao Carlos CIMPA Research School  
« Singularities and Applications » July 11-22, 2022

You find here some information about the course F2, including many links.  
If you save this file on your computer then you can reach each of them in one click.

Lecturers: Dirk Siersma , Mihai Tibăr

Milnor fibrations, nonisolated singularity, and the polar degree of projective hypersurfaces.  
This followup course started with reviewing the material from the online course B from 2021. Exercises and new view points were added.

NB. Lectures were prepared by both teachers together. Dirk Siersma performed the lectures in Sao Carlos.

The material of the course consists of the following texts

1. [Milnor Bouquet theorem's](#)
2. [Non-isolated singularities](#)
3. [Polar degree](#)

The recorded lectures with are available on :

<https://www.youtube.com/channel/UCth-gA-OAsNYI5wNVjgegPQ>

You can reach the lectures directly via the links:

**Lecture 1** on monday july 11 : [video F2-1](#) (bouquet theorems)

**Lecture 2** on monday july 11: [videoF2-2](#) (non isolated singularities)

Excercises on friday july 15: [videoF2-E](#)

**Lecture 3** on monday july 18: [videoF2-3](#) (polar degree)

**Lecture 4** on tuesday july 19: [video F2-4](#) (polar degree and non isolated)

Related video's

Dirk Siersma's **talk about Area** on 12 july : [Video-A](#)

NB. After finalizing the video's the url can change.

## Background material

The files and beamers from the 2021 online course.

[CIMPA Research School 2021 and 2022 \(usp.br\)](#) Or directly :

1. Milnor fibrations and their topology. Bouquet theorems. [Lecture 1](#) [Lecture 2](#)
2. Nonisolated singularity and their topology. [Lecture](#) [Video1](#) [Video2](#) [Video3](#)
3. Polar degree of projective hypersurfaces. [Lecture 1](#) [Lecture 2](#) [Lecture 3](#) [Lecture 4](#)

The course F2 has many interaction with the course F3: Topology of complex projective hypersurfaces and of their complements. Lecturer: Laurentiu Maxim

Course material for F3 is on [Maxim's webspace](#)

We refer also to Mihais Tibar's **opening speech** on monday july 11 : [Video](#)

Our course F2 has a connection with the Fields medalist June Huh. We advise you to read also the [Huh June Interview.pdf \(mathunion.org\)](#)

We wish all of you good weeks in Sao Carlos. And ... if you have any questions afterwards you can always contact us.

Dirk Siersma and Mihai Tibar