

# SUMMER SCHOOL GLOBAL DIFFERENTIAL GEOMETRY

**14 - 18 May 2018**  
**AIMS Center M'bour (Sénégal)**

## Lecture Courses

**Introduction to symplectic and contact geometry**  
*A. Banyaga & D. Houenou*

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**Hamiltonian dynamics and symplectic capacities**  
*K. Cieliebak & U. Frauenfelder*

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**Pseudodifferential operators in geometry  
and quantum field theory**  
*S. Paycha*

## Organizers

|                        |   |   |
|------------------------|---|---|
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## Schedule

### Monday - May 14th

|             |   |
|-------------|---|
| 9:00-9:30   | <b>Registration</b>   |
| 9:30-9:45   | <b>Welcome</b>  |
| 9:45-10:45  | <b>Paycha:</b> Pseudodifferential operators in geometry and QFT I               |
| 10:45-11:15 | <b>Coffee break</b>   |
| 11:15-12:15 | <b>Banyaga/Houenou:</b> Introduction to symplectic and contact geometry I       |
| 13:00       | <b>Lunch</b>  |
| 14:30-15:30 | <b>Cieliebak/Frauenfelder:</b> Hamiltonian dynamics and symplectic capacities I |
| 15:30-16:00 | <b>Coffee break</b>   |
| 16:00-18:00 | <b>Exercises on foundational material in differential geometry</b>              |

### Tuesday - May 15th

|             |  |
|-------------|--|
| 9:30-10:30  | <b>Cieliebak/Frauenfelder:</b> Hamiltonian dynamics and symplectic capacities II |
| 10:30-11:15 | <b>Coffee break</b>  |
| 11:15-12:15 | <b>Banyaga/Houenou:</b> Introduction to symplectic and contact geometry II       |
| 13:00       | <b>Lunch</b>   |
| 14:30-15:30 | <b>Exercises</b>   |
| 15:30-16:00 | <b>Coffee break</b>  |
| 16:00-18:00 | <b>Exercises</b>   |

### Wednesday - May 16th

|             |   |
|-------------|---|
| 9:30-10:30  | <b>Paycha:</b> Pseudodifferential operators in geometry and QFT II          |
| 10:30-11:15 | <b>Coffee break</b>   |
| 11:15-12:15 | <b>Banyaga/Houenou:</b> Introduction to symplectic and contact geometry III |
| 13:00       | <b>Lunch</b>  |
| Evening     | <b>Reception and dinner at the Hotel Royal Saly</b>                         |

### Thursday - May 17th

|             |   |
|-------------|---|
| 9:30-10:30  | <b>Cieliebak/Frauenfelder:</b> Hamiltonian dynamics and symplectic capacities III |
| 10:30-11:15 | <b>Coffee break</b>   |
| 11:15-12:15 | <b>Paycha:</b> Pseudodifferential operators in geometry and QFT III               |
| 13:00       | <b>Lunch</b>  |
| 14:30-15:30 | <b>Exercises</b>  |
| 15:30-16:00 | <b>Coffee break</b>   |
| 16:00-18:00 | <b>Exercises</b>  |

### Friday - May 18th

|             |  |
|-------------|--|
| 9:30-10:30  | <b>Banyaga/Houenou:</b> Introduction to symplectic and contact geometry IV       |
| 10:30-11:00 | <b>Coffee break</b>  |
| 11:00-12:00 | <b>Cieliebak/Frauenfelder:</b> Hamiltonian dynamics and symplectic capacities IV |
| 12:00-13:00 | <b>Paycha:</b> Pseudodifferential operators in geometry and QFT IV               |
| 13:00       | <b>Lunch</b>   |

## Attendants

### Lecturers

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| <b>Augustin Banyaga</b> - Pennsylvania State University, USA       | <i>banyaga@math.psu.edu</i>                  |
| <b>Kai Cieliebak</b> - University of Augsburg, Germany             | <i>kai.cieliebak@math.uni-augsburg.de</i>    |
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### Participants

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| <b>Cyrille Combete</b> - IMSP, Porto-Novo, Benin<br>(contributing exercises in Riemannian Geometry and Analysis) | <i>cyrille.combete@imsp-uac.org</i>          |
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***Funded by Volkswagen Foundation***